



**MINISTRY OF EDUCATION**

# **Physical Education and Health (Core) For Senior High Schools**

**TEACHER MANUAL**



**MINISTRY OF EDUCATION**



**REPUBLIC OF GHANA**

**Physical Education and  
Health (Core)**

**For Senior High Schools**

**Teacher Manual**  
**Year Two**



**NATIONAL COUNCIL FOR  
CURRICULUM & ASSESSMENT  
OF MINISTRY OF EDUCATION**

## PHYSICAL EDUCATION AND HEALTH (CORE) TEACHER MANUAL

Enquiries and comments on this manual should be addressed to:

The Director-General

National Council for Curriculum and Assessment (NaCCA)

Ministry of Education

P.O. Box CT PMB 77

Cantonments Accra

Telephone: 0302909071, 0302909862

Email: [info@nacca.gov.gh](mailto:info@nacca.gov.gh)

website: [www.nacca.gov.gh](http://www.nacca.gov.gh)



©2025 Ministry of Education

This publication is not for sale. All rights reserved. No part of this publication may be reproduced without prior written permission from the Ministry of Education, Ghana.



# Contents

<b>INTRODUCTION</b>	<b>VII</b>
<b>ACKNOWLEDGEMENTS</b>	<b>VIII</b>
<b>SECTION 1: INDIVIDUAL AND TEAM SPORTS</b>	<b>1</b>
STRAND: PHYSICAL ACTIVITY AND HEALTH	1
SUB-STRAND: SPORTS PARTICIPATION	1
<b>Week 1</b>	<b>3</b>
Focal Area: Performing Service and Reception in Table Tennis	3
<b>Week 2</b>	<b>13</b>
Focal Area: Performing Forehand and Backhand Strokes in Table Tennis	13
<b>Week 3</b>	<b>23</b>
Focal Area: Forehand and Backhand Stokes	23
Appendix A: Sample Portfolio Assessment	28
Appendix B: Group Project Work	30
Scoring rubric/ Marking Scheme	29
Assessment Rubrics	30
<b>SECTION 2: HEALTH AND WELLNESS – PART ONE: HUMAN DISEASES</b>	<b>33</b>
STRAND: PHYSICAL ACTIVITY AND HEALTH	33
SUB-STRAND: HEALTH AND WELLNESS	33
<b>Week 4</b>	<b>35</b>
Focal Area: Concepts of Human Diseases	35
<b>Week 5</b>	<b>49</b>
Focal Area: Classification of Human Diseases	49
<b>SECTION 3: TRADITIONAL GAMES - PART ONE</b>	<b>61</b>
STRAND: PHYSICAL ACTIVITY AND HEALTH	61
SUB-STRAND: Traditional Games	61
<b>Week 6</b>	<b>63</b>
Focal Area: Origins and Importance of Traditional Games	63
<b>Week 7</b>	<b>74</b>
Focal Area: Arm wrestling and tug of war	74
Appendix C: Mid-Semester Examination	85
<b>SECTION 4: INDIVIDUAL AND TEAM SPORTS – PART TWO</b>	<b>87</b>
STRAND: PHYSICAL ACTIVITY AND HEALTH	87
SUB-STRAND: SPORTS PARTICIPATION	87
<b>Week 8</b>	<b>89</b>
Focal Area: Footwork, Shoulder and Overhead Pass	89

<b>Week 9</b>	<b>102</b>
Focal Area: Shooting	102
<b>Week 10</b>	<b>117</b>
Focal Area: Netball game	117
<b>SECTION 5: HEALTH AND WELLNESS - PART TWO: DISEASE PREVENTION</b>	<b>122</b>
STRAND: PHYSICAL ACTIVITY AND HEALTH	122
SUB-STRAND: HEALTH AND WELLNESS	122
<b>Week 11</b>	<b>124</b>
Focal Area: Disease prevention	124
<b>Week 12</b>	<b>142</b>
Focal Area: Personal and menstrual hygiene	142
Appendix D: End of First Semester Examination	162
<b>SECTION 6: TRADITIONAL GAMES - PART TWO</b>	<b>164</b>
STRAND: PHYSICAL ACTIVITY AND HEALTH	164
SUB-STRAND: TRADITIONAL GAMES	164
<b>Week 13</b>	<b>166</b>
Focal Area: African cloth parachute	166
<b>SECTION 7: INDIVIDUAL AND TEAM SPORTS – PART THREE</b>	<b>172</b>
STRAND: PHYSICAL ACTIVITY AND HEALTH	172
SUB-STRAND: SPORTS PARTICIPATION	172
<b>Week 14</b>	<b>174</b>
Focal Area: Underarm serve and digging reception in volleyball	174
<b>Week 15</b>	<b>187</b>
Focal Area: Reinforcement of underarm serve and digging reception in volleyball (Skill polishing)	187
<b>Week 16</b>	<b>193</b>
Focal Area: Zones and rotational order on the court in volleyball	193
Appendix E: Individual Project Work	204
Sample Rubric for Scoring Individual Project Work	205
<b>SECTION 8: HEALTH AND WELLNESS - PART THREE</b>	<b>207</b>
STRAND: PHYSICAL ACTIVITY AND HEALTH	207
SUB-STRAND: HEALTH AND WELLNESS	207
<b>Week 17</b>	<b>209</b>
Focal Area: Concept of First Aid	209
<b>Week 18</b>	<b>222</b>
Focal Area: Applying the knowledge of first aid	222
Appendix F: Mid-Semester Examination	238
<b>SECTION 9: TEAM SPORTS - PART FOUR</b>	<b>239</b>
STRAND: PHYSICAL ACTIVITY AND HEALTH	239
SUB-STRAND: SPORTS PARTICIPATION	239

<b>Week 19</b>	<b>241</b>
Focal Area: Rules, grip and pushing in hockey	241
<b>Week 20</b>	<b>257</b>
Focal Area: Dribbling in hockey	257
<b>Week 21</b>	<b>263</b>
Focal Area: Hitting in Hockey	263
<b>SECTION 10: HEALTH AND WELLNESS - PART FOUR</b>	<b>272</b>
STRAND: PHYSICAL ACTIVITY AND HEALTH	272
SUB-STRAND: HEALTH AND WELLNESS	272
<b>Week 22</b>	<b>274</b>
Focal Area: Stress and its Common Sources	274
<b>Week 23</b>	<b>287</b>
Focal Area: Prevention and Management of Stress	287
<b>SECTION 11: WALKING AS A SPORT</b>	<b>303</b>
STRAND: PHYSICAL ACTIVITY AND HEALTH	303
SUB-STRAND: LONG DISTANCE EVENTS	303
<b>Week 24</b>	<b>305</b>
Focal Area: Race walking	305
Appendix G: End of Second Semester Examination	319
<b>BIBLIOGRAPHY</b>	<b>320</b>

# Introduction

The National Council for Curriculum and Assessment (NaCCA) has developed a new Senior High School (SHS) curriculum which aims to ensure that all learners achieve their potential by equipping them with 21st Century skills, competencies, character qualities and shared Ghanaian values. This will prepare learners to live a responsible adult life, further their education and enter the world of work.

This is the first time that Ghana has developed an SHS Curriculum which focuses on national values, attempting to educate a generation of Ghanaian youth who are proud of our country and can contribute effectively to its development.

This Teacher Manual for Physical Education and Health (Core) is a single reference document which covers all aspects of the content, pedagogy, teaching and learning resources and assessment required to effectively teach Year Two of the new curriculum. It contains information for all 24 weeks of Year Two including the nine Key Assessments required for the Student Transcript Portal (STP).

Thank you for your continued efforts in teaching our children to become responsible citizens.

It is our belief that, if implemented effectively, this new curriculum will go a long way to transforming our Senior High Schools and developing Ghana so that we become a proud, prosperous and values-driven nation where our people are our greatest national asset.

# Acknowledgements

Special thanks to Professor Samuel Ofori Bekoe, Director-General of the National Council for Curriculum and Assessment (NaCCA) and all who contributed to the successful writing of the Teacher Manuals for the new Senior High School (SHS) curriculum.

The writing team was made up of the following members:

National Council for Curriculum and Assessment	
Name of Staff	Designation
Eric Amoah	Deputy Director-General, Technical Services
Reginald Quartey	Ag. Director, Curriculum Development Directorate
Anita Cordei Collison	Ag. Director, Standards, Assessment and Quality Assurance Directorate
Rebecca Abu Gariba	Ag. Director, Corporate Affairs
Anthony Sarpong	Director, Standards, Assessment and Quality Assurance Directorate
Uriah Kofi Otoo	Senior Curriculum Development Officer (Art and Design Foundation & Studio)
Nii Boye Tagoe	Senior Curriculum Development Officer (History)
Juliet Owusu-Ansah	Senior Curriculum Development Officer (Social Studies)
Ayuuba Sullivan Akudago	Senior Curriculum Development Officer (Physical Education & Health)
Godfred Asiedu Mireku	Senior Curriculum Development Officer (Mathematics)
Samuel Owusu Ansah	Senior Curriculum Development Officer (Mathematics)
Thomas Kumah Osei	Senior Curriculum Development Officer (English)
Godwin Mawunyo Kofi Senanu	Assistant Curriculum Development Officer (Economics)
Joachim Kwame Honu	Principal Standards, Assessment and Quality Assurance Officer
Jephtar Adu Mensah	Senior Standards, Assessment and Quality Assurance Officer
Richard Teye	Senior Standards, Assessment and Quality Assurance Officer
Nancy Asieduwaa Gyapong	Assistant Standards, Assessment and Quality Assurance Officer
Francis Agbalenyo	Senior Research, Planning, Monitoring and Evaluation Officer
Abigail Birago Owusu	Senior Research, Planning, Monitoring and Evaluation Officer
Ebenezer Nkuah Ankamah	Senior Research, Planning, Monitoring and Evaluation Officer
Joseph Barwuah	Senior Instructional Resource Officer
Sharon Antwi-Baah	Assistant Instructional Resource Officer
Dennis Adjasi	Instructional Resource Officer

Samuel Amankwa Ogyampo	Corporate Affairs Officer
Seth Nii Narthey	Corporate Affairs Officer
Alice Abbew Donkor	National Service Person

Subject	Writer	Designation/Institution
Additional Mathematics	Dr. Nana Akosua Owusu-Ansah	University of Education Winneba
	Gershon Kwame Mantey	University of Education Winneba
	Innocent Duncan	KNUST Senior High School
Agricultural Science	David Esela Zigah	Achimota School
	Prof. J.V.K. Afun	Kwame Nkrumah University of Science and Technology
	Issah Abubakari	Half Assini Senior High School
	Mrs. Benedicta Carbilba Foli	Retired, Pope John SHS and Minor Seminary
Agriculture	Esther Fobi Donkor	University of Energy and Natural Resources, Sunyani
	Prof. Frederick Adzitey	University for Development Studies
	Eric Morgan Asante	St. Peter's Senior High School
Automotive and Metal Technology	Dr. Sherry Kwabla Amedorme	Akenten Appiah Menka University of Skills Training and Entrepreneurial Development (AAMUSTED)
	Kunyuuri Philip	Kumasi Senior High Technical School
	Emmanuel Korletey	Benso Senior High Technical School
	Philip Turkson	G E S
Electrical and Electronics Technology	Walter Banuenumah	Akenten Appiah Menka University of Skills Training and Entrepreneurial Development (AAMUSTED)
	Akuffo Twumhene Frederick	Koforidua Senior High Technical School
	Gilbert Second Odjamgba	Ziavi Senior High Technical School
Building Construction and Woodwork Technology	Wisdom Dzidzienyo Adzraku	Akenten Appiah Menka University of Skills Training and Entrepreneurial Development (AAMUSTED)
	Michael Korblah Tsorgali	Akenten Appiah Menka University of Skills Training and Entrepreneurial Development (AAMUSTED)
	Dr. Prosper Mensah	CSIR-FORIG

Building Construction and Woodwork Technology	Isaac Buckman	Armed Forces Senior High Technical School
	Firmin Anewuoh	Presbyterian College of Education, Akropong-Akuapem
	Lavoe Daniel Kwaku	Sokode Senior High Technical School
Arabic	Dr. Mohammed Almu Mahaman	University for Development Studies
	Dr. Abas Umar Mohammed	University of Ghana
	Mahey Ibrahim Mohammed	Tijjaniya Senior High School
Art and Design Studio and Foundation	Dr. Ebenezer Acquah	University of Education Winneba
	Seyram Kojo Adipah	GES - Ga East Municipal Education Directorate
	Dr. Jectey Nyarko Mantey	Kwame Nkrumah University of Science and Technology
	Yaw Boateng Ampadu	Prempeh College
	Kwame Opoku Bonsu	Kwame Nkrumah University of Science and Technology
	Angela Owusu-Afriyie	Opoku Ware School
Aviation and Aerospace Engineering	Opoku Joel Mintah	Altair Unmanned Technologies
	David Kofi Oppong	Kwame Nkrumah University of Science and Technology
	Sam Ferdinand	Afua Kobi Ampem Girls' Senior High School
Biology	Paul Beeton Damoah	Prempeh College
	Jo Ann Naa Dei Neequaye	Nyakrom Senior High Technical School
	Abraham Kabu Otu	Prampram Senior High School
Biomedical Science	Dr. Dorothy Yakoba Agyapong	Kwame Nkrumah University of Science and Technology
	Davidson Addo	Bosomtwe Girls STEM SHS
	Jennifer Fafa Adzraku	
Business Management	Ansbert Baba Avole	Bolgatanga Senior High School
	Dr. Emmanuel Caesar Ayamba	Bolgatanga Technical University
	Faustina Graham	Ghana Education Service, HQ
Accounting	Nimako Osei Victoria	SDA Senior High School, Akyem Sekyere
	Emmanuel Kodwo Arthur	ICAG
	Bernard Adobaw	West African Examination Council
Chemistry	Awumbire Patrick Nsobila	Bolgatanga Senior High School

Chemistry	Paul Michael Cudjoe	Prempeh College
	Bismark Kwame Tunu	Opoku Ware School
	Michael Amissah	St. Augustine's College
Computing and Information Communication Technology (ICT)	Raphael Dordoe Senyo	Ziavi Senior High Technical School
	Kwasi Abankwa Anokye	Ghana Education Service, SEU
	Osei Amankwa Gyampo	Wesley Girls High School, Kumasi
	Dr. Ephriam Kwaa-Aidoo	University of Education Winneba
	Dr. Gaddafi Abdul-Salaam	Kwame Nkrumah University of Science and Technology
Design and Communication Technology	Gabriel Boafo	Kwabeng Anglican Senior High Technical School
	Joseph Asomani	Akenten Appiah Menka University of Skills Training and Entrepreneurial Development (AAMUSTED)
	Phyllis Mensah	Akenten Appiah Menka University of Skills Training and Entrepreneurial Development (AAMUSTED)
Economics	Dr. Peter Anti Partey	University of Cape Coast
	Charlotte Kpogli	Ho Technical University
	Salitsi Freeman Etonam	Anlo Senior High School
Engineering	Daniel Kwesi Agbogbo	Kwabeng Anglican Senior High Technical School
	Prof. Abdul-Rahman Ahmed	Kwame Nkrumah University of Science and Technology
	Valentina Osei-Himah	Atebubu College of Education
English Language	Esther Okaitsoe Armah	Mangoase Senior High School
	Kukua Andoh Robertson	Achimota School
	Beatrice Antwiwaa Boateng	Oti Boateng Senior High School
	Perfect Quarshie	Mawuko Girls Senior High School
French	Osmanu Ibrahim	Mount Mary College of Education
	Maurice Adjetej	Retired, CREF
	Mawufemor Kwame Agorgli	Akim Asafo Senior High School
General Science	Dr. Comfort Korkor Sam	University for Development Studies
	Robert Arhin	SDA Senior High School, Akyem Sekyere
Geography	Raymond Nsiah-Asare	Methodist Girls' High School

Geography	Prof. Ebenezer Owusu–Sekyere	University for Development Studies
	Samuel Sakyi–Addo	Achimota School
Ghanaian Languages	David Sarpei Nunoo	University of Education Winneba
	Catherine Ekuia Mensah	University of Cape Coast
	Ebenezer Agyemang	Opoku Ware School
Government	Josephine Akosua Gbagbo	Ngleshie Amanfro Senior High School
	Augustine Arko Blay	University of Education Winneba
	Samuel Kofi Asafua Adu	Fettehman Senior High School
History	Dr. Anitha Oforiwah Adu–Boahen	University of Education Winneba
	Prince Essiaw	Enchi College of Education
Management in Living	Grace Annagmeng Mwini	Tumu College of Education
	Dorcas Akosua Opoku	Winneba Secondary School
Clothing and Textiles	Jusinta Kwakyewaa (Rev. Sr.)	St. Francis Senior High Technical School
	Rahimatu Yakubu	Potsin T.I Ahmadiyya SHS
Food and Nutrition	Ama Achiaa – Afriyie	St. Louis SHS
	Lily–Versta Nyarko	Mancell Girls' Senior High Technical School
Literature–in–English	Blessington Dzah	Ziavi Senior High Technical School
	Juliana Akomea	Mangoase Senior High School
Manufacturing Engineering	Benjamin Atribawuni Asaaga	Kwame Nkrumah University of Science and Technology
	Dr. Samuel Boahene	Kwame Nkrumah University of Science and Technology
	Ali Morrow Fatormah	Mfantsipim School
Mathematics	Edward Dadson Mills	University of Education Winneba
	Zakaria Abubakari Sadiq	Tamale College of Education
	Collins Kofi Annan	Mando Senior High School
Music	Pros Cosmas W. K. Mereku	University of Education Winneba
	Prof. Emmanuel Obed Acquah	University of Education Winneba
	Joshua Amuah	University of Ghana
	Benjamin Ofori	CRIG Primary School, Akim Tafo
	Davies Obiri Danso	New Juaben Senior High School
Performing Arts	Dr. Latipher Amma Osei Appiah–Agyei	University of Education Winneba
	Prof. Emmanuel Obed Acquah	University of Education Winneba
	Chris Ampomah Mensah	Bolgatanga Senior High School

Core Physical Education and Health	Dr. Mary Aku Ogum	University of Cape Coast
	Paul Kofi Yesu Dadzie	Accra Academy
Elective Physical Education and Health	Sekor Gaveh	Kwabeng Anglican Senior High Technical School
	Anthonia Afosah Kwaaso	Jukwa Senior High School
Physics	Dr. Linus Kweku Labik	Kwame Nkrumah University of Science and Technology
	Henry Benyah	Wesley Girls' High School, Cape Coast
	Sylvester Affram	Kwabeng Anglican Senior High School
Christian & Islamic Religious Studies	Dr. Richardson Addai-Mununkum	University of Education Winneba
	Dr. Francis Opoku	Valley View University College
	Dr. Francis Normanyo	Mount Mary College
	Dr. Haruna Zagoon-Sayeed	University of Ghana
	Kabiru Soumana	GES
	Seth Tweneboa	University of Education Winneba
Religious and Moral Education	Anthony Mensah	Abetifi College of Education
	Joseph Bless Darkwa	Volo Community Senior High School
	Clement Nsorwineh Atigah	Tamale Senior High School
Robotics	Dr. Eliel Keelson	Kwame Nkrumah University of Science and Technology
	Isaac Nzoley	Wesley Girls' High School, Cape Coast
Social Studies	Mohammed Adam	University of Education Winneba
	Simon Tengan	Wa Senior High Technical School
	Dr. Adwoa Dufie Adjei	University Practice Senior High School
	Dr. Isaac Atta Kwenin	University of Cape Coast
Spanish	Setor Donne Novieto	University of Ghana
	Franklina Kabio-Danlebo	University of Ghana
	Mishael Annoh Acheampong	University of Media, Art and Communication
Technical Support	Benjamin Sundeme	St. Ambrose College of Education
	Dr. Isaac Amoako	Atebubu College of Education
	Eric Abban	Mt. Mary College of Education



# SECTION 1: INDIVIDUAL AND TEAM SPORTS

## STRAND: PHYSICAL ACTIVITY AND HEALTH

### SUB-STRAND: SPORTS PARTICIPATION

**Learning Outcome:** *Demonstrate the ability to use core skills in performing individual and team sports (e.g., table tennis, netball, etc)*

**Content Standard:** *Demonstrate the ability to apply various skills in performing individual and team sports (e.g., Table tennis, netball, volleyball, etc)*

#### HINT



- **Assign individual portfolio assessment** for the academic year by Week 3. Portfolio should be submitted by Week 22. **See Appendix A** of this section and *Teacher Assessment Manual and Toolkit* pages 22–25 for more information on how to organise a portfolio assessment.
- **Inform learners they will be given group project** in week 2 and due for submission in week 7.

## INTRODUCTION AND SECTION SUMMARY

This section is about individual and team sports in table tennis. Table tennis (also known as ping-pong) is a racket sport derived from tennis but distinguished by its playing surface being the top of a specially designed table. It is played either one-on-one or in teams of two players who take turns returning a light, hollow ball over the net, which divides the playing table into two halves. It is played using small rackets/bats. To play table tennis, the rally continues until a player fails to serve or return the ball legally, which results in a point for the opponent. Play is fast, requiring quick reactions and constant attention and is characterised by countless spins on the ball relative to other ball sports. Table tennis was accepted and has been played as an Olympic sport since 1988.

**The weeks covered by this section are:**

**Week 1:** Apply core skills in performing individual and team sports (e.g., table tennis - Service and reception in table tennis).

**Week 2:** Apply core skills in performing individual and team sports (e.g., table tennis - forehand and backhand strokes in table tennis).

**Week 3:** Apply the core skills acquired in a game of table tennis

## SUMMARY OF PEDAGOGICAL EXEMPLARS

Pedagogical strategies in this section are ways of teaching the concepts in table tennis by employing methods like structured talk-for-learning where learners and facilitators discuss table tennis and its rules, grip, stance, service and ball control. Other strategies such as game-based and collaborative learning will be used. Learners in groups are granted the opportunity to think about the skills in table tennis and how service and reception are executed.

## ASSESSMENT SUMMARY

Assign tasks to cover the rules, grip, stance, service and control of the ball in table tennis taking into consideration the various levels of learners' ability. This should be done through structured talk-for-learning, collaboration and game-based exemplars using mixed-ability and mixed-gender approaches. Accept varying responses from learners on a given task such as oral description, demonstration and full performances. Develop rubrics to score the oral descriptions, demonstrations and full performances of learners. Teachers are entreated to administer these assessments and record them for onward submission into the Student Transcript Portal (STP). The following assessment would be conducted and recorded for each learner:

**Week 1:** Discussion and demonstration of how to perform a service in table tennis should be recorded as the class work for first semester to the STP.

**Week 2: Group Project Work** will be assigned and due at end of Week 10.

For additional information on how to effectively administer these assessment modes, refer to the Appendices.

**WEEK 1**

**Learning Indicator:** Apply core skills in performing individual and team sports in table tennis (service and reception)

## **FOCAL AREA: PERFORMING SERVICE AND RECEPTION IN TABLE TENNIS**

### **Service and Reception in Table Tennis**



**Figure 1.1:** *Table Tennis Equipment*

### **Background**

The sport originated during the reign of Queen Victoria in England as an after-dinner parlour game for the upper class. It started when British military officers in India around the 1860s or 1870s developed versions of the game and brought it back to England. Early versions used a row of books arranged along the centre of the table as a net, two more books served as rackets and were used to continuously hit a golf ball.

In 1883, Slazenger developed the table tennis net and filed a patent (ownership right) for it. In 1901, Jaques J. & Son Limited claimed the legal ownership of the name “ping-pong” following their development of the first playing table for the game however Jaques’ table tennis equipment was expensive and not affordable to ordinary people. This led to other manufacturers developing new and cheaper playing tables. They used “table tennis” to identify this more affordable equipment. The new name became popular and has remained so today though the name ping-pong is still commonly used worldwide.

1901 was an important year in the development of the game with James W. Gibb discovering celluloid table tennis balls which remains in use today. E.C. Goode invented the modern racket and the sport became popular. These advancements led to organised tournaments and literature being developed. As a result of wide interest in the sport, an unofficial table tennis world championship was held in 1902 with the first official World Championships being held in London in 1926. The sports grew in popularity globally, with a significant rise in China. Due to the global acceptance of table tennis, it became an Olympic sport in 1988.



**Figure 1.2:** *A Table Tennis Championship in Ghana*

### Basic Rules of the Game

1. A table tennis match begins with the umpire conducting a coin toss. The winner has the option to serve the ball first; receive it or choose the side of the table they would like to play from.
2. The server must hold the ball with an open palm, toss it up and strike it in a manner that the ball bounces first on the server's side of the table before bouncing over the net to the opponent's side.
3. The receiver must return the ball by hitting it over the net and into the opponent's half of the table. A foul is called if the player attempts to return the ball before it bounces.
4. In singles competition, the service rule allows the server to serve to any part of the opponent's half of the table but in doubles, the service must travel diagonally across the table.
5. A player wins a point when the opponent fails to return a good serve and loses a point when a ball served does not touch the server's half first.
6. A player wins a game of table tennis by scoring 11 points, with one point awarded for every infringement. Every player gets to serve twice in a row. The first to reach 11 points is declared the winner. If the points are tied at 10-10, a player then must gain a two-point lead to win the game.



**Figure 1.3:** *Applying the Rules in Table Tennis*

## Importance of Service and Reception in Table Tennis

1. **Good control:** The serve in table tennis allows a player to have total control over how and where to hit the ball. It is the only situation where a player dictates the play.
2. **Pressure on opponent:** A good serve increases pressure on the opponent. When service goes well, the receiver knows they won't get any easy shots, making them more cautious.
3. **Preventing Attacks:** A strong serve prevents opponents from launching powerful attacks right away, giving the server an advantage.
4. **Own the Attack:** A well-placed serve also improves a player's chances of making effective attacks during the rally.
5. **Focus on the Contact Point:** Players pay close attention to where the ball contacts the opponent's racket during the serve. This helps them determine the spin and placement of the ball.



Figure 1.4: Defence and Attack Rally

## Types of Grips in Table Tennis

In table tennis, there are two primary types of grips that players use, each with its variations:

1. **Shake hand grip:** This grip resembles a handshake. The player grips the racket as if shaking hands with it. See *Figure 1.5*.

### Variations

- a. **Deep Shake hand:** The racket is held deeper in the palm for more control.
- b. **Shallow Shake hand:** The racket is held more toward the fingers, allowing quicker wrist movement and a faster style of play.

This grip is popular among Western players and is suitable for both offensive and defensive styles.



Figure 1.5: The shake hand grip

2. **Penhold grip:** In this grip, the racket is held similarly to holding a pen, with the handle pointed upward and the face of the racket toward the ground. See *Figure 1.6*.

### Variations

- a. **Chinese Penhold:** The player uses mainly the forehand side and grips the racket with three fingers behind the blade.
- b. **Japanese/Korean Penhold:** The handle is longer, and the player grips the racket with more fingers behind the blade for power, often using one side for both forehand and backhand.

This grip is more popular in Asia and often favours an aggressive, close-to-the-table playing style. Each grip offers different advantages in terms of spin, control and usefulness.



**Figure 1.6:** *The Penhold grip*

## The Serve/Service

A serve in table tennis is used to start each rally and is done by hitting the ball from a player's free hand and striking it into play with the racket. The serving player must strike the ball so that it hits their own side first, clears the net, and then lands on their opponent's half of the table. A serve can be performed using either a forehand or backhand motion. A player serving in table tennis should follow these steps:

1. **Stance**
  - a. Stand behind the end of the table.
  - b. The feet should be shoulder-width apart.
2. **Hold the Ball**
  - a. Place the ball in your free hand (the hand not holding the racket).
  - b. Keep your palm flat and fingers together.
3. **Toss the Ball**
  - a. Toss the ball upward with a gentle spin.
  - b. The ball should rise at least 6 inches (15 cm) from your hand.
4. **Hit the Ball**
  - a. As the ball descends, use your racket to strike it.
  - b. Aim to hit the ball so it clears the net.

## Serve Variations

There are different types of serves, such as **topspin**, **backspin**, and **sidespin**. Experiment with spin and placement to keep your opponent guessing.

## Topspin

1. Topspin is a table tennis shot in which a player brushes the top of the ball making it have a quick downward motion towards the table, causing the ball to speedily turn downward and forward, giving it spin and a fast bounce on the table. See Figure 1.7.
2. This rotation makes it difficult for the opponent to return the ball, as the effect of the rotation causes the ball to move faster and with a lower rebound angle.
3. To serve with a topspin effect in table tennis, the player must do a quick wrist flick accelerating toward the table and making the first bounce at the beginning of the board.



**Figure 1.7:** Image of Topspin Serving.

## Backspin

It is also known as an underspin serve. It is a strategic technique that can give players an advantage over their opponents (see *Figures 1.8 to 1.9*). Here is how to execute it:

1. **Grip:** Hold the racket with a pinch grip, placing your thumb on the upper side and curling your fingers on the bottom.
2. **Stance:** Stand on the opposite side of your forehand holding the ball and facing the table. Bend your knees and lean forward.
3. **Toss and Wrist Movement:** Toss the ball up and flick your wrist underneath it as it descends. Brush the ball slightly to generate a backspin.
4. **Aim:** Keep the ball low and short, so it either bounces twice on your opponent's side or returns to your side.



**Figure 1.8:** Forehand Backspin Service



**Figure 1.9:** *Backhand Backspin Service*

## Reception/Receiving

Reception in table tennis is the act where a player returns a served ball from the opponent. The receiver returns the ball by hitting it over the net back to the opponent's half of the table which becomes a rally between the two players. The player must hit the ball after it bounces once on their side of the net. If the ball is hit before it bounces or after it bounces more than once, a foul is called and the opponent earns a point.



**Figure 1.10:** *Receiving a ball*

## Basic Drills and Steps in Table Tennis

### 1. Footwork and movement

- a. Work on your footwork to position yourself correctly for each shot.
- b. Practice lateral movements, quick steps and balance.

### 2. Grip and stance

- a. Hold the racket with a firm but relaxed grip.
- b. Experiment with different grips to find what suits you best.
- c. Stand with feet shoulder-width apart, knees slightly bent and body leaning forward.
- d. Hold racket in front of the body and ready to move in any direction.
- e. Stay balanced on the balls of the feet and prepared to move quickly.

### 3. Techniques

- a. Pay close attention to the server's racket movement to anticipate the spin.
- b. Adjust the racket angle to counter the spin (for example, angle upwards for backspin and downward for topspin).
- c. Focus on proper form, timing and consistency.

#### 4. **Serve practice**

- a. Develop a variety of serves (short, long, sidespin, topspin).
- b. Vary spin, placement and speed to keep opponents guessing.

#### 5. **Receive and return**

- a. Learn to read your opponent's serve.
- b. Contact the ball gently to keep it low over the net (often used for backspin).
- c. Simply hold the racket firm to redirect the ball (used against fast topspin serves).
- d. For short serves, use a quick wrist action to flick the ball back with speed and surprise the server.
- e. Practice returning strokes with control and placement.

#### 6. **Drills and routines**

- a. Engage in multiball drills with a partner or a coach.
- b. Work on specific aspects like topspin or counterattacks.

#### 7. **Match play**

- a. Participate in friendly matches or tournaments.
- b. Analyse your performance and learn from your mistakes.

#### 8. **Fitness and conditioning**

- a. Strengthen your core muscles, legs and upper body.
- b. Cardio workouts improve endurance.

#### 9. **Mental toughness**

- a. Stay focused, positive and adaptable during games.
- b. Learn from losses and celebrate victories.

#### 10. **Watch and learn**

- a. Study professional matches.
- b. Observe techniques, strategies and shot selection.



**Figure 1.11:** *Learning Ball Control in Table Tennis*



**Figure 1.12:** *Applying the Skills in Table Tennis*

## Learning Tasks

1. Describe how to serve in table tennis.
2. Demonstrate service in table tennis.
3. Describe how to receive a ball in table tennis.
4. Demonstrate service in table tennis.
5. Demonstrate how to sustain a rally in table tennis.

## Pedagogical Exemplars

### Activity

#### 1. Starter

Show a short video of about two minutes or images of people playing table tennis and let learners describe the various skills they see.



<https://www.youtube.com/watch?v=NfmPcpi4sfc>

*A Video Tutorial on Service in Table Tennis.*



<https://www.youtube.com/watch?v=j0N1ohnL498>

*A Video Tutorial on Ball Reception in Table Tennis.*

#### 2. Introduction

Share a brief history of table tennis with learners for just two minutes. Introduce the rules, importance, grips, types of serve, etc to learners. Tell learners the skills to be learnt and demonstrate the skills to them.

### 3. Warm-up activity

Motivate less skilled learners to boost their confidence in trying the drills. Encourage all learners to feel free to start from their own level of proficiency and not be intimidated by the skilful acts of the highly proficient ones.

In mixed-ability and mixed-gender groups, place learners in a demarcated space and take them through the following warm-up activities:

- a. Learners perform light jogging for 3-5 minutes to increase their general body temperature and heart rate (Jumping jacks and jogging in place).
- b. Table-tennis-specific movements such as shuffle (side to side) footwork.
- c. Shadow play - they perform imaginary stroke play, mimicking forehand and backhand table tennis actions.

**Note:** Teachers have the option to choose/create their own suitable activities as a starter and warm-up.

### 4. Main activity: Serving and receiving

- a. Demonstrate how to stand, hold the grip, how to serve and how to receive to learners. Allow them ask questions based on the demonstration for clarity before engaging them.
- b. Learners practice the grip of the racket and stance and begin to play. Guide them to withdraw the hitting arm, twist the torso and drive the ball (almost in front) with the desired power and direction. Help them to focus on a smooth acceleration through the ball upon contact and avoid tensing up as it can affect their accuracy and spin. Encourage the highly proficient learners to assist those who are new to the sport or less skilful.
- c. In two lines, one at each end of the table, learners take turns to practice the service in table tennis. They are provided cues of the techniques for service to follow step-by-step. Less proficient learners are given additional support from teacher and highly proficient learners.
- d. Assist learners to stand within an arm's length of the table with their elbow bent at around 90° and feet approximately shoulder-width apart. They move the hips of the trailing leg forward to generate power. They keep gaps between their elbow and body. Guide them to point their free arm towards the ball when ready to strike and quickly pull it back as the hitting arm is about to contact the ball. This ensures natural body movement (biomechanics) and accuracy.
- e. **Follow-through:** Guide learners to place emphasis on the follow-through after hitting the ball. A good serve and a follow-through make it difficult for the opponent to hit the ball back. Remind learners of the need to follow through with it being the final component of the hitting process in most racket sports. Provide additional support to learners approaching proficiency.

### 5. Mini game: Service and reception

Keep learners in groups and let them start free service and receptions amongst their group members. Learners then play in turns with a partner in a game; every good service attracts 1 point for the group. After 15 seconds, the next pair takes over. This continues until each learner gets their chance to play. They accurately and honestly keep track of their scores while you closely monitor them. This will help develop their quick-thinking skills, arithmetic abilities and honest behaviours. Encourage all learners to engage in a supportive manner towards their fellow classmates.

**Scoring**

Every good service = 1 point for serving group

Every good return = 1 point for returning group

Every rally that lasts for 15 seconds = 1-point for each group.

**Cool down**

In a free formation, learners walk around and follow the teacher's directions and demonstrations with different bodily actions to return the body to its normal resting state.

**Closure**

In a free-standing formation, learners describe and demonstrate what they have learnt and share their personal experiences from the activities performed.

**Key Assessments****Level 1**

1. List two basic skills used in table tennis.
2. State the types of service in table tennis.
3. State one purpose of a serve in table tennis.
4. State what happens if a ball bounces twice on a player's half of the table.
5. Name two types of grips used in table tennis.
6. How does a player win a game in table tennis?

**Level 2**

1. Describe how a service and reception are executed in table tennis.
2. Explain three instances when a point is won in table tennis.
3. Explain the importance of service and reception in gaining an advantage in table tennis.
4. Demonstrate how service and reception are executed in a rally in table tennis.

**Level 3**

1. Explain how topspin affects the movement of the ball in table tennis.
2. Describe how a backspin is created in table tennis.
3. How can varying your serve help during a match?
4. What is the role of footwork in executing table tennis techniques effectively?

**Level 4:** Demonstrate how different types of spin affect the trajectory and bounce of the ball in table tennis.

## WEEK 2

**Learning Indicator:** Apply core skills in performing individual and team sports (e.g., table tennis – forehand and backhand strokes in table tennis)

### FOCAL AREA: PERFORMING FOREHAND AND BACKHAND STROKES IN TABLE TENNIS

#### Forehand and Backhand Strokes in Table Tennis Background

The forehand and backhand strokes are the backbone of table tennis gameplay, each with its own unique power and finesse. The forehand stroke is the go-to for unleashing powerful, controlled shots across the table. It is all about using the natural arm movement to dominate offensively.

The backhand stroke, on the other hand, is the secret weapon for quick, strategic responses. It is good for balance and precision, allowing the player to tackle shots on their non-dominant side effortlessly. Mastering these strokes will not only enhance a player's skills but also elevate their entire game strategy. — See *Figure 2.1*.



**Figure 2.1:** Celia Baah Danso (right) Vrs Eva Adom Amankwah at a National Finals

#### Forehand

The **forehand stroke** is one of the fundamental and most commonly used techniques in table tennis. It involves hitting the ball with the racket using the side of the racket that corresponds to the palm of the dominant hand. This means the palm of the dominant hand faces the direction of the shot. See *Figures 2.2 to 2.3*.

#### HINT



The dominant hand is the hand a player uses to hold the racket and execute strokes. This is typically the hand that the player naturally uses for most tasks, such as writing or throwing. The non-dominant hand is usually used for balance and positioning during the game.

- For **right-handed** players, the right hand is the dominant hand — see **Figure 2.3**.
- For **left-handed** players, the left hand is the dominant hand — see **Figure 2.2**.

## Key Characteristics of a Forehand Stroke in Table Tennis

### 1. Stance

- The player normally stands in an open stance, with feet slightly apart and the body turned slightly sideways.
- The racket is held in the dominant hand, with the arm relaxed and ready for the swing.

### 2. Swing

- The player swings the racket forward from the dominant side of the body.
- The racket moves from a lower to a higher position, following through after making contact with the ball.
- The wrist and forearm are involved to add precision and control to the stroke.

### 3. Contact

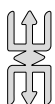
- The ball is struck when it is on the rise or at its peak after bouncing on the player's side of the table.
- For a typical forehand stroke, the ball is hit with a slightly closed racket angle to produce a flat or topspin shot.

### 4. Follow-through

After striking the ball, the racket continues moving in the direction of the shot with the arm extended naturally. The follow-through helps in maintaining balance and preparing for the next shot.

### 5. Recovery (Return to Ready Position)

- Quickly return to the ready position, preparing for the next shot.
- Maintain focus on the ball and opponent.



#### Note

The forehand stroke in table tennis can vary depending on the type of shot (e.g., a drive, smash or loop) but is generally faster and more powerful compared to backhand strokes.



**Figure 2.2:** A forehand stroke – a left-handed player



**Figure 2.3:** A forehand stroke – a right-handed player

## Types of Forehand Strokes

There are several types of forehand strokes, each serves a specific purpose, helping players to adapt to different situations during a match. These strokes vary in terms of speed, spin and purpose, allowing players to adapt their gameplay. Below are the main types of forehand strokes:

### 1. Forehand drive

**Purpose:** An offensive shot used to maintain pressure on the opponent.

**Characteristics:** A fast, controlled shot with moderate topspin. The forehand drive is executed with a slightly closed racket angle to keep the ball low and fast.

**When used:** During rallies to keep the ball in play while applying some aggression.

### 2. Forehand loop

**Purpose:** An aggressive attacking stroke, used to generate heavy topspin.

**Characteristics:** A powerful stroke with a significant amount of topspin. The racket swings from a low to high position, brushing the ball to create spin.

**When used:** Often used to attack underspin or slower balls, allowing for a more aggressive approach.

### 3. Forehand smash

**Purpose:** A high-speed attacking shot used to finish a point.

**Characteristics:** The ball is hit with maximum force and minimal spin, aiming for a fast and flat trajectory. A forehand smash is typically executed against high balls.

**When used:** When the ball is returned high and can be attacked for an outright winner.

### 4. Forehand push

**Purpose:** A defensive or neutral shot, typically used to control the pace of the game.

**Characteristics:** The ball is hit with a controlled, brushing motion, often with slight backspin. The forehand push is usually slower and aimed at keeping the ball low.

**When used:** Primarily used in response to underspin balls or in defensive situations to keep the ball in play.

### 5. Forehand flick (or flip)

**Purpose:** A quick, attacking shot used to return short balls, especially serves.

**Characteristics:** The racket moves in a fast, upward motion to flick the ball over the net. The shot is usually played with a flat or slightly topspin motion.

**When used:** Against short serves or balls that bounce close to the net, where a more powerful shot isn't possible.

## 6. Forehand block

**Purpose:** A defensive stroke used to counter fast, powerful shots.

**Characteristics:** The racket is held steady, using the opponent's speed to return the ball. The block is typically a controlled, passive stroke with little forward movement.

**When used:** When facing fast, aggressive shots, especially near the table.

## 7. Forehand chop

**Purpose:** A defensive stroke used to apply heavy backspin to the ball.

**Characteristics:** The ball is hit with a downward slicing motion, creating heavy backspin. This stroke is often slower and used to neutralize an opponent's attack.

**When used:** When the player is on the defensive, particularly when far from the table.

## Summary of Forehand Strokes

1. **Drive:** Fast, moderate topspin, offensive.
2. **Loop:** Heavy topspin, aggressive attacking.
3. **Smash:** Fast, flat shot to finish points.
4. **Push:** Defensive, slight backspin, low and controlled.
5. **Flick:** Quick, attacking return of short balls.
6. **Block:** Defensive, controlled return of fast shots.
7. **Chop:** Defensive, heavy backspin neutralizes attack.

## Importance of the Forehand Stroke in Table Tennis

The forehand stroke is one of the most important and widely used techniques in table tennis. Its significance lies in its versatility, power, and ability to control rallies and dictate play. Here are some key reasons why the forehand stroke is crucial in table tennis:

1. It is the strongest and the most aggressive stroke for players. It allows players to generate more power and speed during rallies.
2. The forehand stroke offers more flexibility, and a wider range of movement compared to the backhand. Players can adjust to hit shots from a variety of angles and positions making it easier to reach and attack balls from different parts of the table.
3. Players can produce different types of spin (especially topspin) with a forehand stroke, which is essential for controlling the trajectory and speed of the ball.
4. The forehand stroke is key for dictating the pace of rallies. It allows players to switch from defence to offense smoothly, helping to control the flow of the game and apply pressure on the opponent.
5. It is a reliable stroke for shot for players of all levels.

6. The forehand stroke can be used in various situations, including:
  - a. Forehand drive for controlled attacking.
  - b. Forehand loop for generating heavy topspin.
  - c. Forehand chop for defensive play.
  - d. Forehand smash for finishing points.
7. A strong forehand stroke encourages good footwork and body positioning, as players must move efficiently to get into position for the shot. Developing a consistent forehand stroke helps

## Backhand

The backhand stroke in table tennis is a technique where the player hits the ball with the back of the racket hand facing the direction of the stroke. This is the opposite of the forehand stroke, where the palm faces forward. The backhand stroke is commonly used when the ball is on the player's non-dominant side, and it can be used for both offensive and defensive shots.

### Key Features of a Backhand Stroke

1. **Stance:** Players usually have a more squared or neutral stance with the body facing the table directly, rather than turned to the side as in a forehand stroke. The feet are often positioned close together or shoulder-width apart, allowing for quick lateral movement.
2. **Grip:** The racket is held using either the Shake-hand grip or Penhold grip, depending on the player's preference. The backhand stroke is performed by swinging the racket across the front of the body.
3. **Swing:** The swing motion for a backhand stroke is shorter and more compact compared to a forehand stroke. The arm moves across the front of the body with the elbow serving as the pivot point for the motion. The wrist can also play an important role in adding spin or controlling the shot.
4. **Contact:** The ball is struck with the back of the racket as the player swings their arm from the non-dominant side towards the dominant side. The racket angle is typically more closed, especially for topspin shots.
5. **Follow-through:** After hitting the ball, the player follows through by continuing the racket's movement across the body, maintaining balance and preparing for the next shot.

### Types of Backhand Strokes

1. **Backhand drive:** A controlled attacking stroke, like the forehand drive where moderate topspin is applied.
2. **Backhand block:** A defensive shot used to return fast attacks with minimal effort. The racket is held steady, and the ball is "blocked" back.
3. **Backhand push:** A defensive stroke used to return short or underspin shots, typically keeping the ball low and spinning.
4. **Backhand loop:** An aggressive shot with heavy topspin used to counteract underspin or push shots.
5. **Backhand flick:** A quick attacking shot used to return short serves or balls close to the net.

## Importance of the Backhand Stroke

1. It is used for handling balls that come to the player's non-dominant side, especially in fast-paced rallies, where switching to a forehand might be difficult.
2. It is used for quick reactions and blocks when playing close to the table.
3. The stroke allows for shorter and faster movements compared to the forehand, making it ideal for blocking and returning rapid shots.
4. It provides balance and variety in a player's game, helping them handle shots on both sides of the body efficiently.



*Figure 2.4: A backhand stroke – a right-handed player*



*Figure 2.5: A backhand stroke – a left-handed player*



*Figure 2.6: Backhand play.*

## Learning Tasks

1. Explain forehand and backhand strokes in table tennis.
2. Why are forehand and backhand strokes important in table tennis?
3. What are the key differences between forehand and backhand strokes?
4. Demonstrate how to execute the forehand and the backhand strokes in table tennis.

## Pedagogical Exemplars

### Activity

#### 1. Starter/warm-up activity

##### Warm up activity 1: Target Tag

Mark different spots on the floor with coloured tape or small cones (for both forehand and backhand sides).

Ask learners to move quickly between the marked targets, touching them with their racket. This simulates positioning for strokes and helps them understand where to stand for different types of shots (forehand and backhand).

Encourage learners to move quickly and react to different colour instructions (e.g., touch blue for forehand, red for backhand, etc).

#### 2. Warm up activity 2: Ball toss and catch

In pairs, ask learners to stand 3-5 feet apart and toss the ball to each other. However, instead of catching the ball with their hand, they must “*catch*” the ball on their forehand or backhand side of the racket, keeping the ball balanced on the racket. This helps develop hand-eye coordination and racket control while warming up the wrists and arms.

**Add a fun challenge:** keep the ball balanced for a count of 5 before tossing it back.

**Note:** Teachers have the option to choose/create their own suitable activities as a starter and warm-up.

#### 2. Introductory activity

Show a short video or images of people playing table tennis using forehand or backhand and let learners describe the various skills they see.

#### 3. Main activity: Swing motion of the forehand stroke

In mixed ability groups, have learners stand without a ball and practice the swing motion of the forehand stroke. Emphasise proper grip, footwork (standing sideways to the table), and the follow-through of the racket. Ensure learners rotate their hips and shoulders while swinging.

##### Forehand Wall Bounce

Learners stand a few feet away from a wall and repeatedly hit the ball against it using only forehand strokes. Encourage a smooth and controlled swing, focusing on keeping the ball at a consistent height. Challenge them to keep the ball bouncing against the wall for as long as possible. Encourage assist learners who are new to the sport or less skilful.

### **Forehand Rally with a Partner**

In pairs, players practice rallying the ball using only forehand strokes. Start with slow, gentle hits and gradually increase speed as players get more comfortable. Ask them to count and see how many consecutive shots they can return using only forehands. Move around to assist and give additional support to learners struggling with the skill.

#### **Target practice**

Mark targets on the class wall or on the wall of the hall where the class is taking place, and have learners aim for the targets while using forehand strokes. Challenge learners by adding a point system to keep it fun (e.g. one point for each successful hit on the target).

### **Backhand stroke: Backhand shadow practice**

Learners practice the backhand motion without a ball. Emphasise grip, keeping the racket close to the body and a shorter and more compact swing than the forehand stroke. Encourage learners to focus on using the wrist and forearm and maintaining balance.

### **Backhand Wall Bounce**

Like the forehand wall drill, guide learners line up near a wall and hit the ball against the wall using only backhand strokes. Encourage smooth, controlled shots to develop muscle memory.

### **Backhand rally with a partner**

In pairs, players rally back and forth using only backhand strokes. Assist them to start slow and gradually increase the pace as their control improves. Inspire learners to keep the ball in play for as many backhand shots as possible.

### **Combined forehand and backhand rally**

In pairs, guide learners to alternate between hitting forehand and backhand strokes during rallies. For example, after hitting a forehand, the next shot must be a backhand, and so on. This helps learners transition between forehand and backhand strokes. For more advanced learners, speed up the pace or add a restriction (e.g., only five forehand and five backhand strokes per rally). Ask one learner to feed the balls alternately to the forehand and backhand sides of their partner. The player receiving the balls moves side to side, switching between forehand and backhand strokes with each shot. Time them and ask to switch roles when the time is up. Pay attention to their footwork and encourage smooth positioning and transitioning between strokes.

### **Around-the-world table tennis**

The objective of this is to make learning fun while practicing the strokes.

Guide learners to form a circle around the table. One learner hits a forehand or backhand stroke, then moves around the table while the next learner does the same. This continues in rapid succession and learners must stay in sync with each other. The aim is to keep the rally going for as many shots as possible, while alternating between forehand and backhand strokes. Learners finding it difficult should be put into a different group to practice at their own pace.

**Mini game: ‘Target Zones’ table tennis game**

The objective of the game is to practice and improve forehand and backhand strokes through targeted ball placement.

**Setup**

Divide the table into four zones using coloured chalk or tape. For example:

**Zone 1:** Forehand side (left) near the net.

**Zone 2:** Forehand side (left) deep.

**Zone 3:** Backhand side (right) near the net.

**Zone 4:** Backhand side (right) deep.

**Rules**

Each learner takes turns serving the ball. The goal is to hit the ball into one of the four zones. Learners alternate between forehand and backhand strokes. The server calls out the zone they will aim for before striking the ball. For example, if they call “Zone 2,” they must use a forehand stroke to place the ball deep into the forehand side.

**Scoring**

If a learner hits the correct zone with the appropriate stroke (forehand or backhand), they earn 2 points.

If the learner hits the correct zone but uses the wrong stroke, they earn 1 point.

No points are awarded for missing the table or hitting the wrong zone.

**Winning:** The first learner to reach 10 points wins.

**Cool down****Deep Breathing**

Have the learners stand in a relaxed position with their feet shoulder-width apart.

Instruct them to take slow, deep breaths; inhale through the nose for 4 seconds, hold for 2 seconds and exhale slowly through the mouth for 6 seconds.

Repeat this 4-5 times to help calm their heart rate.

**Stretching** (learners follow the teacher’s instructions or mimic what the teacher does).

**Neck Stretch:** Tilt the head gently to one side, hold for 10 seconds, then switch to the other side.

**Shoulder Rolls:** Roll the shoulders forward and backward for 10 seconds each.

**Arm Stretches:** Stretch one arm across the body and hold with the other arm for 10-15 seconds per side.

**Wrist Stretches:** Extend one arm forward with the palm facing up, use the other hand to gently pull back the fingers, and hold for 10 seconds per side.

**Back Stretch:** Stand with feet apart, bend forward, and try to touch the toes while keeping the legs straight, holding the stretch for 15-20 seconds.

**Closure**

Have the learners sit comfortably or stand in a circle.

Ask them to reflect on the skills they learned today. You can ask:

“What did you find most challenging about the forehand/backhand strokes?”

“What did you enjoy most during the session?”

“How can you improve your strokes for next lesson?”

Encourage brief responses to foster a positive mindset for future improvement.

**Key Assessment****Level 2**

1. Describe the basic technique for performing a forehand and a backhand stroke in table tennis
2. Explain how a backhand stroke differs from a forehand stroke in terms of body movement and racket positioning.

**Level 3**

1. In a match, your opponent keeps hitting to your backhand side. How would you adjust your stance and grip to effectively use a backhand stroke?
2. Why is mastering both forehand and backhand strokes essential for success in table tennis?

**Level 4**

1. Discuss how the ability to switch between forehand and backhand strokes can improve a player's defensive and offensive strategies in table tennis.
2. Demonstrate the correct grip and follow-through for both a forehand and backhand stroke.

## WEEK 3

**Learning Indicator:** Apply the core skills acquired in a game of table tennis

### FOCAL AREA: FOREHAND AND BACKHAND STROKES

#### Background

Table tennis is a dynamic and highly strategic sport that requires the development of several core skills to excel during a game. These skills, such as grip technique, footwork, stroke mechanics, hand-eye coordination and spin control form the foundation of successful performance. Among the essential strokes used in table tennis are the forehand and backhand, which allow players to maintain control over the ball and dictate the pace of the game. When applied effectively, these core skills enable players to execute tactical strategies, whether playing offensively or defensively.

A key starting point for players is the grip technique. The way a player holds the racket, whether using the shake hand or Penhold grip, determines the control they have over the ball's speed, spin, and trajectory. A well-maintained grip provides the player with the flexibility to adjust their shots during fast rallies and to switch between forehand and backhand strokes seamlessly.

Footwork is another critical skill that allows players to position themselves correctly to execute shots. Good footwork ensures that players can cover the table efficiently, staying balanced and prepared to return shots from various angles. Fast, precise movement is essential, especially in high-speed rallies, where quick transitions between offensive and defensive play are required.

One of the most fundamental aspects of table tennis is mastering stroke mechanics, particularly the forehand and backhand strokes. The forehand stroke is often used for generating powerful, offensive shots, as players can fully rotate their bodies and apply force to the ball. The forehand stroke is frequently the preferred offensive tool, allowing players to attack their opponent's weak spots. Equally, the backhand stroke is essential for maintaining control and making quick defensive returns. While it may not generate as much power as the forehand, the backhand provides the player with the ability to respond to shots on the opposite side of their body quickly. Mastering both strokes help players to maintain balance in gameplay, allowing players to be adaptable in various game situations.

In addition to stroke mechanics, hand-eye coordination is important. Players must accurately track the ball's movement, anticipate its trajectory, and time their strokes to hit the ball cleanly. This coordination is especially important when facing opponents who use various spins and shot speeds to disrupt the player's rhythm.

Spin control is another skill that is crucial to success in table tennis. Spin alters how the ball behaves when it hits the opponent's racket or the table. Skilled players use topspin, backspin, and sidespin to create unpredictable bounces, making it more difficult for their opponent to return the ball effectively. Understanding spin mechanics allows players to control the pace of the game and force their opponents into making errors.

By applying the forehand stroke to generate powerful offensive shots and the backhand stroke to defend and maintain control, players create a balance that can adapt to different game situations. Combined with strong grip technique, footwork, hand-eye coordination, and spin control, these core skills enable players to execute a wide range of strategies and perform well in matches. As players continue to refine these abilities, they become more proficient in handling the challenges and demands of competitive table tennis.

## Learning Tasks

1. Grip and stroke practice
2. Forehand and backhand rally
3. Game

## Pedagogical Exemplars

### Activity

#### **Starter /Warm-up Activity (Skill focused warm up)**

##### **Jogging and side stepping – 3mins**

In two or four lines, learners jog in place for 1 minute, then side-step in both directions for another minute to activate their legs. Encourage learners to swing their arms as they move, simulating racket strokes.

##### **Forehand and backhand shadow strokes – 2mins**

In three or four ranks, ask learners to stand in a ready position as if they were preparing for a table tennis rally. Without a ball, learners practice shadow strokes, imagining they are hitting a forehand or backhand shot using their racket. Listening to instruction from the teacher. Call out forehand or backhand and have them swing accordingly, focusing on proper form, rotation of the torso, and foot placement. They should also switch their grip depending on which stroke they are simulating.

##### **Footwork with imaginary rally -2mins**

In ranks learners simulate moving to hit an imaginary ball coming at them. Call out directions (e.g., Left or right) and have learners shuffle in that direction as they pretend to hit the ball.

You can speed up the commands to make it more challenging, prompting quick changes in direction and stroke selection (e.g., left backhand or right forehand).

##### **Wrap up**

After the warm-up, gather the learners for light stretching, focusing on their shoulders, wrists, and legs. This will prepare their muscles and joints for the game while preventing injuries.

**Note:** Teachers have the option to choose their own activities as a starter and warm-up.

#### **Main Activity**

##### **Activity based learning - King/queen of the table**

In mixed ability and mixed gender groups, help learners set up a queue, with two starting as players at the table to compete in game play. The winner of each rally stays at the table (the “king” or “queen”), while the loser goes to the back of the line and the next learner steps up to challenge. The first player to win five consecutive matches becomes the ultimate “king” or “queen” of the session. The focus of this activity is for quick reactions, consistency and rally control. The teacher can limit the type of strokes learners can use, e.g., only forehand or only backhand. Learners who are less skilful should be encouraged to perform at their required intensity and repetition. They can be assisted by the teacher or their colleagues to improve upon their base level at their own pace.

### **Rally challenge**

Put learners into appropriate groupings. Set a target for how many consecutive shots learners must hit without making an error (e.g., 10 consecutive forehand or backhand strokes) and guide them to practice the strokes in a contest for fun while learning, emphasising on the correct grip and footwork. If learners succeed in meeting the target, raise the target or add complexity (e.g., alternate between forehand and backhand every few shots). For learners who are struggling to meet the target reduce it to make the practice fun for them. Learners who are very skilful can be allowed to compete to see who can achieve the longest rally in pairs or small groups.

### **Group/collaborative learning**

#### **Game: Match play with restrictions**

##### **1. Prepare the Class**

**Explain the objective:** Start by explaining the purpose of the restricted match play. Tell learners that the focus is on improving specific skills learnt in the previous lesson (forehand, backhand, footwork, etc.) through controlled challenges.

**Demonstrate the restrictions:** Give a brief demonstration of each restriction. For example, show how to play using only forehand strokes or how to alternate between forehand and backhand and the movement at the table.

##### **2. Organise the class**

**Divide the class into pairs:** Pair up learners based on their skill level, ensuring balance. If the class is large, consider setting up multiple tables and have learners rotate in groups.

**Create rotation stations:** Set up different tables with each having a unique restriction.

**For example:**

**Table 1:** Service variation match

**Table 2:** Forehand only match

**Table 3:** Backhand only match

**Table 4:** Spin control match, etc.

This allows learners to rotate between the tables and experience all the restrictions during the class session.

##### **3. Match format and rules**

**Duration:** Each match can be played up to 5 or 7 points, depending on time available. This ensures learners experience multiple matches and restrictions within the session.

**Rotation:** After each match, pairs can rotate to the next table with a different restriction or switch partners to keep things fresh.

**Scoring:** Follow regular table tennis scoring rules (best of 3 or 5 points for each rally), but apply the specific restriction for that table.

##### **4. Monitor and coach**

**Provide feedback:** As learners to play, move around and offer pointers to help them adapt to the restrictions. For instance, teacher can correct their footwork during the **Footwork Focus Match** or encourage better spin control in the **Spin Control Match**.

**Encourage peer learning:** Have learners observe their classmates when they are not playing to see how others handle the restrictions. This can spark discussions and help them improve.

## 5. Debrief after each round

**Ask for reflections:** Take a few minutes after each round or rotation to ask learners to reflect on what they found difficult or easy. For instance, did they struggle with using only their non-dominant hand or with generating enough spin? This will promote self-awareness in learners and aid them to adjust and correct their mistakes in the next match.

**Discuss key learning points:** Emphasise the importance of consistency, control and adaptability in table tennis. Discuss how mastering these individual skills can improve their overall performance to motivate them.

## 6. End with a fun challenge

**Final match:** To wrap up the session, organise a *Champion's Match* where the winners of each restricted match face off in a game with combined restrictions. For example, they could play a match using only backhand strokes for even points and only backhand shots on odd points.

### Example session plan

Time	Activity
5 min	Introduction and demonstration of restrictions
7 min	Pair up learners and assign them to different tables
15 min	First round of restricted matches (learners rotate every 5 minutes)
10 min	Debrief and feedback
15 min	Second round of matches
8 min	Closing challenge and final reflection

### Hints for success

- Adapt for skill level: For learners finding the skills challenging, simplify some restrictions (e.g., allow them to alternate between forehand and backhand every 2 strokes instead of every stroke) to allow them also to practice with easy and have fun.
- Keep it fun: While these restrictions can be challenging, encourage learners to have fun and not take mistakes too seriously.
- Be flexible: If a particular restriction is too hard or too easy for some learners, adjust it on the spot to keep them engaged.
- Following this plan will create an enjoyable and educational table tennis session where learners can develop key skills while staying active and competitive.

**Closure:** In a free-standing formation, learners share their experiences with the class and how they intend to improve upon them.

**Cool down:** In a free formation, learners walk around in a relaxed manner to return the body to its normal resting state.

## Key Assessment

### Level 1

1. Define the term “grip” in table tennis.
2. Name the part of the racket that contacts the ball during a backhand stroke.
3. What is the main difference between a forehand and a backhand stroke?
4. What is the primary purpose of the forehand stroke in table tennis?

### Level 2

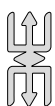
1. Compare and contrast the movement of the wrist in both forehand and backhand strokes.
2. Explain two key factors that contribute to generating power in a forehand stroke.
3. Explain why foot positioning is important when executing a forehand stroke.
4. How does spin control influence an individual’s ability to control the ball.
5. How does the angle of the racket affect the direction of the ball in a backhand stroke?
6. In the forehand only match, how should the body and feet be positioned to maintain consistent shots?

### Level 3

1. Analyse how the stance and body positioning impact the accuracy of a backhand stroke.
2. Why might a player choose to use a backhand stroke rather than a forehand stroke during a rally? Explain your answer with examples.

### Level 4

1. Design a practice drill that incorporates both forehand and backhand strokes to improve agility and stroke consistency. Describe each step and expected outcomes.
2. Create a personalised training plan to improve your forehand and backhand strokes, including specific goals, timelines, and metrics for tracking progress.
3. Plan a peer coaching session where you would teach someone the fundamental techniques of the forehand and backhand strokes. Outline the objectives, activities, and feedback methods you would use.



#### Note

Assign individual portfolio and group project this week) for the academic year. The portfolio should be submitted by Week 23.

## SECTION REVIEW

In Week 1, we learned about the importance of service and reception in table tennis. Mastering these skills helped establish a solid foundation for gameplay. A good serve allowed players to control the pace, while effective reception skills enabled them to respond well to serves.

In Week 2, we focused on forehand and backhand strokes. The forehand stroke became a key offensive tool, allowing players to hit powerful shots. The backhand stroke was important for quick defensive returns. Mastering both strokes was essential for balanced play.

In Week 3, we applied these core skills in actual games. Players used their grip, footwork, stroke mechanics, hand-eye coordination, and spin control in match scenarios. This practice helped them develop strategies and adapt to different situations. Combining forehand and backhand strokes prepared players to face competitive challenges effectively.

Overall, the progression from basic skills to gameplay application equipped learners with the tools needed for success in table tennis. Through practice, they improved their performance and strategy on the table.



## APPENDIX A: SAMPLE PORTFOLIO ASSESSMENT

**Task:** Compile and submit a comprehensive portfolio that represents your work for the entire academic year. The portfolio should include a selection of exercises/assignments, project work, reflective pieces, and both mid-semester and end of semester examination papers.

### *Purpose of the Portfolio*

To provide a comprehensive record of learners' academic achievements, progress, and growth over time. The portfolio will be compiled throughout the academic year. This comprehensive portfolio of assessments will be administered in week 1 and collected at the end of week 22 of the second semester, scored and recorded.

### *Structure and Organisation of the Portfolio*

As part of the structure of the portfolio assessment, make sure the following information has been provided:

1. Cover Page with:
  - a. name of school
  - b. academic year
  - c. learner's name
  - d. class/form
  - e. subject
  - f. date and signature, etc.
2. Table of Contents which has the list of items included with page numbers.
3. Brief description/background of items such as background information for each included artefact, etc.

### *Learners' works to be included in the Portfolio*

1. Class Exercises/Assignments
2. Project works
3. Reflective Pieces of Five Specific Focal Areas
4. Pictures of Involvement in Activities
5. Mid-semester examination papers
6. End of semester examination papers, etc.

### *Mode of Administration for Portfolios*

1. Clearly explain the purpose of the portfolio and its various components to the learners. Provide examples and templates for each section to guide them in their work.
2. Set up regular review sessions, every 4 weeks, to monitor learners' progress. During these checkpoints, they offer feedback and guidance to help them improve their portfolios.
3. Share the scoring rubrics with the learners and thoroughly explain how their work will be evaluated.

Set the final due date for portfolio submission in Week 23 of the academic calendar. Offer a grace period for learners to make revisions based on the final feedback they receive.

### **Mode of Submission/Presentation**

1. Clearly inform all learners of the final deadline for portfolio submission to ensure that all work is completed and submitted on time.
2. Learners should organise their portfolios in a clear and logical manner, with each section clearly labelled and easy to access.
3. Learners may submit their portfolios either in physical form or via the school's online submission system.
4. For digital submissions, learners should upload their portfolios either as a single file or in well-organised folders within the online platform.
5. Ensure the portfolio contains all required components: assignments, projects, quizzes, tests, reflective pieces, mini-research work, as well as mid-semester and end of semester examination papers.

### **Feedback strategy**

1. Schedule regular meetings to review learners' progress, set new goals, and make any necessary adjustments to their learning strategies.
2. Provide helpful comments throughout the learning process to support learners' development. Ensure that learners clearly understand how to use this feedback to continually improve their work and achieve better results.

### **Scoring rubric/ Marking Scheme**

<i>Learner's pieces of work</i>	<i>Items</i>	<i>Marks per Item</i>	<i>Total Marks</i>
<i>Assignments/Exercises</i>	2	1 mark each	2 marks
<i>Group Project</i>	1	2 marks	2 marks
<i>Individual Project</i>	1	2 marks	2 marks
<i>Reflective Piece of five Specific Focal Areas</i>	5	1 mark each	5 marks
<i>Pictures of Involvement in Activities</i>	3	3 marks	3 marks
<i>Mid-semester Examination Papers</i>	2	2 marks each	4 marks
<i>End of semester Examination Paper</i>	1	2 marks	2 marks
<i>Total Marks</i>			20 marks



## APPENDIX B: GROUP PROJECT WORK

**Project Task:** Identify any world class table tennis player who uses either the forehand or backhand or both, describe their strength and challenges in the use of such stroke(s) and suggest ways of how they can improve with such stroke(s) they use.

### Structure of the Project

1. Introduction.
2. Project Objective
3. Background of tennis player (Name, age, nationality, tournaments, achievements, and type of forehand stroke used)
4. Main strength of use of forehand stroke(s)
5. Main challenges of use of forehand stroke(s)
6. Conclusion (Summary of Key Points)
7. References

### Suggested Approach for Administering the Group Project on the Challenges of law Enforcement in Ghana

1. Provide clear guidelines for developing the project and how to assess it.
2. Design and plan the project that aligns with the learning outcomes.
3. Ensure that learners are assigned to project groups and also projects to individuals considering learners' background characteristics
4. Provide necessary resources, materials, and support to help learners succeed in their projects.
5. Provide and use ongoing feedback and guidance to learners.
6. Encourage collaboration and teamwork among learners by promoting peer-to-peer learning,
7. Guide learners in reflecting on their project-based assessments and help them develop metacognitive skills

### Assessment Rubrics

Criteria	Excellent – 4 marks	Very good – 3marks	Good – 2 marks	Satisfactory – 1 mark.
<b>Identifying Player</b>	Provide 4 information of player such as Name, age, nationality, tournaments, achievements, and type of forehand stroke used	Provide 3 information of player such as Name, age, nationality, tournaments, achievements, and type of forehand stroke used	Provide 2 information of player such as Name, age, nationality, tournaments, achievements, and type of forehand stroke used	Provide 1 information of player such as Name, age, nationality, tournaments, achievements, and type of forehand stroke used

<p><b>Strength of Stroke(s)</b></p>	<p>Identify and present any 4 of these;</p> <p>Power, speed, and fast pace shot</p> <p>Generating topspin, sidespin, or even backspin, forcing errors from opponents</p> <p>Dictate the pace of the game and control the rally.</p> <p>Versatile techniques for various types of shots</p> <p>Hit sharp angles and target different areas of the table, etc.</p> <p>And any other relevant strength</p>	<p>Identify and present any 3 of these;</p> <p>Power, speed, and fast pace shot</p> <p>Generating topspin, sidespin, or even backspin, forcing errors from opponents</p> <p>Dictate the pace of the game and control the rally.</p> <p>Versatile techniques for various types of shots</p> <p>Hit sharp angles and target different areas of the table, etc.</p> <p>And any other relevant strength</p>	<p>Identify and present any 2 of these;</p> <p>Power, speed, and fast pace shot</p> <p>Generating topspin, sidespin, or even backspin, forcing errors from opponents</p> <p>Dictate the pace of the game and control the rally.</p> <p>Versatile techniques for various types of shots</p> <p>Hit sharp angles and target different areas of the table, etc.</p> <p>And any other relevant strength</p>	<p>Identify and present any 1 of these;</p> <p>Power, speed, and fast pace shot</p> <p>Generating topspin, sidespin, or even backspin, forcing errors from opponents</p> <p>Dictate the pace of the game and control the rally.</p> <p>Versatile techniques for various types of shots</p> <p>Hit sharp angles and target different areas of the table, etc.</p> <p>And any other relevant strength.</p>
<p><b>Challenges of Stroke(s)</b></p>	<p>Identify any 4 challenges with the use of a forehand stroke such as;</p> <p>Struggle with consistency, leading to errant shots that miss the table or land in the wrong areas.</p> <p>Predictable, allowing opponents to anticipate and exploit</p> <p>Open to quick counterattacks,</p> <p>Compromised shot quality and effectiveness</p> <p>vulnerable to short balls or quick returns</p> <p>And any other relevant challenge identified.</p>	<p>Identify any 3 challenges with the use of a forehand stroke such as;</p> <p>Struggle with consistency, leading to errant shots that miss the table or land in the wrong areas.</p> <p>Predictable, allowing opponents to anticipate and exploit</p> <p>Open to quick counterattacks,</p> <p>Compromised shot quality and effectiveness</p> <p>vulnerable to short balls or quick returns</p> <p>And any other relevant challenge identified.</p>	<p>Identify any 2 challenges with the use of a forehand stroke such as;</p> <p>Struggle with consistency, leading to errant shots that miss the table or land in the wrong areas.</p> <p>Predictable, allowing opponents to anticipate and exploit</p> <p>Open to quick counterattacks,</p> <p>Compromised shot quality and effectiveness</p> <p>vulnerable to short balls or quick returns</p> <p>And any other relevant challenge identified.</p>	<p>Identify any 1 challenge with the use of a forehand stroke such as;</p> <p>Struggle with consistency, leading to errant shots that miss the table or land in the wrong areas.</p> <p>Predictable, allowing opponents to anticipate and exploit</p> <p>Open to quick counterattacks,</p> <p>Compromised shot quality and effectiveness</p> <p>vulnerable to short balls or quick returns</p> <p>And any other relevant challenge identified.</p>

<p><b>Improvement Suggestions</b></p>	<p>Suggest any 4 of these</p> <p>Ensure correct grip and body mechanics</p> <p>Ensure proper follow-through after striking the ball.</p> <p>Use drills against a wall or with a partner that emphasize target practice and consistency</p> <p>Incorporate footwork drills to improve agility and positioning</p> <p>Work on generating topspin with forehand by brushing up on the ball during stroke</p> <p>Any other relevant suggestion</p>	<p>Suggest any 3 of these</p> <p>Ensure correct grip and body mechanics</p> <p>Ensure proper follow-through after striking the ball.</p> <p>Use drills against a wall or with a partner that emphasize target practice and consistency</p> <p>Incorporate footwork drills to improve agility and positioning</p> <p>Work on generating topspin with forehand by brushing up on the ball during stroke</p> <p>Any other relevant suggestion</p>	<p>Suggest any 2 of these</p> <p>Ensure correct grip and body mechanics</p> <p>Ensure proper follow-through after striking the ball.</p> <p>Use drills against a wall or with a partner that emphasize target practice and consistency</p> <p>Incorporate footwork drills to improve agility and positioning</p> <p>Work on generating topspin with forehand by brushing up on the ball during stroke</p> <p>Any other relevant suggestion</p>	<p>Suggest any 1 of these</p> <p>Ensure correct grip and body mechanics</p> <p>Ensure proper follow-through after striking the ball.</p> <p>Use drills against a wall or with a partner that emphasize target practice and consistency</p> <p>Incorporate footwork drills to improve agility and positioning</p> <p>Work on generating topspin with forehand by brushing up on the ball during stroke</p> <p>Any other relevant suggestion</p>
<p><b>Collaboration and Teamwork</b></p>	<p>Exhibit 4 of these</p> <p>Contributing to the group.</p> <p>Respecting the views of others</p> <p>Tolerating others</p> <p>Resolving conflicts</p> <p>Taking responsibility</p>	<p>Exhibit 3 of these</p> <p>Contributing to the group.</p> <p>Respecting the views of others</p> <p>Tolerating others</p> <p>Resolving conflicts</p> <p>Taking responsibility</p>	<p>Exhibit 2 of these</p> <p>Contributing to the group.</p> <p>Respecting the views of others</p> <p>Tolerating others</p> <p>Resolving conflicts</p> <p>Taking responsibility</p>	<p>Exhibit 1 of these</p> <p>Contributing to the group.</p> <p>Respecting the views of others</p> <p>Tolerating others</p> <p>Resolving conflicts</p> <p>Taking responsibility</p>

**Total Score:** 20 marks

### Reflection and Feedback

1. **Group Reflection:** After the exhibition, facilitate a session for groups to reflect on their experiences and what they learned.
2. Provide targeted feedback on the project process and presentations, highlighting strengths and areas for improvement.

## SECTION 2: HEALTH AND WELLNESS – PART ONE: HUMAN DISEASES

### STRAND: PHYSICAL ACTIVITY AND HEALTH

#### SUB-STRAND: HEALTH AND WELLNESS

**Learning Outcome:** *Discuss human diseases and the importance of their understanding for health and well-being*

**Content Standard:** *Demonstrate understanding of health and wellness*

#### HINT



Conduct classwork by week 4 and record it for subsequent submission to the Student Transcript system

### INTRODUCTION AND SECTION SUMMARY

Human diseases cover a wide range of health conditions that affect the normal functioning of the human body. These diseases are classified into several categories based on their causes, such as infectious diseases caused by pathogens (bacteria, viruses, fungi, parasites), genetic disorders resulting from inherited genetic mutations, and chronic diseases which often result from a combination of genetic, environmental, and lifestyle factors. A comprehensive understanding of this concept is essential in helping learners recognise symptoms, understand causes and learn about ways to preventive the various diseases. Knowing, understanding and recognising disease with their signs and symptoms and what causes them can help individuals maintain personal and public health. As such, this section will explore the general concept human diseases and classifications of diseases.

**The weeks covered by this section include the following:**

**Week 4:** Explain the concepts of human diseases

**Week 5:** Discuss the classification of human diseases.

### SUMMARY OF PEDAGOGICAL EXEMPLARS

In this section, teachers are expected to use appropriate teaching approaches to promote learners' achievement of the content. This can be facilitated by exploring and applying approaches such as the use of Digital-based learning, Collaborative Learning, Group-based learning, Project-based learning etc to engage learners in the various learning tasks of the session. Pedagogical exemplars such as mixed-ability, mixed-gender and gender-based groupings where applicable should be appropriately applied taking into consideration the nature of the activity involved and ability of learners. Special attention should also be given to learners with additional needs such as social-emotional needs, hearing and speech deficiencies, etc. to

ensure they benefit from the lesson. Encourage learners to respect individual differences (beliefs, religions, abilities, temperaments, cultures, etc.) to create a conducive environment for teaching and learning

## ASSESSMENT SUMMARY

Learners' achievement in a lesson delivery is crucial, which is measured through assessment. It is expected that teachers employ appropriate assessment methods to achieve this. The following are examples of appropriate methods for adaption in this section. They include:

Assessment based on (Recall) where learners reproduce main/key concepts/information such as the definition of human diseases, classifications of human diseases, etc. orally or in written form for some groups of learners.

Assessment based on Skills of Conceptual Understanding where learners describe or explain and provide examples such as the characteristics of human diseases and effects of effects of human diseases on life must also be employed. Oral, written or a combination of both responses can be accepted with presentations for some groups of learners during the course of the teaching and learning or after the lesson delivery.

In addition to the above, assessments based on Strategic Reasoning should be included. This involves encouraging learners to think strategically, analysing and creating new ideas, activities and applying what they have learnt in real life situations. For example, applying the knowledge gained in human diseases to design a poster to create awareness on diseases learnt in their school and communities. The recommended mode of assessments for each week is as follows:

**Week 4:** Class exercise

**Week 5:** Poster presentation

**WEEK 4**

**Learning Indicator:** Explain the concept of human diseases

## FOCAL AREA: CONCEPTS OF HUMAN DISEASES

### Human Diseases

#### What is human disease?

The term human disease refers to any condition that harmfully or negatively affects the normal functioning of the human body, leading to physical, mental or social distress with social distress being a state of extreme worry, pain, suffering and discomfort that individuals experience due to diseases or illnesses. Human diseases are caused by a variety of factors, including pathogens (like bacteria, viruses and parasites), genetic defects, environmental influences and lifestyle choices.

Disease also refers to a condition that impairs, damages or hinders the normal functioning of an individual's body or mind. Some diseases are characterised by specific symptoms and signs which can vary based on the causal agent. However, some diseases may have no symptoms or the symptoms may appear a long time after infection. Diseases can affect any part of the human body.

#### Examples of Human Diseases

Some examples of diseases include: Pneumonia, cholera, whooping cough, diabetes, hypertension (high blood pressure), cancer, asthma, Alzheimer's disease, Parkinson's disease, osteoporosis, arthritis, obesity, stroke, kidney disease, liver disease (e.g., cirrhosis), influenza (flu), common cold, tuberculosis (TB), malaria, HIV/AIDS, hepatitis B and C, covid-19, Ebola, measles, mumps, chickenpox, zika virus, etc.



*Figure 4.1: An individual sick of Ebola*



*Figure 4.2: An individual sick of Whooping cough*

## Examples of Diseases with Their Specific Characteristics

1. **Influenza (Flu):** commonly known as the flu, it affects the nose, throat, and sometimes the lungs, and can range from mild to severe.

**Causal agent:** Influenza viruses (types A, B, C, and D, with A and B causing most seasonal flu epidemics).

**Mode of transmission:** Spread through droplets when an infected person coughs, sneezes, or talks; can also spread by touching surfaces contaminated with the virus and then touching the face.

**Symptoms:** Fever, chills, cough, sore throat, runny or stuffy nose, muscle or body aches, headaches, fatigue, and sometimes vomiting and diarrhoea (more common in children than adults).

**Prevention:** Annual flu vaccine, practicing good hygiene such as washing hands frequently, covering mouth and nose with a tissue or elbow when coughing or sneezing, avoiding close contact with sick individuals.

**Treatment:** Rest, fluids, and over-the-counter medications to relieve symptoms; antiviral medications (such as oseltamivir or zanamivir) can reduce the severity and duration if taken within the first 48 hours of symptoms.



**Figure 4.3:** A child suffering from flu

2. **Diabetes:** a chronic health condition that affects how the body turns food into energy. There are two main types of diabetes, each with different causes but similar complications.

**Causal agent:** Body's inability to produce enough insulin (Type 1) or use insulin properly (Type 2), leading to high blood sugar levels.

- a. **Type 1 Diabetes:** An autoimmune condition where the immune system attacks insulin-producing cells in the pancreas. Usually diagnosed in children and young adults.
- b. **Type 2 Diabetes:** More common form, often associated with lifestyle factors such as obesity, physical inactivity and poor diet. Typically develops in adults but increasingly seen in younger populations too.

**Symptoms:** Increased thirst and urination, extreme hunger, unexplained weight loss, fatigue, blurred vision, slow-healing sores, frequent infections.

**Prevention (Type 2):** Healthy diet (rich in fruits, vegetables, and whole grains, low in sugar and refined carbs), regular physical activity, maintaining a healthy weight, not smoking.

## Treatment

- c. **Type 1:** Insulin injections or an insulin pump, monitoring blood sugar levels, healthy eating, and regular physical activity.
- d. **Type 2:** Lifestyle changes (diet and exercise), oral medications (like metformin), and sometimes insulin or other injectable medications.



**Figure 4.4:** A diabetes patient checking his blood sugar

3. **Tuberculosis (TB):** commonly known as TB, is a serious disease that mainly affects the lungs but can also affect other parts of the body. When TB affects organs other than the lungs, it is referred to as extrapulmonary TB. Some of the common sites where TB can spread to are lymph nodes in the neck, the bones and joints, the kidneys, the bladder and ureters, the brain and the central nervous system.

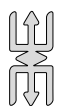
**Causal agent:** TB is caused by a bacteria called *Mycobacterium tuberculosis*.

**Mode of transmission:** TB is spread through the air when an infected person coughs, sneezes, speaks or sings. It typically requires prolonged exposure in close quarters to be transmitted.

**Symptoms:** Symptoms of TB includes persistent cough lasting more than 3 weeks, coughing up blood or sputum (mucus or phlegm), chest pain, fatigue, weight loss, fever, night sweats, chills and loss of appetite.

**Prevention:** This disease is prevented through vaccination (it is primarily given in countries with high TB prevalence), good ventilation in living spaces, wearing masks, early detection and treatment of active TB cases to prevent further spread.

**Treatment:** Actions to treat TB involve long-term course of multiple medicines (antibiotics) for at least 6 months. Adherence to the treatment regimen is crucial to prevent drug resistance.



### Note

Drug resistance – When microorganisms causing a particular disease is not responding to drugs that are usually able to kill or weaken them due to inconsistency in taken the drug or other factors.



**Figure 4.5:** A TB patient.



**Figure 4.6:** A chest X-ray showing patches of TB

4. **Arthritis:** a condition causing pain, swelling and stiffness in the joints. Body parts that are mostly affected are the wrists, fingers, knees, ankles, elbows, hips and shoulders.

**Causal agent:** Different types of arthritis have different causes:

**Osteoarthritis:** Wear and tear on the joints over time.

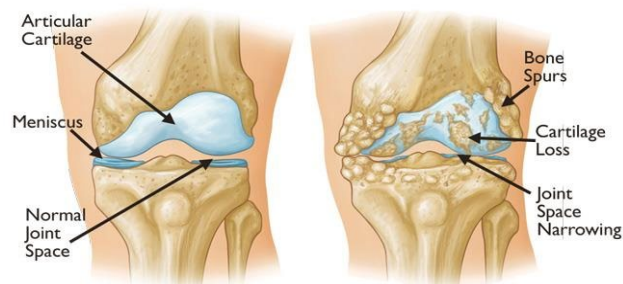
**Rheumatoid arthritis:** An autoimmune disorder where the immune system attacks the joints.

**Mode of transmission:** Arthritis is not transmissible.

**Symptoms:** The main symptoms of arthritis are joint pain, stiffness, swelling, reduced range of motion, which typically worsen with age.

**Prevention:** This disease can be prevented by maintaining a healthy weight, engaging in regular exercise and avoiding joint injuries.

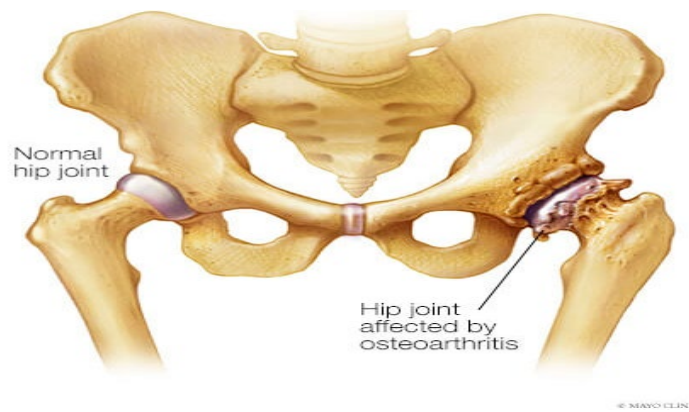
**Treatment:** Medications to reduce pain and inflammation, physical therapy, sometimes surgery.



**Figure 4.7:** Osteoarthritis of the knee



**Figure 4.8:** Rheumatoid arthritis – affected wrist and fingers



**Figure 4.9:** *Osteoarthritis of the hip*

5. **HIV/AIDS:** an infection of the body’s immune system that makes the immune system weak and unable to fight off other infections of the body. The advanced form of the infection is called AIDS, which stands for acquired immunodeficiency syndrome.

**Causal agent:** The disease is caused by Human Immunodeficiency Virus (HIV).

**Mode of transmission:** This disease is spread through blood, semen, vaginal fluids and breast milk. However, it is commonly transmitted through unprotected sex, sharing needles, from mother to baby during childbirth or breastfeeding.

**Symptoms:** Early stages may have flu-like symptoms (fever, chills, rash, night sweats, muscle aches, sore throat, fatigue, etc). As the virus progresses, it weakens the immune system, leading to opportunistic infections and certain cancers (AIDS stage).

**Prevention:** Safe sex practices (abstaining from sexual activities or using condoms), not sharing needles, HIV testing and treatment during pregnancy to prevent mother-to-child transmission, taking pre-exposure prophylaxis (PrEP) if at high risk.

**Treatment:** Antiretroviral therapy (ART) to manage the virus and prevent progression to AIDS. ART helps maintain a low viral load, improve immune function and reduce the risk of transmission.



**Figure 4.10:** *An HIV/AIDS patient*



**Figure 4.11:** A child suffering from HIV/AIDS

6. **Osteoporosis:** a condition where bones become weak and brittle, increasing the risk of fractures.

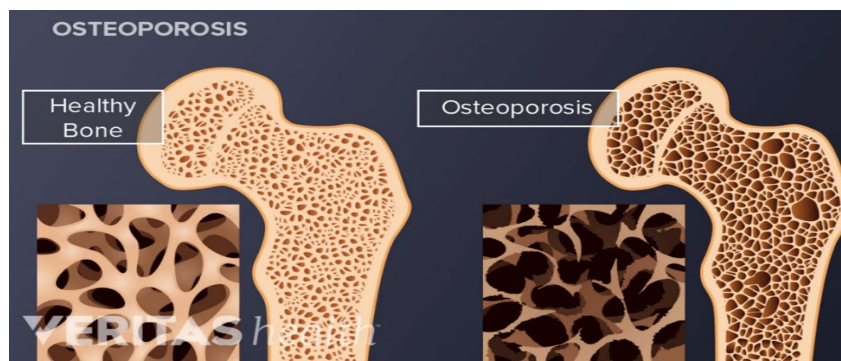
**Causal agent:** This disease is not caused by any agent but is developed due to aging, hormonal changes (like menopause), low calcium and vitamin D intake and lack of physical activity.

**Mode of transmission:** The disease is not transmitted however there are risk factors of developing it. The risk factors include not getting enough calcium and vitamin D in a diet, not doing enough weight-bearing exercises (like walking or running), smoking, drinking too much alcohol and certain medical conditions or medications.

**Symptoms:** This disease most often has no symptoms until a bone breaks, however, some may experience back pain, loss of height or a stooped posture.

**Prevention:** The disease can be prevented by eating a diet rich in calcium and vitamin D, engaging in regular weight-bearing exercise, avoiding smoking and excessive alcohol, etc.

**Treatment:** Medications to strengthen bones, calcium and vitamin D supplements and lifestyle changes.



**Figure 4.12:** Osteoporosis of the hip bone

7. **COVID-19:** the short form for Coronavirus Disease 2019 and officially named SARS-CoV-2 (Severe Acute Respiratory Syndrome Coronavirus 2). It is a disease that mainly affects the respiratory system, which includes organs involved in breathing. Examples of some organs the diseases affect are the lungs, nasal cavity and sinuses, throat, heart, kidneys, etc.

**Causal agent:** The disease is caused by coronavirus SARS-CoV-2.

**Mode of transmission:** The disease is spread through respiratory droplets when an infected person coughs, sneezes or talks. It is also transmitted by touching surfaces contaminated with the virus and then touching the face with the hands.

**Symptoms:** Symptoms include fever, cough, difficulty breathing, loss of taste or smell, fatigue, muscle or body aches, sore throat, congestion or runny nose, nausea or vomiting, diarrhoea, etc. Severe cases can lead to pneumonia, acute respiratory distress syndrome (ARDS) and death.

**Prevention:** The disease can be prevented through vaccination, wearing masks, hand washing, social distancing, avoiding large gatherings, ventilating indoor spaces, getting tested if exposed or symptomatic (when showing signs or symptoms that show an individual might be infected with the disease).

**Treatment:** The disease can be treated by resting, taking in enough fluids and using over-the-counter medications for mild cases. In severe cases, hospitalisation and professional medical treatment are the best treatment options.



**Figure 4.13:** Covid 19 patient

8. **Alzheimer’s disease:** progressive brain disorder that slowly destroys memory and thinking skills.

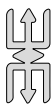
**Causal agent:** The exact cause for this disease is unknown, but it involves the build-up of plaques and tangles in the brain. Plaques are masses or clusters of a protein called beta-amyloid that gather between nerve cells (neurons) in the brain. Risk factors include age, family history and certain genetic factors.

**Mode of transmission:** Alzheimer’s is not transmissible.

**Symptoms:** Memory loss, confusion, difficulty with problem-solving and language, changes in mood and behaviour.

**Prevention:** There is no certain way to prevent Alzheimer’s, but a healthy lifestyle may help reduce risk (regular exercise, healthy diet, mental stimulation, social engagement).

**Treatment:** The disease is not treatable but can be managed with medications and therapies to temporarily improve and manage symptoms. Supportive care can also help to manage the disease.



#### Note

Supportive care - Creating a safe environment and offering emotional support to patients for them to feel cared for and loved.



**Figure 4. 14:** A Patient suffering from Alzheimer (dementia)

## General Characteristics of Human Diseases

The general characteristics of diseases refer to the common features and attributes that different diseases share. These characteristics help to categorise, understand and manage diseases. Key aspects include:

1. **Causes:** Diseases are caused by pathogens such as bacteria, viruses, fungi and parasites or from genetic factors, lifestyle choices, environmental factors or a combination of these.
2. **Transmission:** Diseases can be spread from person to person, from contaminated surfaces, vectors or may be developed due to hereditary factors, poor diet, lack of exercise, exposure to toxins or aging.
3. **Signs and Symptoms:** *Signs* are what doctors and other people see or observe in a person with a disease or medical condition.
4. **Symptoms** are what a person with a disease or medical condition feels and can describe to a doctor or other people.
5. **Signs and symptoms** vary widely based on the specific disease and the body part affected. However, common ones include fever, fatigue, muscle aches, cough, diarrhoea and rash, pain, abnormal growths (like tumours), organ dysfunction and metabolic changes.
6. **Diagnosis:** Diseases can be diagnosed through laboratory tests that identify the presence of pathogens (e.g., blood tests, cultures, stool tests, etc), physical examination, imaging tests (e.g., X-rays, MRIs) and genetic testing. Reviewing an individual's medical history may also help in the diagnosis of a disease.
7. **Prevention:** Diseases can be prevented through vaccination, healthy lifestyle choices, good hygiene practices, balanced diet, regular exercise, regular medical check-ups, avoiding contact with infected individuals, using protective equipment and public health measures like quarantines and sanitation, etc.
8. **Treatment:** Some disease can be treated with medications that target the pathogen causing the disease while others cannot be treated but may be managed through lifestyle changes, medications to manage symptoms or underlying conditions. Other treatment options may include surgery, physical therapy and other interventions tailored to the specific disease.

## Importance of Studying Human Diseases

### 1. For personal health

**Early detection:** Knowing about diseases helps catch them early when treatment works best.

**Making smart choices:** Learning about diseases helps to make good choices for our health, like eating well and staying active.

## 2. To keep everyone healthy

**Stopping spread:** Understanding diseases helps to stop them from spreading among people and in communities.

**Staying informed:** Knowing about diseases helps us to learn how to stay healthy and prevent getting sick.

## 3. To find better treatments

**Finding cures:** Researchers study diseases to find new medicines and treatments that can help people get better faster.

**Using new technology:** Learning about diseases helps doctors use new tools and methods to treat patients.

## 4. To save money and help economies

**Avoiding big bills:** Understanding diseases helps prevent people from getting very sick, which can save money on medical bills.

**Working well:** When people are healthier, they can work better and help the economy grow.

## 5. To protect against global health issues

**Stopping outbreaks:** Understanding diseases helps countries work together to stop outbreaks from spreading around the world.

## 6. To understand how our environment affects us

**Learning from nature:** Studying diseases helps us to understand how things like pollution and climate change can make people sick.

**Making better choices:** Knowing this helps us to make better choices to keep the environment clean and safe for everyone.

## General Impacts of Diseases on Human Life

Diseases can greatly affect people and their communities in many ways, such as harming their physical health, mental well-being, social interactions, and financial stability. Some key effects of diseases on life include:

### 1. Physical Health

**Pain and disability:** Diseases can cause long-term pain in people and make it hard to move and live a normal life.

**Shortened life:** Serious diseases kill people and shorten their lives on earth.

**Weak immune system:** Diseases like HIV/AIDS can make it easier to get other infections because it attacks the white blood cells that fight pathogens that enter the body making the immune system weak to fight diseases.

### 2. Mental Well-being

**Stress and anxiety:** Living with a disease can make people feel very stressed and worried.

**Depression:** Ongoing illnesses can make people feel very sad and hopeless.

**Memory problems:** Diseases like Alzheimer’s can make people forget things and have trouble thinking clearly.

### 3. Social Interactions

**Isolation:** People with serious diseases feel lonely because they feel the need to avoid others or because of the stigma associated with the disease.

**Relationship strain:** Being sick can make it hard to keep up with friends and family.

**Changes in roles:** Illness can make people stop doing things they used to do, like work or taking care of family.

### 4. Economic Stability

**Medical costs:** Treating diseases can be very expensive and money wasting.

**Loss of income:** If someone is too sick to work, the person cannot earn money to pay their medical bills and may have to depend on people to help them.

**Productivity loss:** When lots of people are sick, it affects the economy because fewer people are able to work.

### 5. Education

**Missing school:** Sick learners might miss a lot of school which will affect their education.

**Learning difficulties:** Diseases or illnesses can make it harder for learners to learn or concentrate.

### 6. Lifestyle changes

**Diet and exercise:** People with certain diseases may need to change their diet or exercise habits.

**Medication:** Some diseases require taking medicine every day, which can be difficult to manage.

### 7. Community impact

**Healthcare burden:** If a lot of people fall sick and require hospital treatment, additional pressure is applied on hospitals, nurses and doctors.

## Learning Tasks

1. What are human diseases?
2. Create a table that highlights the characteristics of human diseases.
3. Dramatise the effects of human diseases on life.
4. Design a poster to create awareness on any two diseases learnt in the lesson in your school and community.
5. How do different diseases affect the body, and what are the best strategies for their prevention?

## Pedagogical Exemplars

### Activity

#### 1. Starter Activity

- a. Write down names of diseases or the symptoms of common diseases on individual cards and put them on a table in front of the class and divide the class into two teams.
- b. Each team takes turns sending one member to the front of the class to take a card and act out the diseases or the symptom written on the card without speaking.
- c. The team members who are acting have 1 minute to act out the disease or symptom while their team tries to guess what it is.
- d. The team guessing can shout out their answers and the first correct guess wins a point for their team.
- e. Rotate turns between teams until all cards have been used.

#### 2. Introductory Activity

- a. After the game, lead a brief discussion by asking learners how they felt about the game and what they learnt from it.
- b. Briefly discuss the importance of recognising diseases and their symptoms in real life situations and how it can help in seeking appropriate medical attention.
- c. Transition into the main lesson by mentioning that they will be learning more about human diseases, their characteristics, their impact on human life and why it is important to learn about them.

3. **Digital-based learning:** Learners individually and in groups use their phones or laptops to search the meaning of human diseases, diseases and examples of diseases, compile the information gathered and share with their group members or with an elbow partner in a friendly atmosphere as they assist each other to fine tune their findings.

Assist learners to narrow their search for information on the internet on human diseases. Group learners based on their digital proficiency. For those less comfortable with technology, pair them with more digitally literate peers to enable them to learn collaboratively. Provide a structured worksheet or template for learners who need assistance with open-ended research tasks. Give learners clear guidelines on the information to find. Take care of the various backgrounds and abilities of learners by allowing them to engage in tasks at their own pace, offering differentiated instruction and providing multiple ways to demonstrate their understanding.

Guide learners to visit the original sites for information regarding the concept being taught. Encourage learners to tolerate views from other members. Allow groups to present their reports in class using different modes (PowerPoint, flip chart, diagrams, concept maps, from their notebook/jotters, etc) through leaders comprising both females and males where appropriate.

4. **Collaborative learning:** In mixed ability, culture, gender and identities, learners engage in structured discussion to outline and discuss the general characteristics of diseases. Guide learners to make note for class presentation using different formats to present their findings (written, oral or visual) to help accommodate different learning styles.

Ensure each member of the group contributes and plays a supportive role, respecting the views of other group members.

5. **Group-based learning:** Learners in their small groups examine the importance of studying disease and the impacts of diseases on humans on life. Guide groups through the process and ensure learners with special needs to assume roles such as group secretaries, lead presenters etc. Learners present their findings to the whole class for feedback and clarification. Give further explanation and guidance to less able learners. Encourage reserved and shy learners in the various groups to lead the discussion while emphasising the need for patience and respect for each other.
6. **Project-Based Learning:** Learners in four groups research and investigate how different diseases affect the body and develop a report detailing the best strategies for preventing these diseases. Include an analysis of the physiological impact of each disease and effective prevention methods to use. Assign each group to research how different diseases affect the body using online resources. Guide the groups through the research process and assign specific roles to all members, including those with special needs (e.g., group secretaries, lead presenters, organisers). Each group should present their findings to the class.

## Key Assessment

### Level 1

1. What are human diseases?
2. State four examples of human diseases.

**Level 2:** Describe the characteristics of at least four human diseases.

### Level 3

1. Explain four reasons why it is important to study human diseases.
2. Explain four effects of human diseases can have on life.

**Level 4:** Design a poster to create awareness on two of the diseases learnt in this lesson in your community.

## Project Outline

1. **Introduction to human diseases:** Define human diseases.
2. **Selection of diseases:** Select one disease that can be spread and one that cannot be spread. Examples of diseases to choose from:
  - a. **Transmittable diseases:** COVID-19, Influenza, Tuberculosis, etc.
  - b. **Non-transmittable diseases:** Diabetes, Osteoporosis, Arthritis, etc.
3. **Research and data collection**

**Causes:**

  - a. What causes the disease?
  - b. How is it transmitted (for infectious diseases)?

**Symptoms:**

  - a. What are the common symptoms?
  - b. How do they affect the body?

**Prevention**

- a. How can the disease be prevented?
- b. What lifestyle choices can reduce the risk?

**Treatment**

- a. What are the common treatments available?
- b. Are there any ongoing research or new treatments being developed for the disease?

**4. Project format****a. Written Report**

- i. Title page
- ii. Table of contents
- iii. Introduction
- iv. Detailed research on chosen diseases
- v. Conclusion
- vi. References/Bibliography

**b. Presentation**

- i. Create a visual presentation (PowerPoint, poster, etc.)
- ii. Include images, charts, and diagrams to explain the points
- iii. Present the findings to the class

**5. Evaluation Criteria**

- a. **Content Quality:** Depth of research, accuracy, and understanding of the diseases.
- b. **Presentation:** Clarity, creativity, and ability to engage the audience.
- c. **Collaboration:** How well the group worked together, division of tasks, and overall effort.
- d. **Report:** Organisation, neatness, and completeness of the written report.

**6. Scoring rubric for the project work on human diseases - Total Points: 100****Example of Scoring Breakdown**

Criteria	Points Possible	Points Earned
Content Quality	40	
Depth of research	20	
Accuracy	10	
Understanding	10	
Presentation	30	
Clarity	10	
Creativity	10	

Engagement	10	
Written Report	20	
Organisation	10	
Neatness	5	
Completeness	5	
Collaboration and effort	10	
Group work	5	
Overall effort	5	
Bonus points	5	
Total	100	

### Hint

Adjust the points to suit your scoring criteria

The bonus points are for exceptional work that goes beyond the requirements, such as extra research, additional visuals or innovative presentation methods used by learners.

Divide the class into small groups (e.g., 3-4 learners per group, depending on the class size).

Assign tasks within the group: research, writing, creating visuals, and presenting.

Encourage collaboration and regular group meetings to discuss progress.

Take into consideration the proximity of where learners stay when grouping.

## WEEK 5

**Learning Indicator:** Discuss the classification of human diseases

### FOCAL AREA: CLASSIFICATION OF HUMAN DISEASES

#### Concept of Human Diseases

Classification of diseases means grouping diseases together based on similar features like what causes them, how long they last, how they spread, which part of the body they affect, and whether they are inherited or developed based on an individual's lifestyle. This helps doctors and scientists to understand diseases better, diagnose them correctly and find the best ways to prevent or treat them.

#### Classification of Human Diseases

The two main classifications of diseases are infectious diseases and non-infectious diseases.

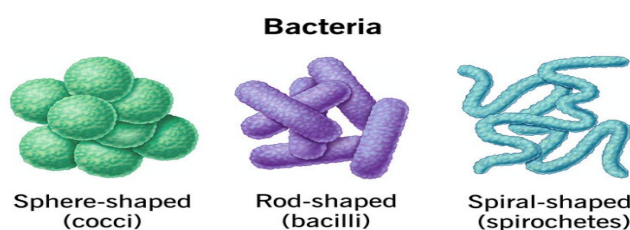
1. **Infectious or communicable diseases** are illnesses or disorders caused by pathogens or organisms such as bacteria, viruses, fungi or parasites. These microorganisms can invade the body and multiply, leading to illness and disease. Infectious diseases are spread or transmitted directly or indirectly from the environment, insects and animals to a person. They can be prevented or treated with specific drugs depending on the pathogen causing them.
2. **Non-infectious or non-communicable diseases (NCD):** are long-lasting illnesses that do not spread from person to person. They develop slowly and can be caused by things like poor diet, lack of exercise, smoking, degenerative factors and genetics. NCDs are often called lifestyle diseases because their development is mainly influenced by an individual's lifestyle choices and behaviours. Diseases develop from these categories can lead to serious health problems and even death, but many can be prevented by making healthy lifestyle choices. Early detection and treatment are important to manage these diseases and improve quality of life.

#### Characteristics of Infectious Diseases

Infectious diseases are caused by pathogens or microorganisms. They have modes of transmission, incubation period, and signs and symptoms.

#### Causative agents

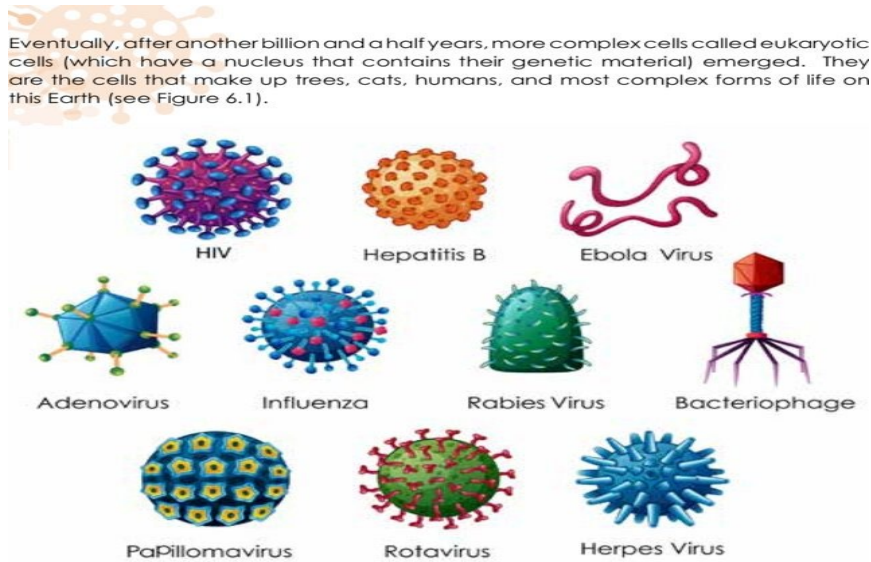
1. **Bacteria:** are microscopic living or tiny organisms that are found everywhere on earth. The word for just one is "*bacterium*". They are so small that a microscope is needed to see them. Bacteria can have different shapes, such as rods, spheres or spirals and they can live in many different environments, including our bodies, soil, water and inside other living things. They can reproduce quickly when they enter the body and give off poisons (toxins) that can cause illness or order in the body they enter.



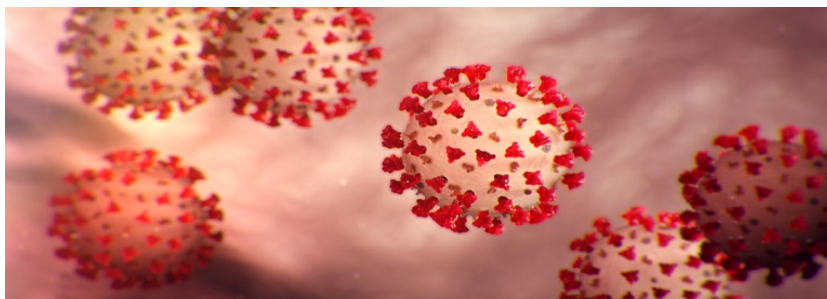
**Figure 5.1:** Types of bacteria

**Examples of diseases caused by bacteria:** Pneumonia, tuberculosis (TB), whooping cough, cholera, diphtheria, tetanus, diarrhoea, salmonellosis, bacterial meningitis, urinary tract infection (UTI), chlamydia, gonorrhoea and syphilis, etc.

2. **Viruses:** tiny or small germs (germs are pathogens or infectious agents) that can only reproduce or replicate inside a living cell of other organisms. They are much smaller than bacteria and are considered unique because they cannot carry out any life processes or development on their own. Instead, they need to infect a host cell to reproduce and spread. This often makes an individual sick. Viruses can infect humans, plants and animals.



**Figure 5.2:** Different kinds of viruses that cause different diseases



**Figure 5.3:** Coronaviruses (COVID-19)

**Examples of diseases caused by viruses:** Chickenpox, HIV/AIDS, covid-19, hepatitis A and B, common cold, human papillomavirus (HPV), influenza (flu), measles, mumps and rubella, polio, Ebola, rabies, herpes, norovirus, west Nile virus, etc.

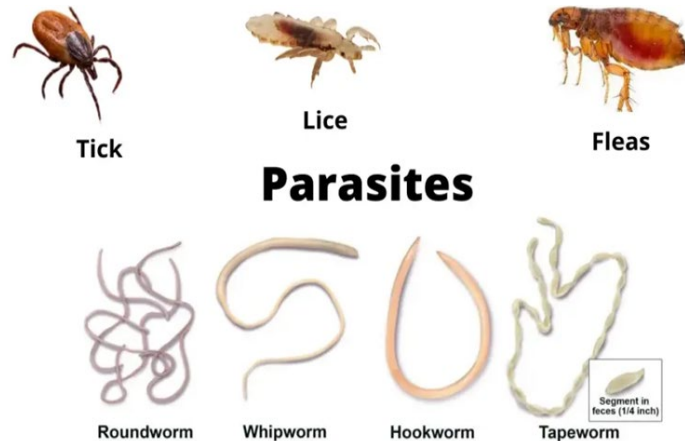
3. **Parasites:** organisms that must live on or inside another organism, the host, to survive and spread. They feed, grow or multiply in a way that harms their host. They need their host for their survival. For this reason, they rarely kill their host, but they often carry diseases that can be life-threatening. Practicing good hygiene, thoroughly cooking meat and drinking clean water helps prevent many parasites.

### Types of parasites

Based on the location of infection, parasites may be groups as:

- a. **Ectoparasite:** These are parasites that live, attach or burrow into the upper layer of the skin of humans without gaining access into the internal tissues. Some common ectoparasites of humans are: ticks, fleas, lice, bed bug and mites.

- b. **Endoparasite:** These are parasites that live within the human body (in the blood, tissues, body cavities, and other organs). Invasion by the endoparasite is called an infection. Some common examples of endoparasites include roundworm, hookworm, whipworm, hookworm and tapeworm.



*Figure 5.5: Various Ectoparasites and Endoparasites of Humans*

**Examples of diseases caused by parasites:** Malaria, chagas disease, toxoplasmosis, trichomoniasis or trich, trypanosomiasis (sleeping sickness), bilharzia, etc.

4. **Fungi:** Fungi are a group of microorganisms that include yeasts, moulds and mushrooms. They can be found in various environments, such as soil, air, water and on plants and animals. Fungi play important roles in decomposing organic matter and recycling nutrients in ecosystems. Some fungi are beneficial and are used in food production (e.g., yeast in bread and beer) and medicine (e.g., antibiotics like penicillin). However, some fungi can cause infections in humans, especially when the immune system is weak. Examples of some diseases caused by fungi: Athlete's foot, jock itch, ringworm, yeast infections, valley fever, etc.



**Figure 5.6:** Athlete's foot between the toes



**Figure 5.7:** Athlete's foot under the feet

## Mode of Transmission (How Diseases Spread)

Diseases can be transmitted through different means. This includes:

1. **Direct contact transmission:** This occurs when infectious agents are transferred directly from one person to another. It is also known as person-to-person contact (e.g., hugging, shaking hands, touching, kissing, sexual intercourse, etc).
2. **Indirect contact transmission:** This happens when infectious agents are transferred to a person through an intermediate object, surface or vector. Transmission takes place through contact with contaminated surfaces and objects (e.g., doorknobs, tabletops, etc. touched by an infected person).
3. **Airborne transmission:** This occurs when we breathe in respiratory droplets, that is breathing in germs from an infected person coughing, sneezing, talking, singing, etc.).
4. **Vector-borne transmission:** This happens a person is bitten by insects that carry the disease-causing pathogens and spread to humans (e.g., mosquitoes, ticks, fleas, lice, blackflies, tsetse flies etc.).
5. **Food and waterborne transmission:** This occurs when people eat and drink contaminated food or water.
6. **Animal reservoirs:** This happens when an individual comes in contact with infected animals and their droppings. Some examples include:
  - a. **Rodents:** Can spread diseases like hantavirus and plague.
  - b. **Bats:** Can spread rabies, Ebola, and Nipah viruses.
  - c. **Birds:** Can spread West Nile virus and avian influenza.
  - d. **Primates:** Can spread HIV/AIDS and yellow fever.
  - e. **Dogs:** Can spread rabies.
  - f. **Cattle:** Can spread bovine tuberculosis and brucellosis.
  - g. **Pigs:** Can spread swine flu and Nipah virus.
  - h. **Sheep and Goats:** Can spread Q fever.
  - i. **Cats:** Can spread toxoplasmosis.
7. **Vertical transmission:** This refers to the transmission of an infection, disease or genetic condition from a mother to her baby during pregnancy, childbirth or breastfeeding.

## Examples of infectious diseases transfer from mother to a baby during pregnancy, childbirth or breastfeeding

1. **HIV (Human Immunodeficiency Virus)**
  - a. **Transmission:** Can be transmitted from mother to baby during pregnancy, childbirth or breastfeeding.
  - b. **Impact:** Can lead to AIDS in the child if not treated with antiretroviral therapy.
2. **Syphilis**
  - a. **Transmission:** Can be passed from the mother to the baby during pregnancy or childbirth.

- b. **Impact:** Can cause serious health problems in the baby, including developmental delays, bone abnormalities and even stillbirth.
3. **Herpes Simplex Virus (HSV)**
- a. **Transmission:** Can be transmitted during childbirth if the mother has an active outbreak of genital herpes.
  - b. **Impact:** Can cause neonatal herpes, which can lead to severe complications such as brain damage, eye problems, or even death.
4. **Hepatitis B**
- a. **Transmission:** Can be transmitted from mother to baby during childbirth.
  - b. **Impact:** The baby can develop chronic hepatitis B infection, which may lead to liver damage or liver cancer later in life.
5. **Toxoplasmosis**
- a. **Transmission:** Can be transmitted during pregnancy if the mother is newly infected.
  - b. **Impact:** Can cause serious birth defects, including brain damage and eye problems.

### Example of genetic condition transfer from mother to a baby during pregnancy, childbirth or breastfeeding

#### Sickle cell disease

1. **Transmission:** An autosomal recessive genetic disorder. If both parents carry the sickle cell trait, the baby has a 25% chance of inheriting the disease.
2. **Impact:** Causes red blood cells to become misshapen, leading to pain, anaemia, and increased risk of infections

### Incubation Period

This refers to the time between exposure to the causative agents and the appearance of the first symptoms. This period can vary widely depending on the disease and the individual's health.

For example: Influenza takes 1- 4 days for the first symptoms to show whiles HIV takes several weeks to months for the symptoms to manifest.

### Signs and Symptoms

Signs and symptoms are terms used to describe the evidence of a disease or health condition in a person.

**Signs** are what doctors and other people see or observe on a person with a medical condition. Examples are rash, lump, fast heartbeat, runny nose, spots, broken bone, blisters, etc.

**Symptoms** are what a person with a medical condition feels and can describe to a doctor or other people. Examples are pain, headache, tiredness, dizziness, numbness in any part of the body. Symptoms can be specific to a disease and can range from mild to severe. Common symptoms include fever, fatigue, muscle aches, cough, diarrhoea and rash.

## Some Common Infectious Diseases and Their Causal Agents, Mode of Transmission and Symptoms

### 1. Tuberculosis (TB)

- a. **Cause:** TB is caused by *Mycobacterium tuberculosis*.
- b. **Mode of transmission:** Airborne particles when infected persons cough, sneeze or speak.
- c. **Symptoms:** Persistent cough, chest pain, coughing up blood, fatigue, weight loss, fever, night sweats.

### 2. Strep Throat

- a. **Cause:** Strep Throat is caused by *Streptococcus pyogenes*.
- b. **Symptoms:** Sore throat, fever, red and swollen tonsils, headache, nausea, and vomiting.
- c. **Mode of transmission:** Direct contact with respiratory droplets from an infected person.

### 3. Pneumonia

- a. **Cause:** caused by various bacteria but commonly caused by *Streptococcus pneumoniae*.
- b. **Symptoms:** Chest pain, cough with phlegm, fever, chills, difficulty breathing.
- c. **Mode of transmission:** Inhalation of airborne droplets, or through blood.

### 4. Whooping cough (pertussis)

- a. **Cause:** Whooping cough is caused by *Bordetella pertussis*.
- b. **Symptoms:** Severe coughing fits followed by a high-pitched “whoop” sound, vomiting, exhaustion.
- c. **Mode of transmission:** Airborne droplets from an infected person.

### 5. Cholera

- a. **Cause:** Cholera is caused by *Vibrio cholerae*.
- b. **Symptoms:** Severe diarrhoea, dehydration, vomiting and leg cramps.
- c. **Mode of transmission:** Ingesting contaminated food or water.

### 6. Chlamydia

- a. **Cause:** Chlamydia is caused by *Chlamydia trachomatis*.
- b. **Symptoms in females:** Thin (sometimes foamy) white, yellow or greenish vaginal discharge, itching, pain or discomfort during intercourse.
- c. **Symptoms in males:** Itching or irritation inside the penis, penile discharge and burning or pain after urination or ejaculation.
- d. **Mode of transmission:**
  - i. **Sexual Contact:** The primary mode of transmission is through vaginal, anal, or oral sex with an infected partner.
  - ii. **Mother to Child:** It is also transmitted from an infected mother to her baby during childbirth.

## 7. Gonorrhoea

- a. **Caused by** *Neisseria gonorrhoeae*.
- b. **Symptoms in females:** Yellowish-white vaginal discharge, itching, burning during urination and rectal pain.
- c. **Symptoms in males:** Discharge from the penis, burning when urinating, painful/swollen testicles.
- d. **Mode of transmission:**
  - i. **Sexual Contact:** The primary mode of transmission is through vaginal, anal, or oral sex with an infected partner.
  - ii. **Mother to Child:** It is also transmitted from an infected mother to her baby during childbirth.

## 8. Syphilis

- a. **Cause:** Syphilis is caused by *Treponema pallidum*.
- b. **Symptoms:** Painless open sore on the genitals which heals on its own, but the infection remains. A rash on anywhere of the body, including the palms of the hands and soles of the feet.
- c. **Mode of transmission**
  - i. **Sexual Contact:** The primary mode of transmission is through direct contact with a syphilitic sore during vaginal, anal, or oral sex. These sores can be found on the external genitals, vagina, anus, rectum, or in the mouth.
  - ii. **Mother to Child:** Syphilis is also transmitted from an infected mother to her baby during pregnancy or childbirth, known as congenital syphilis, which can cause severe, life-threatening conditions in the baby.
  - iii. **Blood Transfusion:** Though rare, it can also be transmitted through blood transfusions if the blood is contaminated.

## Ways of Preventing Infectious Diseases

Preventing infectious diseases involves a combination of personal hygiene practices, vaccinations, safe food and water consumption and other preventive measures. Here are some effective ways to prevent infectious diseases:

1. **Vaccination:** Get vaccinated for diseases for diseases that they protect against. Vaccines protect people from many diseases.
2. **Hand hygiene:** Hygiene practices such as washing hands with soap and water before eating, after using the restroom removes germs that can cause disease.
3. **Safe food practices:** Properly wash fruits and vegetables in clean water before eating and thoroughly cooking meat and other foods reduce the risk of foodborne illnesses.
4. **Clean water:** Drinking and using clean water prevents waterborne diseases.
5. **Avoiding close contact:** Staying away from sick individuals reduces the spread of infectious diseases. Example, avoid close contact with people who have colds or the flu.
6. **Using protective gear:** Wearing masks and gloves can protect you from airborne and contact-transmitted diseases. Example: Wear a mask in crowded places to reduce the spread of respiratory infections.

7. **Safe sexual practices:** Using condoms and having regular health check-ups can prevent sexually transmitted infections (STIs). Example: Use condoms during sexual activity to prevent HIV and other STIs.
8. **Proper waste disposal:** Properly disposing of waste prevents the spread of infectious agents.
9. **Avoiding insect bites:** Using insect repellent and nets can prevent diseases spread by insects. Example: Use mosquito repellent and sleep under a mosquito net to prevent malaria.
10. **Staying home when sick:** Staying home when sick prevents spreading illness to others. Example: Rest at home suffering from cold or the flu until better before going out to mingle with others.

## Characteristics of Non-Infectious Diseases

Characteristics of non-communicable diseases refers to the distinctive features or traits that are commonly associated with non-communicable diseases (NCDs). These characteristics help differentiate NCDs from other types of diseases.

1. **Chronic nature of the disease**
  - a. **Long duration:** NCDs usually persist for long periods, often for the remainder of an individual's life.
  - b. **Slow progression:** NCDs diseases normally develop slowly over years or decades.
  - c. **Chronic pain and discomfort:** Many NCDs cause ongoing pain and discomfort, affecting daily activities of the sufferers.
2. **Complex causes of the diseases**
  - a. **Multifactorial causes or origins of a disease:** NCDs often arise from a combination factor such as of genetic, physiological, environmental and behavioural factors.
  - b. **Lifestyle factors:** Poor diet, physical inactivity, tobacco use, and excessive alcohol consumption are significant contributors to the development of the disease.
3. **Non-Infectious**
  - a. **No direct transmission:** NCDs cannot be spread from person to person through physical contact, air or bodily fluids.
  - b. **Internal development:** They develop due to internal factors such as genetic mutations, metabolic issues and immune system malfunctions.
4. **Major Types**
  - a. **Cardiovascular diseases:** Includes heart disease, stroke and hypertension.
  - b. **Cancers:** Various forms like lung cancer, breast cancer and colon cancer.
  - c. **Chronic respiratory diseases:** Example, chronic obstructive pulmonary disease (COPD) and asthma.
  - d. **Diabetes:** Particularly Type 2 diabetes characterised by high blood sugar levels over a prolonged period.
5. **High Mortality and Morbidity:** Leading causes of death: NCDs are the primary cause of death worldwide, accounting for over 70% of all deaths globally.

6. **Significant disability:** These diseases often lead to long-term health issues and disabilities, impacting quality of life.
7. **Preventability**
  - a. **Modifiable risk factors:** Many NCDs can be prevented or delayed through lifestyle changes such as healthy eating, regular physical activity, avoiding tobacco and limiting alcohol consumption.
  - b. **Early detection and management:** When detected early, NCDs can be prevented from worsening and becoming life threatening. This can be done through regular health screenings and early interventions.

## Ways of Preventing Non-Infectious Diseases

Preventing non-infectious diseases involves adopting a variety of lifestyle and behavioural strategies aimed at reducing risk factors and promoting overall health.

Here are some effective ways to prevent non-infectious diseases:

1. **Healthy diet:** Consume a balanced diet rich in fruits, vegetables, whole grains, lean proteins, healthy fats and limit intake of processed foods, sugars and salt.
2. **Regular physical activity:** Engage in regular exercise such as walking, running, cycling, swimming or participating in sports. Aim for at least 150 minutes of moderate-intensity aerobic activity or 75 minutes of vigorous-intensity activity per week.
3. **Maintain a healthy weight:** Achieve and maintain a healthy body weight through a balanced diet and regular physical activity. Monitor weight regularly and seek professional advice if needed to manage weight effectively.
4. **Avoid tobacco use:** Do not smoke or use tobacco products. Seek help to quit if currently using tobacco. Avoid exposure to second hand smoke to reduce the risk of respiratory and cardiovascular diseases.
5. **Limit alcohol consumption:** Drink alcohol in moderation, if at all.
6. **Manage stress:** Practice stress management techniques such as mindfulness, meditation, deep breathing exercises, or hobbies that promote relaxation. Seek professional help for chronic stress or mental health issues.
7. **Regular health screenings:** Schedule regular check-ups with healthcare providers to monitor and manage risk factors such as blood pressure, cholesterol levels and blood glucose levels. Participate in recommended screenings for cancer, heart disease and other non-infectious diseases based on age, gender, and family history.
8. **Avoid exposure to environmental toxins:** Minimise exposure to harmful chemicals and pollutants in the environment, workplace, and home. Use protective equipment and follow safety guidelines if working with hazardous materials.
9. **Good sleep hygiene:** Ensure adequate sleep by maintaining a regular sleep schedule and creating a restful sleep environment.
10. **Healthy relationships and social connections:** Foster strong social connections and maintain healthy relationships to support emotional well-being. Seek support from friends, family, or support groups when needed.

## Learning Tasks

1. Create a visual chart that differentiates between infectious and non-infectious diseases.
2. Create a table or diagram that matches each type of pathogen (bacteria, virus, fungi, parasite) with a specific disease it causes.
3. Compile a list of common risk factors associated with non-communicable diseases.
4. Develop a visual presentation that describes infectious diseases and their causal agents, mode of transmission and symptoms.
5. Write an essay explaining why non-communicable diseases are commonly known as “lifestyle diseases.”
6. Develop a detailed guide on methods for preventing communicable diseases.

## Pedagogical Exemplars

### Activity

#### 1. **Starter:** Disease category matching

- a. Prepare cards with disease names. Divide the markerboard or blackboard into sections and label the sections with disease categories (e.g., infectious diseases and non-infectious diseases).
- b. Divide the class into 4 groups and distribute the disease cards among the groups.
- c. Explain that each group’s task is to match the disease cards to the correct category on the board.
- d. Encourage learners to discuss the symptoms, causes and transmission methods of each disease to determine its category. Allow the groups some few minutes to complete the matching activity.

#### 2. **Introductory activity**

- a. After completing the activity, facilitate a discussion by asking groups to explain their reasoning for categorising each disease.
- b. Discuss any discrepancies and clarify misconceptions about disease classification and connect the activity to the upcoming lesson by telling learners that the lesson for the day is on classifications of human disease.

#### 3. **Group work/Collaborative learning/Digital learning**

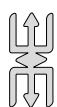
In mixed-ability groups and with the help of their digital devices, learners search for the meaning of a meaning of classification diseases, the two main classification of diseases, their meanings and examples while giving chances to all, regardless of gender, disability or culture to contribute. Learners present their findings to the whole class for feedback and clarification. The entire class put their groups’ findings together and create one simple definition of a classification diseases, communicable and non-communicable diseases and give example of each category of classification. Encourage and ensure all learners work together and contribute to the group work. Give further clarification and guidance to the whole class and the less able learners to grasp the concept.

#### 4. Collaborative learning

In mixed ability groups, learners engage in structured discussion to ways of preventing of both communicable and non-communicable diseases. Guide learners to make note for class presentation using different modes to present their findings (written, oral, PowerPoint, Prezi or google slides) to present their findings to the class to help accommodate different learning styles. Ensure each member of the group contributes and plays a supportive role, tolerating and respecting the views of other group members.

#### 5. Project-Based Learning

Learners in six groups research and examine specific characteristics of infectious and non-infectious diseases. Guide learners in groups to select diseases they will research on. Task each group to search the internet on the causal agents, mode of transmission/risk factors and symptoms of the disease chosen. Guide groups through the process and ensure learners with special needs assume roles such as group secretaries, lead presenters, organisers, etc. Develop a rubric for scoring based participation, contribution and presentation.



#### Note

Have a session after all presentations where learners can ask questions about the diseases they studied and learn from each other's research.

### Key Assessment

#### Level 1

1. State three examples each of infectious and non-infectious diseases.
2. Identify two diseases caused by each of the following; bacteria, virus, fungi and parasite.
3. State four common risk factors for developing non-communicable diseases?
4. State three ways to prevent the spread of infectious diseases.
5. Identify two lifestyle changes that can help prevent non-infectious diseases.

#### Level 2

1. Differentiate between infectious and non-infectious diseases.
2. Describe four infectious diseases and their causal agents, mode of transmission and symptoms.
3. Describe three examples of non-communicable diseases

#### Level 3

1. Why are non-communicable diseases often called *lifestyle diseases*.
2. Explain three specific characteristics of non-infectious diseases.
3. Explain four ways of preventing communicable diseases.

#### Level 4

1. Discuss the social and economic impact of infectious disease outbreaks on communities. Use specific examples to illustrate points that may be raised.
2. Health fair: Organise a school health fair where learners can present their projects to other classes and parents.

## Suggestions for Additional Learning

For further understanding of human diseases, learners can read the following:

1. Acute and chronic diseases and their examples.
2. Differences and similarities in the treatment approaches for acute and chronic diseases.
3. Autoimmune diseases and their examples.

## SECTION 2 REVIEW

Section 2, part one provides learners with a comprehensive knowledge and understanding of diseases that affect human health. By the end of these two weeks, learners will have a foundational grasp of classifications of diseases, common diseases and their causal agents, mode of transmission, risk factors and their symptoms.

In Week 4, learners explored the foundational concepts of human diseases. The key concepts included the meaning of human disease, disease, examples of human diseases, general characteristics of diseases, examples of diseases with their specific characteristics, importance of studying human diseases and the general impacts of diseases on human life. Differentiation was included by engaging advanced learners to support their peers in search on the concepts, discussions and in preparing findings for presentations while providing additional support to those who need help understanding the concepts.

In Week 5, learners had the opportunity to explore further concepts of human diseases. The focus was on key concepts such as the meaning of classification of diseases, the two main classifications of diseases, specific characteristics of infectious and non-infectious diseases, examples of diseases from each category, common infectious and non-infectious diseases and their causal agents, mode of transmission/risk factors, symptoms and ways of preventing infectious and non-infectious diseases. The expected outcomes for this week are learners successfully demonstrating understanding of diseases that fall under each classification, what causes them, how they are developed or contracted and spread, their various symptoms and how they can be prevented. Differentiation in this week involved assigning leadership roles to gifted students, allowing them to lead their groups during discussion sessions while providing additional support to those who need help.

## SECTION 3: TRADITIONAL GAMES – PART ONE

### STRAND: PHYSICAL ACTIVITY AND HEALTH

#### SUB-STRAND: Traditional Games

**Learning Outcome:** *Demonstrate the understanding of the backgrounds of traditional games in Ghana and their significance to health and well-being*

**Content Standard:** *Demonstrate the ability to apply basic movements in performing traditional games*

#### HINT



- Teachers are encouraged to administer this assessment and document the results for submission to the Student Transcript Portal (STP). Refer to **Appendix C** for table of specifications on how to develop assessment items for mid-semester examinations.
- Remember to take the **group project** by week 7 and remind learners to keep copies in their portfolios after evaluation.

### INTRODUCTION AND SECTION SUMMARY

Traditional games hold a significant place in the cultural heritage and social life of communities around the world. These games, often passed down through generations, are more than mere pastimes, they are a rich form of history, tradition and community values. They offer a window into the ways of life, customs and beliefs of different cultures. In the educational context, traditional games can be a powerful tool for teaching learners about cultural diversity, teamwork, and physical fitness. This section aims to provide learners with insights into various traditional games, their origins, rules and the cultural and educational benefits they offer. Participating in these games will create a dynamic and engaging learning environment that will foster a deeper appreciation of cultural heritage and promote social and emotional development among learners.

This section covers a variety of traditional games from different Ghanaian tribes, highlighting their historical and cultural significance including their origin, basic rules and the skills the game develops. In summary this section will emphasise the cultural significance, educational benefits of the games, such as promoting cultural awareness, enhancing physical fitness, and fostering social skills like teamwork, communication, inclusion and cohesion. Through engagement in the games, learners will not only learn about different cultures but also develop important life skills that contribute to their overall growth and development.

**The weeks covered by this section include:**

**Week 6:** Identify various traditional games and discuss their origins and importance.

**Week 7:** Identify the core skills in performing arm wrestling and tug of war.

## SUMMARY OF PEDAGOGICAL EXEMPLARS

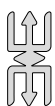
In this section, teachers are expected to use appropriate teaching approaches to promote learners' achievement of the content. This can be facilitated by exploring and applying approaches such as the use of Talk for Learning (TFL), Collaborative Learning, building on what others say, etc. to engage learners in the various learning tasks of the session. Pedagogical exemplars that allow groupings such as mixed-ability, mixed-gender and gender-based where applicable should be appropriately applied taking into consideration the nature of the task involved. Special attention should also be given to learners with additional needs to ensure they benefit from the lesson. Encourage learners to respect individual differences (beliefs, tribe, religions, abilities, temperaments, etc.).

## ASSESSMENT SUMMARY

Assessment methods in this section should include practical demonstrations, class assignments and written quizzes to evaluate learners' understanding of the meaning, origins, cultural and educational importance of traditional games. In Week 6, assess learners' grasp of the theoretical aspects of traditional games through assignment, quizzes and discussions. In Week 7, focus on practical skills, observing how learners perform the games using the basic rules governing the games for fun, fitness and safety. Develop rubrics to ensure objective assessment of performance and safety compliance. Record learners' progress, noting areas for improvement and those excelling in their skills and use this information to inform future lesson planning and individualised feedback on subsequent games they may engage in. The recommended mode of assessment for each week is as follows:

**Week 6:** Mid-Semester Examination

**Week 7:** Practical assessment



### Note

For additional information on how to effectively administer the mid-semester, please, refer to the Appendices at the end of section 2.

## WEEK 6

**Learning Indicator:** Identify various traditional games and discuss their origins and importance

### FOCAL AREA: ORIGINS AND IMPORTANCE OF TRADITIONAL GAMES

#### Traditional Games

#### What are traditional games?

Traditional games are activities that have been passed down through generations and are typically rooted in the culture, history and social practices of a tribe, community or region. These games often require minimal equipment and are played using simple rules that can be easily learned and adapted. They are usually played in groups, fostering social interaction, teamwork and physical activity. Traditional games can be an important part of childhood and community life, providing entertainment, education and a means of preserving cultural heritage. They are a valuable part of educational and recreational activities, offering a blend of fun, learning and cultural appreciation. Examples of traditional games in Ghana include:

Ampe, langa, pilolo, chaskele, ansankroma, kallanga, Oware, Antoakyire, Tumatu, cloth parachuting or sail, ludo, alokoto, draughts (dame), etc. Engage learners to come out with more from their various localities.

#### Origins of some Ghanaian traditional games

The traditional games of Ghana have deep roots in the cultural and social history of its diverse ethnic groups. These games have evolved over centuries, reflecting the customs, values and way of life of the people. They often serve as a means of socialisation, education and entertainment.

##### 1. Cultural heritage

- a. **Community and clan-based origins:** Many traditional games originated within specific communities or clans and were played during communal gatherings, festivals and rites of passage. They were integral to social bonding and cultural identity.
- b. **Oral tradition-based origin:** Some games and stories behind them and their rules were discovered by great hunters and warriors who transmitted to their people and was onwards transmitted orally from one generation to the next. This oral tradition ensured that the games remained a vital part of community life.

##### 2. Ritual and ceremonial context

- a. **Ritual significance:** Some traditional games had ritualistic and ceremonial significance as their origin. They were often part of larger cultural ceremonies, such as harvest festivals, initiation rites and religious celebrations. For example, wrestling matches were held during festivals to honour ancestral spirits and celebrate community strength.
- b. **Seasonal variations:** The playing of certain games was sometimes tied to specific seasons or agricultural cycles. This seasonal aspect ensured that the games remained relevant to the community's way of life. For instance, Abongo is a traditional wrestling game that takes place during dry season festivals when farming activities are minimal.

Kyekyekule is a singing and clapping game played mainly by children. It typically takes place during the post-harvest period when children are free and there is more leisure time.

### 3. Colonial influence and adaptation

Colonial period adaptations: During the colonial period, some traditional games were adapted to include elements from Western games introduced by colonial powers. This period saw a blending of indigenous and foreign game elements, leading to new variations and forms. Examples of such games are

#### a. Chaskele

**Indigenous elements:** The game involves hitting a ball (often made from rolled-up socks or rubber) with a stick and running to designated spots before the ball is retrieved.

**Western influence:** The concept of hitting a ball and running bases is reminiscent of baseball, a game introduced during the colonial era.

#### b. Pilolo

**Indigenous elements:** The game involves hiding small sticks or objects and players racing to find them.

**Western influence:** The competitive racing element resembles aspects of Western scavenger hunts.

## Some Examples of Traditional Games in Ghana: Tribes That Play Them, Their Descriptions and Basic Rules

Traditional games in Ghana are an integral part of the cultural heritage, reflecting the customs and values of various ethnic groups. These games are often played during festivals, community gatherings, and as part of everyday leisure activities. Examples include Ampe and Pilolo.

### Ampe

**Tribe:** This game is played by children of almost all tribes in Ghana.

#### Description

- Ampe is a lively, rhythmic and energetic game that involves jumping, clapping and quick reflexes mainly played by girls, though boys can also participate. It is often played during the post-harvest period at home when there is more free time and at school during break time.
- The game is typically played by two or more players and can be played in any open space, such as a playground, courtyard, field or a park.
- At the start of the game, players stand facing each other at a close distance, about one or two feet apart and agree on the foot movement for scoring (that is one player or a group of players will choose same foot - right, right or left, left foot for winning a point and the other player or players will choose different foot - right, left or left, right for scoring a point). This can be done through a ballot or by mutual agreement.
- The game begins with both players jumping simultaneously while clapping their hands. As they jump, each player extends one foot forward. The timing and rhythm are crucial to match the clapping and jumping. This involves anticipating the opponent's foot movement while jumping and clapping in sync with the objective being to outwit the opponent by

anticipating their foot moves. If both players have the same foot forward, the players or players who chose the same foot wins a point but if they have different foot forward then the player or players who chose different foot wins and plays against the remaining player or players.



**Figure 6.1:** *The same foot forward*

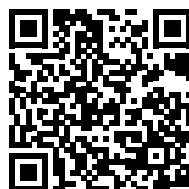


**Figure 6.2:** *Different foot forward*

## Rules

Rules and scoring vary slightly from one place to another, so it is essential to agree on the rules before starting the game. However, below are some general rules

1. Players must stand facing each other.
2. Players must clap hands and jump simultaneously.
3. Players must extend one foot forward while in the air.
4. Players must land in sync with both players hitting the ground at the same time.
5. Scoring must be based on agreed foot movement.
6. Overall winner must be determined by the number of total points accrued.



<https://www.youtube.com/watch?v=wZPeon377mM>

*A short video on ampe.*



**Figure 6.3:** *Girls playing ampe during break time at school*



**Figure 6.4:** *Learners playing ampe during physical education class*

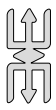
## Pilolo

**Tribe:** This game is played by children of almost all tribes in Ghana.

### Description

1. Pilolo is an outdoor game that is played among Ghanaian children. It is a hide-and-seek type of game where players search for hidden sticks or objects. The literal English translation of the name pilolo is “time to search for”. The game is played by five or more children. The higher the number of participants, the higher the excitement and the zeal to win.
2. An object like a stick is mostly used and the number of sticks to use is dependent on the number of participants. The game is started by one player hiding the sticks. The one to hide the sticks, who is also referred to as the leader is determined by drawing lots, a previous winner, a previous loser or by volunteering.
3. The one to hide the sticks or the leader instructs the rest of the players go into hiding elsewhere. The leader then sneaks to hide the sticks around the playing area and then shouts out “pi-lo-lo” to signal the start of the search.
4. The participants run from their hideout to search for the items. The objects are hidden in spots that are not too hard to find, but not too obvious either.
5. Clear and defined boundaries for where the objects can be hidden and where players can search is indicated. This ensures safety and keeps the game within a manageable area. The competition is about who first finds the sticks, pick one and returns it to the leader first at a demarcated finishing point.

6. The first to return a stick scores the most points for the round. The second receives fewer points and the points awarded decrease in that order. The leader keeps track of the points acquired by the participants. The points to be awarded are agreed on by the whole group before the start of the game.
7. For instance, if there are 10 participants, it can be agreed that the first person to return a stick scores 10 points followed by 9 points, in that order till it gets to the last person who will be awarded 1 point. In some cases, the participants fail to find the sticks. For such a round, no one scores any points. When there are many children involved, an assistance leader can be added to help the leader in ensuring that no one watches while the leader hides the sticks. The game continues with the same or a new hider, and the objects are hidden again for the next round.
8. After a predetermined number of rounds or a set time limit, the player who finds and returns the most sticks or objects to the leader at the designated spot is declared the winner.



### Note

Points awarded can also be determined solely by the teacher.

## Rules

1. Players must not peek while the hider is hiding the objects.
2. Players must not interfere with other players while searching for the objects.
3. Players must return the found object to the designated area or line to win a point.



**Figure 6.5:** Children in search of the hidden object



**Figure 6.6:** Children running with excitement after finding the hidden object



**Figure 6.7:** *Children struggling to join the finishing queue*

## Cultural Significance of Traditional Games

Traditional games hold profound cultural significance across societies, acting as a channel for preserving and transmitting cultural values, social norms and historical narratives. They are a vibrant expression of cultural identity, serving as a bridge between past and present, and a means of imparting invaluable lessons and experiences to future generations. Here are some ways in which traditional games play a crucial role in cultural heritage:

### 1. Preservation of cultural heritage

- a. **Oral tradition and history:** Traditional games summarise historical events, legends and folklore, helping to preserve oral traditions and history. For instance, some games are based on historical battles or significant events, making them a living record of a community's past.
- b. **Cultural identity:** They reinforce cultural identity and pride, connecting individuals to their heritage and ancestors. By engaging in these games, people reaffirm their connection to their cultural roots and pass on this sense of identity to younger generations.

### 2. Social cohesion and community building

- a. **Intergenerational bonding:** Traditional games are often passed down through generations, creating opportunities for the young and old to interact and bond. For example, grandparents teach grandchildren the rules and strategies of the games, fostering family connections.
- b. **Community engagement:** They bring people together during festivals, celebrations, and communal gatherings, fostering unity and social harmony. Participating in these games can build a sense of belonging and mutual support within the community.

### 3. Educational value

- a. **Skill development:** Traditional games help to develop various skills in children and young adults. Skills such as physical coordination, strategic thinking teamwork, problem-solving abilities and social interaction are developed by the participants. The games are not only recreational but also serve as informal training grounds for young people, preparing them for various aspects of life, including warfare and defence.

For instance, games like Oware fostered mathematical and strategic skills, while physical games like Ampe and wrestling promoted physical fitness and agility. Also, Dambe a form of traditional boxing with deep roots in the Hausa culture of Ghana, teach physical strength, bravery and combat skills to the individuals who engage in them. Again, Abongo a traditional wrestling game among the Dagomba people also

highlights strength, endurance and tactical skills. Kpatinga a traditional spear throwing game of various Northern tribes as well train young men in precision and strength for hunting and combat.

- b. **Moral, ethical and social lessons:** Many traditional games are team-based and convey important moral and social lessons, such as fair play, cooperation and respect for others. They serve as informal educational tools within the community.

Examples of such games are pilolo, chaskele, dame (draughts), ampe, oware, sansakroma (stone passing game), antoakyire, olu, dua oo dua, kwaa-kwaa, ludo, etc.

- c. **Moral and ethical lessons:** Many traditional games are team-based with local rules that emphasise fair play, communication, sportsmanship, social bonds, honesty and respect for teammates, opponents and audience, which are critical values for social harmony.

#### 4. Ritualistic and ceremonial functions

**Rites of passage:** Certain games are integral to rites of passage, marking significant life events like birth, puberty, marriage and death. These games symbolise the transition from one stage of life to another and are often accompanied by ceremonies that impart cultural values.

## Benefits of Traditional Games in Daily Living

### 1. Entertainment and Recreation

- a. **Leisure activities:** Traditional games provide entertainment and recreational opportunities, contributing to the overall well-being and happiness of community members. They offer a way to relax, socialise and have fun, which is essential for mental health and general well-being.
- b. **Festive celebrations:** They are often a highlight of festive celebrations, adding joy and excitement to cultural festivals and ceremonies. These games bring a sense of liveliness and joy, enhancing the festive atmosphere.

### 2. Promotes physical health

- a. **Physical fitness:** Many traditional games involve physical activity, promoting fitness and healthy lifestyles. Games that require running, jumping or other physical movements help participants stay active and fit. Almost all traditional games involve some kind of running, jumping and balancing which promote cardiovascular health, muscle strength and overall physical fitness. Regular participation in these games helps maintain a healthy weight, reduces the risk of chronic diseases and enhances physical endurance.
- b. **Coordination and motor skills:** Games requiring precise movements and timing, like jump rope or stick fighting, enhance hand-eye coordination and fine motor skills. These skills are crucial for daily tasks and overall physical development, especially in children.
- c. **Endurance and stamina:** Engaging in physically demanding traditional games builds endurance and stamina. This is beneficial for daily activities and contributes to overall energy levels and resilience.
- d. **Mental agility:** They enhance mental agility and cognitive functions through strategic thinking, problem-solving and memory exercises and concentration. Most, games for instance, require players to think several moves ahead and plan their strategies carefully.
- e. **Flexibility and agility:** Activities that involve dodging, twisting and bending improve flexibility and agility individuals engaging in them.

### 3. Mental benefits

- a. **Cognitive skills:** Strategic games enhance planning, problem-solving abilities, memory and concentration which help develop critical thinking and decision-making skills.
- b. **Stress relief:** Engaging in playful activities can reduce stress and anxiety, providing a mental break from daily pressures and routines, promoting relaxation and emotional well-being.
- c. **Self-esteem and confidence:** Successfully participating in games, mastering, overcoming challenges or winning boosts self-esteem and confidence. This sense of accomplishment positively impacts other areas of life of an individuals' life. The feeling of achievement motivates individuals to set and pursue other goals.

### 4. Promoting inclusivity

- a. **Accessible to all ages and abilities:** Traditional games often have simple rules and require minimal equipment, making them accessible to people of all ages, genders, and abilities. This inclusivity ensures that everyone, regardless of their physical or cognitive abilities, can participate and enjoy the game. Example: In Ghana, the game “Pilolo” involves hiding and finding small objects, which can be played by both children and adults. The simplicity of the game makes it easy for participants of all ages and abilities to engage, fostering inclusivity within the community.
- b. **Non-competitive nature:** Many traditional games emphasise participation and fun over competition, reducing barriers to inclusion. This approach encourages everyone to join in without the fear of losing or being judged, promoting a supportive and inclusive environment. Example: ‘sansankroma’ a game played by passing a stone in a circle, focuses on cooperation and enjoyment rather than competition. The game’s non-competitive nature ensures that everyone, regardless of their skill level, can participate and have fun together.
- c. **Adaptability:** Traditional games can be easily modified to accommodate different participants’ needs, ensuring that everyone can take part. This adaptability makes the games inclusive for people with diverse abilities and preferences. Example: The rules of same games can be adjusted to allow children with mobility issues to participate. For instance, instead of running or jumping, players might walk or use mobility aids, ensuring everyone can enjoy the game and feel included.

## Impact of Modern-Day Influences on the Popularity and Practice of Traditional Games

Traditional games have been an important part of cultural heritage, reflecting the history, values, and customs of different communities. However, in recent times, these games have been influenced by various modern-day factors that affect their popularity and practice.

Some of these influences include:

### 1. Technology and digital entertainment

With the rise of smartphones, video games, and online entertainment, many young people spend more time on digital platforms than engaging in traditional physical activities.

Games like football or “Ampe” are now played less in communities because children and teenagers prefer playing video games or engaging on social media platforms.

The convenience and excitement of virtual gaming environments draw attention away from traditional games, which might seem less appealing.

## 2. Urbanisation and changing lifestyles

As more people move to cities, there is often limited space for outdoor play. Traditional games that require open fields or specific outdoor environments are becoming harder to practice. The fast-paced lifestyle of city dwellers leaves little time for recreational activities, causing traditional games to be forgotten.

## 3. Western influence and globalisation

Globalisation has brought about the introduction of foreign sports like basketball, football, and tennis, which have become highly popular, especially among the youth.

Traditional games such as “Pilolo” or “Oware” might be perceived as old-fashioned compared to these modern sports that receive greater media coverage and international recognition.

## 4. Education systems and school curricula

Many schools focus more on academic subjects and mainstream sports, with less emphasis on teaching and practicing traditional games. Learners are more exposed to modern physical activities like athletics, football and volleyball during Physical Education Health lessons, limiting their exposure to traditional games.

## 5. Cultural shifts and changing values

Cultural shifts towards modernisation mean that some people no longer see traditional games as valuable or relevant to contemporary life. As families become more focused on modern lifestyles, the practice of traditional games, often passed down through generations, is no longer prioritised.

Traditional games are an excellent way to incorporate physical activity into daily life while preserving cultural heritage and fostering social connections. They offer a holistic approach to health and well-being, benefiting both the body and the mind. Modern day influences, such as technology, urbanisation, and globalisation, have significantly impacted the popularity and practice of traditional games. However, by promoting awareness and incorporating these games into cultural and educational programmes, there is hope for their revival and continued relevance in today’s society.

### Learning Tasks

1. What are traditional games?
2. Research and create a detailed profile of traditional games from your region or community.
3. Develop an informative video that illustrates the significance of traditional games to both individuals and society.
4. Design an educational pamphlet that outlines the origins of traditional games in Ghana.

## Pedagogical Exemplars

### Activity

#### 1. Starter Activity: Four Corners

**Preparation:** Label each corner of the classroom with a different traditional game (e.g., tumatu, alikoto, oware, zanzama, etc.). Prepare a list of questions or statements related to each game.

**How to Play:** Ask learners to move to the corners in the class to familiarise themselves with names of the games there. Then ask them to stand by their desks and listen to what you will read out. Tell them to move to the game they think the statement you read best matches or describes.

For example, you might say, “Move to the corner of the game that originated in Ashanti region.” Then they move to the corner they think the statement best fit. *For this statement the correct answer is Oware.* Or I am a game that is played by hopping. Then they move. *For this statement the correct answer is tumatu.*

**Discussion:** After each round, discuss the correct answer and share interesting facts about each game.

**Hint:** Some learners may be moving to the wrong corners but do not stop. This activity not only gets learners physically active but also sparks their curiosity and sets the stage for deeper learning about traditional games. Therefore, do not restrict them when they are moving towards the wrong answers.

#### 2. Introductory Activity

After the game, lead a brief discussion by asking learners how they felt about the game and what new thing they learnt from it. Encourage them to share their experiences or knowledge about the games.

Briefly summarise what they shared and transition into the main lesson by telling them that they will be learning about various traditional game, their origins and importance.

#### 3. Digital-based learning

Learners in mixed ability and mixed gender groups use their phones or laptops to search the meaning of traditional game and examples of traditional games, compile their information and share with the group on their right-hand side to help fine tune their findings.

#### 4. Group research project

In the same groupings, assign each group a traditional game to research. Provide learners with resources such as articles, books or online databases. Task each group to find information about the game’s origin, rules and cultural significance. Ask the groups to create a visual presentation (poster, digital slideshow or infographics) to share their findings.

## Key Assessment

### Level 1

1. What are traditional games?
2. What is the significance of traditional games to individuals and society?

### Level 2

1. Identify at least four traditional games from your region or community and describe their origins.
2. Describe three core rules of two traditional games from your region.

### Level 3

1. How does traditional games contribute to the development of motor skills in individuals?
2. Discuss the role of traditional games in promoting inclusivity and unity in within communities?

### Level 4

1. Develop a video on how traditional games have contributed to building social connections and fostering teamwork in your community.
2. Analyse the psychological benefits of traditional games and how they contribute to mental wellbeing.
3. Analyse the impact of modern-day influences on the popularity and practice of these games.

#### HINT



*The Recommended Mode of Assessment for Week 6 is **Mid-semester Examination**. Refer to **Appendix C** at the end of section 3 for further information on how to go about the mid-semester examination.*

## WEEK 7

**Learning Indicator:** Identify the core skills in performing arm wrestling and tug of war

### FOCAL AREA: ARM WRESTLING AND TUG OF WAR

#### Arm Wrestling and Tug of War

In many African cultures, including Ghana, wrestling has been an important traditional sport. For young men, wrestling was often a rite of passage, a way to show their strength, skill, endurance, physical power and competitiveness.

In Ghana, some communities, especially in the north, still practice traditional wrestling. These strength-based contests are usually held during festivals, but they are not seen as competitive sports.

#### Arm Wrestling

Arm wrestling is a competitive sport in which two opponents use one arm each to force the other person's hand down onto a flat surface in a show of strength and technique. It is a contest of power, but also involves skill, leverage and strategic use of body mechanics — see *Figures 7.2 to 7.3*.

Arm wrestling has gained popularity in Ghana over the past decade, transitioning from a casual pastime and festival contest to a formalised sport. The formation of the Ghana Arm-wrestling Federation (GAF) in 2016 was a major step in developing the sport as a competitive discipline in the country. The Federation's main goal is to promote arm wrestling as an organised sport, encouraging discipline, strength, and fair competition among young people. GAF also hosts national tournaments, and arm wrestling has been included in school sports and inter-district competitions, helping to blend traditional values of physical strength with modern competitive sports.

Learners can compete at local, regional, and national levels, giving those passionate about arm wrestling the chance to become professional athletes and represent their schools or even Ghana in international competitions. Thanks to the efforts of the GAF, talented and dedicated learners can participate in national competitions. They can join teams, take part in organised events, develop their skills, build strength, and gain recognition for their achievements.

Arm wrestling in Ghana is no longer just about strength, it has become a sport of strategy, technique and endurance, with a growing number of learners embracing the challenge. By participating in these competitions, learners can gain valuable experience, build their physical fitness and possibly pursue a future in competitive arm wrestling, both locally and internationally.

#### Basic Rules of Arm Wrestling

The rules of arm wrestling are straightforward but essential to ensure fairness and safety.

1. **Starting position:** Two competitors sit or stand facing each other. Each participant must have one elbow resting on a flat surface, usually a table, with their forearm vertical to the surface — see *Figures 7.2 to 7.3*.

2. **Grip:** The participants' hands must grip each other's firmly, with palms touching and thumbs interlocked. The wrist must be straight at the start of the match and the elbow of both participants must remain on the table throughout the match.
3. **Ready, Set, go:** An official or teacher gives the signal to start the match by saying "Go." Both participants then push against each other's arm, attempting to pin the opponent's hand onto the surface.
4. **Winning the match:** The match is won when one competitor forces the opponent's hand down until it touches the surface.
5. **Disqualification:** Any illegal movement such as lifting the elbow off the table, twisting the arm unnaturally or using both hands to push is grounds for disqualification.



Figure 7.1: Arm wrestling tables

## Techniques of Arm Wrestling

While arm wrestling may seem like a simple contest of strength, there are essential techniques that can help even the physically weaker competitor gain an advantage. These techniques include:

1. **Grip:** This refers to the way competitors hold each other's hands before the match begins. The participants' hands must grip each other's firmly, with palms touching and thumbs the fingers interlocked — see *Figures 7.2 to 7.3*. The wrists are straight at the start of the match. Grip strength is important in arm wrestling. The stronger the grip, the harder it is for the opponent to control the hand. It directly influences control over the opponent's hand and the ability to apply force effectively. A strong grip helps maintain stability, prevents the opponent from gaining control and enhances the ability to use leverage and other techniques effectively.

### The grip involves

- a. **Hand positioning:** This is how high or low the hand is placed on the opponent's hand or wrist.
- b. **Finger placement:** This refers to where the fingers lock around the opponent's hand.
- c. **Wrist position:** This is whether the wrist is straight, flexed or rolled to gain an advantage.

### Types of grips commonly used in arm wrestling

- a. **Toproll grip:** The toproll is a grip and technique where the arm wrestler tries to control the opponent's fingers and hand. The goal is to rotate the opponent's wrist back and pull their hand towards the wrestler's own body. The key advantage of this grip is, it weakens the opponent's grip and focuses on hand control and leverage.

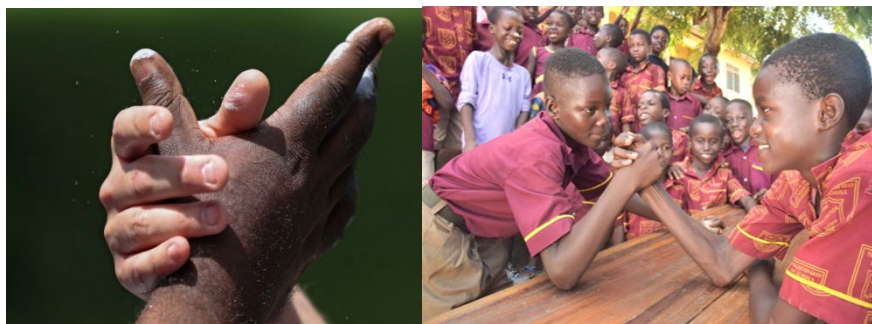
- b. **Hook grip:** In the hook grip, the arm wrestler pulls the opponent's arm towards their body while flexing the wrist inward. This technique focuses on using arm strength rather than hand or finger strength and the main advantage is, it brings the match into a close, power focused position, using the bicep and shoulder muscles to win.
- c. **Press grip (Shoulder press):** The press grip involves bringing the body forward and pressing the opponent's hand down with the triceps and shoulder. It is often used after gaining control with another grip like the hook or toproll. This grip takes advantage of the body's weight and uses pressing power to overwhelm the opponent.
- d. **Strap grip:** In a strap grip, a strap is used to tie the competitors' hands together. This happens when both competitors slip out of a traditional grip. The strap forces both wrestlers to rely more on arm strength than hand control. This grip eliminates the focus on hand strength, allowing competitors with weaker grips to compensate with arm and shoulder power.
- e. **Over-the-top grip:** This grip aims to roll over the opponent's hand by applying upward pressure while pulling the arm back. The technique is a combination of a toproll and pulling the opponent's hand outward. This weakens the opponent's wrist and grip while allowing you to control the match.
- f. **Low hand toproll grip:** This is a variation of the toproll where the arm wrestler positions their hand lower on the opponent's wrist to gain better leverage and control. This grip focuses more on back pressure and finger control. Its key advantage is that it puts pressure on the opponent's wrist and forces them into a weak defensive position.

Each grip has its own strengths and can be used depending on an arm wrestler's strategy, the opponent's technique and their personal strengths.

2. **Leverage and body positioning:** In arm wrestling, leverage refers to the use of body positioning and angles to maximise force and gain an advantage over the opponent. It allows an individual to apply more pressure with less effort, by using the body weight and muscle groups more efficiently. Instead of depending purely on arm strength, leverage enables the use of the entire body to effectively control the match.

**Wrist control:** This refers to the ability to manipulate and dominate the position of the opponent's wrist during the match. The correct position of the wrist must be maintained while manipulating the opponent's wrist to gain a strategic advantage. The position and stability of the wrist play a major role in applying force effectively and resisting the opponent's attempts to overpower you.

3. **Forearm strength:** Forearm strength refers to the muscular power and endurance of the forearm muscles, which are essential for effective performance in the sport. Strong forearms play a crucial role in grip strength, wrist stability and the overall ability to execute various techniques during a match.



**Figure 7.2:** *The grip in arm wrestling*



**Figure 7.3:** *Hand and elbow placement*

## TUG OF WAR

### History

Tug of war is one of the oldest and most widely recognised games in history, with its simple concept of two teams pulling on opposite ends of a rope staying mostly the same over time. It was traditionally used to build strength, prepare soldiers for battle and celebrate harvests. Tug of war was even an Olympic sport from 1900 to 1920, governed by the Tug of War International Federation (TWIF), which still organises world championships and sets the official rules. Although it is no longer part of the Olympics, tug of war remains a popular sport globally. The sport is played both indoors and outdoors, with strict rules on rope length, team size and technique. Tug of war continues to be a popular game at festivals, school sports days and community events around the world, including in Ghana. — See *Figures 7.4 to 7.5*.

### What is tug of war?

Tug of war is a competitive sport and recreational game in which two teams pull on opposite ends of a long rope, with the goal of dragging/pulling the other team across a designated line. It is a fun and competitive game that also encourages the development of physical fitness, communication, teamwork and strategy. It tests both individual strength and the ability to work cohesively as a team, as each member contributes to the overall pulling power.

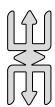
### Tug of war in Ghana

Tug of war has long been a part of the country's cultural and recreational practices. Although it may not have the formal history seen in other nations, the game has been widely played in communities, especially during festivals, celebrations, local competitions and other social gatherings. The sport has served as a source of entertainment, team building and even strength testing among various groups, from schools to local festivals and special events.

### Physical and Social Benefits of the Game

**Unity and disputes resolutions:** In many Ghanaian communities, tug of war is not just a fun activity but also a symbol of strength and unity. It has historically been used to build friendships, especially during festivals and cultural gatherings. Like other African countries, tug of war in Ghana is often part of larger celebrations, where the game is used to entertain crowds and showcase the physical abilities of the participants. In rural communities, tug of war is a common feature at durbars (traditional gatherings), where people come together to celebrate their heritage, mark a festive occasion or resolve disputes through friendly competition. It is also used to unite different groups within a community and fostering cooperation.

**School sports and education:** Tug of war is frequently played in Ghanaian schools, where it is included in some sports programmes and physical education lessons. The game is popular during inter school and old school reunion days, where learners compete in teams for prizes and bragging rights. At the primary and secondary school levels, tug of war serves as a fun and simple way to promote teamwork, communication and physical activity.



### Note

Teachers can use tug of war as a practical way to develop learners' strength and endurance while encouraging unity and collaboration. This is especially true during physical education lessons and some school festive days. The game's simplicity makes it easy to organise and its physical and social benefits make it a popular choice for both learners and teachers.

**Physical strength and conditioning:** Tug of war builds strength in the arms, leg and core muscles due to the intense pulling and resistance involved. It also enhances cardiovascular fitness, as it requires bursts of strength and stamina over a potentially extended period.

**Teamwork and communication skills:** Tug of war is a true test of teamwork. Learners/players must communicate effectively to synchronise their efforts, enhancing their ability to work with others. It teaches participants how to rely on one another and develop trust, as each player's effort directly impacts the entire team's success.

**Mental toughness and resilience:** Playing tug of war cultivates resilience. Teams must remain focused, stay positive and persist, even when they are losing ground. It also builds self-confidence, as participants learn to push their limits and strive for success through collective effort.

**Social engagement and fun:** Tug of war is not only about competition; it is also a great way to socialise and have fun. It fosters a spirit of friendship and is often used in team-building activities because of the mutual support and cooperation it encourages.

**Team-building activity:** Tug of war can also be used as a team-building exercise in workplaces and community organisations in Ghana. The game is an ideal activity for building trust, fostering communication and developing leadership skills among participants. Corporate organisations sometimes include tug of war in their team-building exercises to strengthen relationships between employees and improve morale.

## Rules of Tug of War

1. **Teams and players:** Each team consists of 8 players, although casual games can have more or fewer players if both sides are equal. Players are often arranged with the strongest or most experienced puller, called the anchor, positioned at the back of the line.
2. **Sitting or lying on the ground:** Players are not allowed to sit or lie down while pulling the rope. This is both a safety issue and a violation of the rules. To keep the game fair, no individual is allowed to use their feet to dig into the ground excessively, nor can they employ techniques like "locking," where they lie down and use their body weight to gain an advantage.
3. **Letting go of the rope:** Teams should not let go of the rope deliberately, as this can lead to injury for the opposing team.
4. **Pulling the rope too early:** Teams must wait for the signal (whistle) before starting to pull. A referee will ensure that both teams are ready and that the rope is taut before starting the

game with a whistle or a verbal signal like ‘Ready, Set, Pull’. Teams must maintain a strong and steady pull while coordinating efforts. The winning team is the first to pull the centre marker past their goal line.

### Equipment needed

1. **Rope:** The most essential piece of equipment is a thick, sturdy rope. For safety reasons, the rope should be long enough to provide space for each team to grip and maintain balance without crowding. The rope should be made of natural or synthetic fibres and be strong enough to withstand significant pulling force. The centre of the rope is marked with a flag or coloured tape, while additional markers are placed 4 metres from the centre on each side to designate the goal lines. For official competitions, the rope should be around 11 centimetres in circumference and 33.5 metres in length.
2. **Markers:** Markers are needed to indicate the starting position (centre line) and the victory lines on either side. These can be made using cones, chalk or any clear marking.
3. **Appropriate footwear:** Participants are to wear shoes with good grip to prevent slipping. Safety is a priority, and proper footwear reduces the risk of injury.

### Fouls and Disqualifications

Common fouls include sitting or lying down intentionally, which is called “locking.”

Wrapping the rope around hands, arms or other body parts is also forbidden because it can lead to serious injuries. Failure to heed the referee’s warnings or committing multiple fouls can result in disqualification.



**Figure 7.4:** *Pulling the rope in tug of war*



**Figure 7.5:** *Tug of war competition among Senior Staff Association at the University of Ghana, UEW Chapter.*

## Learning Tasks

1. Describe the proper arm and body positioning required to safely execute an arm-wrestling match.
2. Explain how leverage, grip and technique influence the outcome of an arm-wrestling match.
3. Demonstrate the correct form and technique for engaging in an arm-wrestling match while ensuring safety for both participants.
4. Analyse different arm-wrestling techniques (e.g., top roll, hook) and discuss which technique might be more effective against various opponents.
5. Design a training plan that includes specific exercises to improve grip strength, arm endurance, and upper body stability for arm wrestling.
6. Conduct an experiment where you test the impact of different grip techniques on arm wrestling performance and present your findings to the class.
7. Identify the optimal body posture and foot positioning required for maximum pulling strength during a tug of war.
8. Describe the roles of each team member in a tug of war match and how they contribute to the team's success.
9. Demonstrate how to properly grip the rope and position oneself at the start of a tug of war match to gain an advantage.
10. Examine different team strategies (e.g., anchoring, rhythm pulling) in tug of war and discuss how each can be used to outwit the opposing team.
11. Compare the effectiveness of various footwear and surface types on team performance in tug of war and discuss their impact on grip and stability.
12. Develop a team warm-up routine focusing on strength, endurance and coordination exercises to optimise tug of war performance.

## Pedagogical Exemplars

### Activity

#### 1. Starter/warm-up activity

##### **Starter – videos on arm wrestling and tug of war.**

Let learners watch short videos on both arm wrestling and tug of war. After the videos engaged them by explaining the basics of arm wrestling and tug of war to them by touching on the purpose.

#### 2. Warm up activities

##### **Activity 1**

**Arm circles:** Have learners do arm circles for 1-2 minutes to warm up their shoulder muscles.

**Wrist rotations:** Guide them through wrist rotations to warm up the wrists and forearms.

**Dynamic stretches:** Include shoulder stretches and bicep stretches to loosen up the upper body and improve flexibility.

### Activity 2

**Partner hand tug:** Pair up learners and have them hold hands in a firm grip. They should gently pull against each other's hand for 20-30 seconds, building grip and arm endurance. Rotate partners for variety.



**Figure 7.6:** *hand tug*

*Take learners through any other starter and warmup activity to get them ready for the lesson.*

### 3. Main activity: Arm wrestling and tug of war

- a. **Talk for learning:** The rules of the game: Take learners through the core rules of both games and allow them ask questions to clarify anything they do not understand.
- b. **Activity based learning: Arm wrestling**
  - i. **Demonstration:** Demonstrate the starting position for learners to see. After that guide them in their mixed ability groups to place their elbow on the table in line with their shoulder and have them grip their partner's hand firmly with their thumb around the partner's hand with fingers curled around.
  - ii. **Body positioning:** Instruct learners to keep their bodies close to the table and square their shoulders. Guide them to align their forearm with their shoulder and not overextend them.
  - iii. **Basic pull technique:** Show learners how to pull their partner's hand toward their shoulder rather than pushing it down. Emphasise keeping the wrist straight to avoid strain.
  - iv. **Resistance practice:** Pair up learners with partners of similar strength levels. Have them apply slow, controlled pressure against each other, focusing on form and the right technique. Guide learners to aim for 3 sets of 10 seconds each. Increase the duration gradually based on learners' ability. Move around the groups to guide and support where necessary. Encourage learners who are struggling grasp the techniques.
  - v. **Ending the practice:** Lead a brief discussion about what strategies were effective and what they learned from the experience. Allow learners to share their experiences with the various techniques and positions covered.

Quickly regroup learners for the second game

### Tug of war

- a. **Proper stance:** Teach learners to stand with one foot in front of the other, knees slightly bent and body leaning back slightly. Emphasise distributing weight evenly between both legs for stability.



**Figure 7.7:** *Starting positions in tug of war*

- b. **Grip and hand position:** Show learners the basic grip position by demonstrating how to hold the rope. Instruct learners to hold the rope firmly using an overhand grip with the palm of dominant hand facing down and placed closer to their body and the non-dominant hand placed slightly further away also gripping the rope firmly. Briefly explain the importance of the hand positioning, emphasizing proper grip for enhance pulling strength and coordination.



**Figure 7.8:** *Proper stance and hand positions in tug of war*

- c. **Team coordination group drill:** Explain the importance of synchronising movements and pulling together as a team. Have learners practice with short “one, two, three, pull” commands to practice timing in their groups. Let the groups know they are to pull in unison toward their side of the rope. Guide learners to practice these synchronising movements and pulling drill for three rounds.
- d. **Strength based drill:** Regroup learners based on equal strength and weight. Place the centre mark of the rope over a line on the ground. On the teacher’s whistle, teams pull in unison until the opposing group crosses the line. Encourage learners to communicate effectively during the drills to maintain harmonisation and support for each other. Run this drill for 3 rounds, allowing short breaks in between to correct or to support learners still finding it difficult to coordinate properly.



**Figure 7.9:** *Pulling in unison*

- e. **Tug of war technique practice:** Have each group practice different techniques, such as leaning back, digging heels into the ground or pulling in a rhythm. Rotate groups so that they compete against various opponents throughout the drill. After each round, discuss which techniques worked best and why.
- f. **Ending the drills:** After the determined set of rounds (e.g., 3 or 4 rounds), gather all learners for a closing session. Lead a brief discussion about what strategies were effective and what they learned from the experience. Allow learners to share their experiences with the various techniques and sessions. Highlight the importance of teamwork and staying positive, regardless of winning or losing.

### Cool down

#### Static Stretches

1. **Shoulder stretch:** Lead learners to cross one arm over the chest and pull with the other arm, holding it for 15 seconds on each side.
2. **Hamstring stretch:** ask learners to sit with legs extended and reach for the toes, holding it for 15 seconds.
3. **Wrist and forearm stretch:** Instruct learners to extend one arm straight in front with the palm facing down and use other hand to gently pull back the fingers towards the body until they feel a stretch in the wrist and forearm.

## Key Assessments

### Level 1

1. Define the term arm wrestling.
2. Define the term tug of war.
3. List the primary muscles used during an arm-wrestling match.
4. List the equipment needed to participate in tug of war.

### Level 2

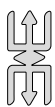
1. Describe the correct grip for arm wrestling.
2. Describe the correct stance in tug of war.
3. Describe the proper stance in arm wrestling.
4. Describe the role of the anchor position in tug of war.
5. Summarise the basic rules of arm wrestling and tug of war.

**Level 3**

1. Explain the importance of teamwork in tug of war.
2. Demonstrate the correct pulling technique for tug of war.
3. Demonstrate how to position the body for a safe arm-wrestling match.
4. Predict the outcome of a match based on the stance and grip of the competitors in arm wrestling.
5. Compare two different grip styles used in tug of war.

**Level 4**

1. Analyse how foot positioning affects balance and strength during tug of war.
2. Analyse how proper body positioning affects leverage in an arm-wrestling match.
3. Create a presentation proposing rule modifications to enhance safety and fairness in tug of war competitions.
4. Design a training programme to enhance strength and technique for arm wrestling.
5. Design a training regimen to improve team coordination and pulling strength for tug of war.
6. Develop a plan for improving wrist strength for arm wrestling.
7. Develop a strategy for coordinating team pulls to maximise force in tug of war.

**Note**

Learners' group project work assigned in Week 2 should be ready for submission by the end of Week 7.

**SECTION REVIEW**

In Week 6, the focus was on identifying various traditional games in Ghana and discussing their origins and importance. Learners engaged with games like Ampe and Pilolo, exploring their cultural significance and the skills they promote. The week emphasised the educational benefits of traditional games, including cultural awareness and social interaction, while assessments included theoretical assignments and quizzes. In Week 7, the emphasis shifted to practical skills, specifically in arm wrestling and tug of war. Learners learned the basic rules, techniques, and positioning required for both games. This week promoted teamwork, strength, and strategy, with assessments focusing on practical demonstrations of these skills. Overall, both weeks contributed to a deeper understanding of traditional games and their role in physical activity, cultural heritage, and community bonding.



## APPENDIX C: MID-SEMESTER EXAMINATION

### *Sample of principles to consider when designing effective multiple-choice questions (MCQ's)*

1. Write questions that are clear and straightforward so learners can easily understand them.
2. Make sure each question matches the learning goals and the topics that have been taught in the course.
3. Add incorrect answer choices (distractors) that seem believable and are closely related to the correct answer.
4. Ensure each question has only one clear and correct answer. Avoid using options like “all of the above” or “none of the above,” which can sometimes confuse learners.
5. Create questions with different levels of difficulty to distinguish between learners with varying levels of understanding.
6. Make sure questions are free from cultural, language, or gender bias. Use language and examples that are fair and accessible to all learners, regardless of their background.

### *Sample of principles to consider in developing essay-type questions*

1. Write questions that are clear and straightforward so learners can easily understand them.
2. Make sure each question matches the learning goals and the topics that have been taught in the course.
3. Add incorrect answer choices (distractors) that seem believable and are closely related to the correct answer.
4. Ensure each question has only one clear and correct answer. Avoid using options like “all of the above” or “none of the above,” which can sometimes confuse learners.
5. Create questions with different levels of difficulty to distinguish between learners with varying levels of understanding.
6. Make sure questions are free from cultural, language, or gender bias. Use language and examples that are fair and accessible to all learners, regardless of their background.

**Nature:** The mid-semester examination questions should cover Weeks 1-5 focal areas in the Teacher Manual. This mid semester examination will consist of 20 multiple choice questions for 20 marks strictly comprising 30% DoK 1, 40% DoK 2 and 30% DoK 3.

### *Table of Specification*

Weeks	Focal Area	Type of questions	DoK Levels				Total
			1	2	3	4	
1	Performing service and reception in table tennis	Multiple choice	2	2	1	-	5
2	Performing forehand and backhand strokes in table tennis	Multiple choice	1	1	1	-	3
3	Forehand and Backhand Stokes	Multiple choice	1	2	1	-	4

4	<i>Concepts of human diseases.</i>	<i>Multiple choice</i>	1	1	1	-	3
5	<i>Classification of human diseases.</i>	<i>Multiple choice</i>	1	2	2	-	5
	<i>Total</i>		6	8	6	-	20

# SECTION 4: INDIVIDUAL AND TEAM SPORTS – PART TWO

## STRAND: PHYSICAL ACTIVITY AND HEALTH

### SUB-STRAND: SPORTS PARTICIPATION

**Learning Outcome:** *Demonstrate the ability to use core skills in performing individual and team sports (e.g., table tennis, netball, etc.)*

**Content Standard:** *Demonstrate the ability to apply various skills in performing individual and team sports (e.g., Table tennis, netball, volleyball, etc.)*

#### HINT



- Learners' scores on the mid-semester examination should be ready for submission to the STP.
- Remember to score learners group project and make the records ready for onward submission to the STP.

## INTRODUCTION AND SECTION SUMMARY

This section explores the concepts of netball, emphasising throwing and catching, movement and shooting skills. The game shares similarities with basketball but has distinct rules, positions and court structure. The game fosters skills such as agility, coordination and teamwork while highlighting strategic play and spatial awareness. Understanding and participating in netball supports the holistic development of learners, equipping them with physical skills, mental agility, and interpersonal capabilities that benefit them both on and off the court. Core skills to be covered in this section are footwork, shoulder pass, overhead pass and shooting. Also, learners will be required to apply the skills acquired in a game situation. The chest pass is not specifically covered here as it has been taught in other hands games in year one. These skills can be carried over to this section.

### The weeks covered by this section are:

**Week 8:** Apply core skills in performing individual and team sports (e.g., netball – footwork, shoulder pass and overhead pass).

**Week 9:** Apply core skills in performing individual and team sports (e.g., netball - shooting).

**Week 10:** Apply the skills acquired from the previous lessons in a game situation.

## SUMMARY OF PEDAGOGICAL EXEMPLARS

The pedagogical strategies include a range of approaches for teaching netball concepts. For instance, talk for learning encourages learners to actively engage in discussions during lessons, which helps them develop their communication skills. Collaborative learning and group activities promote teamwork by having learners work in mixed-ability and mixed-gender groups, fostering inclusivity as they share ideas and learn from one another. Using audio-visual aids brings creativity into the lesson delivery, enhancing learners' progression and confidence as they master the skills. This section also incorporates video content, allowing learners to observe and analyse techniques such as footwork, throwing, catching and shooting. Additionally, advanced learners can be given extra responsibilities, such as taking on the role of group leader, where they can support their peers in understanding the concepts being taught.

## ASSESSMENT SUMMARY

To assess learners' understanding of netball, consider using a mix of formative and summative assessments tailored to diverse learning styles and abilities. Formative assessments can include recall of fundamental netball concepts, individual skill demonstrations and collaborative group activities where learners apply skills in mini-game scenarios. These assessments enable the teacher to monitor ongoing understanding, adjust instruction as necessary and provide targeted support for learners with additional needs or offer more advanced challenges for those who excel. Options such as individual projects, presentations or group performances where learners can showcase their mastery of specific skills should be included. To ensure fairness and inclusivity, employ clear rubrics that assess content quality, creativity and grasp of key concepts. This approach offers a well-rounded view of learners' progress, accommodating diverse abilities and recognising each learner's unique contributions. The recommended mode of assessment for each week is as follows:

**Week 8:** Questioning

**Week 9:** Homework

**Week 10:** Case study

## WEEK 8

**Learning Indicator:** Apply core skills in performing individual and team sports (e.g., netball – footwork, shoulder pass and overhead pass)

### FOCAL AREA: FOOTWORK, SHOULDER AND OVERHEAD PASS

#### Footwork, Shoulder Pass and Overhead Pass in Netball

##### Background

Netball is a team sport that originated in England in the late 19th century as a variation of basketball adapted for women. At the time, it was called “women’s basketball” and was played mainly by women in schools and colleges. The sport quickly gained popularity and spread around the world, with the first international match being played between England and Australia in 1938. However, it is not exclusively played by women anymore. In recent years, netball has gained popularity among men and mixed-gender teams. Over time, it evolved into a unique game with distinct rules and characteristics. It is played by two teams of seven players on a rectangular court divided into thirds, with a goal post at each end. The objective is to score points by passing the ball and shooting it into the opposing team’s hoop. Netball emphasises passing, movement, teamwork and strategic positioning, with specific roles and restricted areas for each player.

The sport is popular worldwide, particularly in Commonwealth countries like Ghana, Australia, New Zealand, Nigeria, South Africa and others. Known for its fast paced and non-contact nature, netball promotes fitness, coordination and cooperation among players. The perception of netball as a female only sport is gradually changing, with more initiatives aimed at encouraging male participation. Organisations and clubs are actively promoting men’s netball, which has led to the growth of male players and teams. Countries like Australia, New Zealand and England have seen increasing participation from male players, reflecting a growing acceptance of netball as a sport for everyone, regardless of gender. — See *Figure 8.1*.



**Figure 8.1:** *Female netball game*

##### Men’s Participation

**Mixed teams:** Many leagues and recreational leagues offer mixed gender netball, where both men and women play together on the same team. This format encourages inclusivity and fosters teamwork across genders.



**Figure 8.2:** *Mixed gender netball game*

**Men’s netball:** Some regions have established men’s netball teams and competitions. In these formats, men compete in their own leagues, showcasing their skills and promoting the sport among male players.



**Figure 8.3:** *Male netball game*

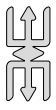
## Key Elements of Netball

### Team, players and positions

A full netball team is made up of 12 players. This includes seven (7) players on the court and five (5) substitutes. The game is played between two teams of seven players each. Each player has a specific position that defines their role and area where they are allowed on the court. The positions are:

1. Goal Shooter (GS)
2. Goal Attack (GA)
3. Wing Attack (WA)
4. Centre (C)
5. Wing Defence (WD)
6. Goal Defence (GD)
7. Goalkeeper (GK)

Each position has a specific court area they are allowed to operate within. This requires players to stay within their designated zones to avoid penalties. By understanding these responsibilities, players can effectively contribute to both the offensive and defensive phases of the game, making it easier to coordinate team efforts on the court. — See **Figure 8.4**.



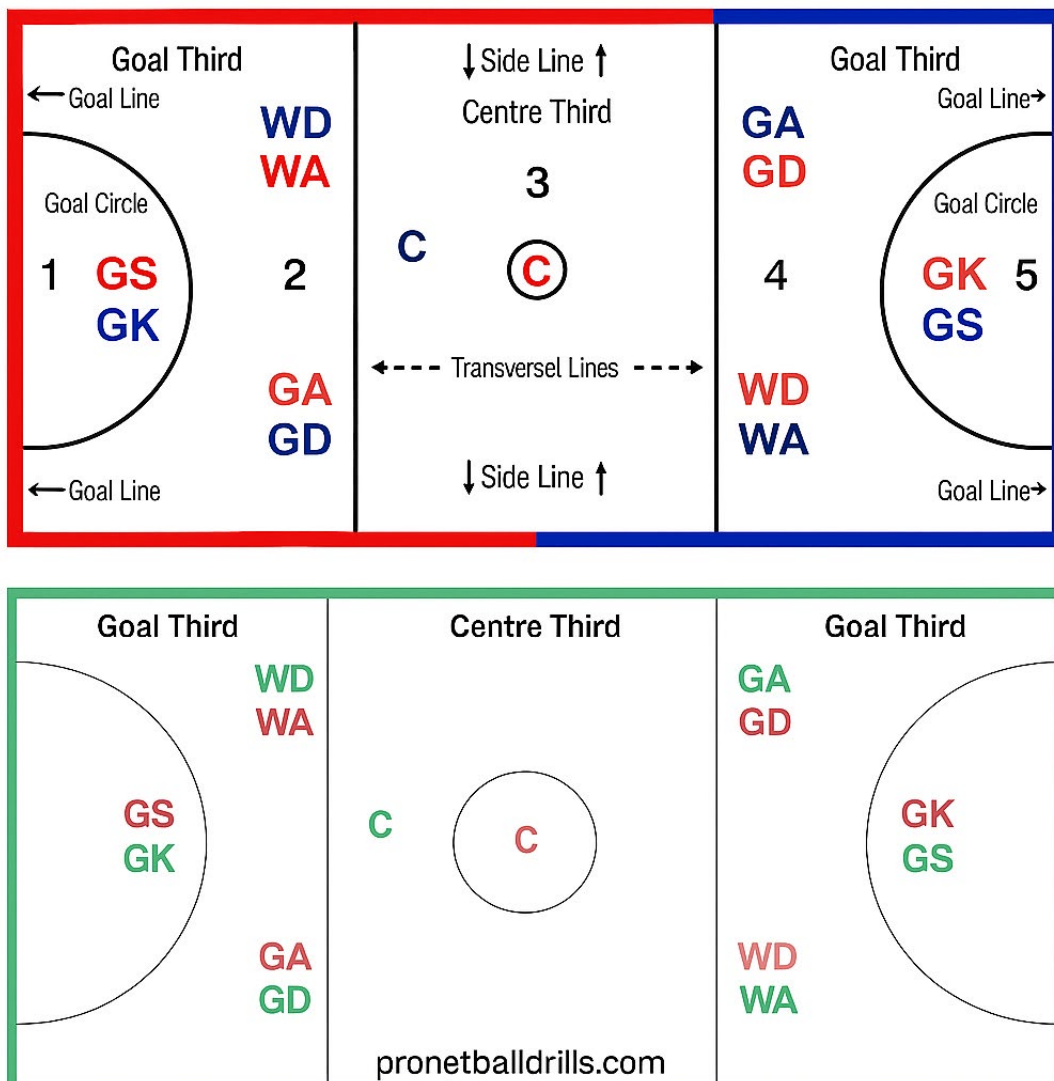
### Note

A team must have a minimum of five players to be able to take the court.

## Court and Goals

The netball court is divided into three parts called *thirds*. The court measures 30.5 metres (100ft) long and 15.25 metres (50ft) wide. The thirds are designated areas for attacking, centre and defence. Each end of the court has a goal post with a hoop, similar to basketball but without a backboard. The goal is to score points by shooting the ball into the opposing team's hoop. Each end of the court also has a goal circle, a semi-circular area with a radius of 0.9 metres. Only designated players can enter this area to score. In the middle of the court, there is a centre circle with a diameter of 0.9 metres, used for the initial pass at the start of the game and after each goal.

The netball goal post stands 3.05 metres high and the hoop has a diameter of 38 cm.



**Figure 8.4:** Netball court with player positions



**Figure 8.5:** *Netball posts*

## Where to play netball

Netball can be played on both indoor and outdoor courts, making it a versatile sport that can be played all year round.

## Some fundamental rules of the game

1. Players cannot run, walk or drag their foot until they pass or shoot the ball. If they intend to move, they must stop and establish their landing foot and pivot to locate a teammate and pass the ball or shoot. If a player runs, walks or drags the foot upon receiving a pass, it results in footwork violation and the opposing team is awarded a free pass.
2. The ball cannot be held after receiving it for more than within three (3) seconds. It must be pass within three (3) seconds. Holding the ball longer than the three seconds results in a free pass for the opposing team.
3. The ball cannot be passed over the centre third of the court. A player must touch the ball within the centre third.
4. Only the Goal Shooter and the Goal Attack are allowed to score goals and they must be within the goal or the shooting circle to do so. If any of them shoot and scores outside the goal or shooting circle, the goal invalid and a free pass is awarded to the opposing team.
5. Defenders can attempt to intercept passes and shots but must keep a minimum distance of three feet (3ft) from the player with the ball. If they get too close, it results in obstruction and attracts a penalty pass or shot for the opposing team.
6. Players cannot dribble the ball but must pass it or bounce it once to a teammate to move it down the court.
7. Physical contacts that impede or restrict an opponent's play are not allowed. Incidental contacts are acceptable as long as they do not affect the flow of the game. Contacts that impede the flow of the game result in a free pass or short to the opposing team depending on where it occurred on the court.
8. Players must not move to areas on the court that is not assigned to them. They must stay within the boundaries of their designated areas. If they move outside their allowed positions, it results in offside violation. Offside violations result in a free pass to the opposing team from where the infringement occurred.

## Scoring and duration

A goal is worth one (1) point and the team with the most points at the end of the game wins. A standard netball match consists of four (4) quarters, each lasting 15 minutes with short breaks in between for players to rest and also listen to tactical advice from their coaches.

## Core skills in netball

Netball requires a range of basic skills that help learners effectively pass, catch and move on the court while adhering to the rules of the game. Mastering these skills is essential for good gameplay and team coordination. Core or fundamental skills in netball are the physical abilities, techniques and tactics needed to play a successful game of netball. These skills include; footwork, passing, catching, shooting, defending and attacking.

### Footwork in Netball

Footwork in netball refers to the rules and techniques governing how players move their feet when they have possession of the ball. Footwork is essential for maintaining balance, allowing quick changes in direction and avoiding turnovers due to footwork violations. The key elements of netball footwork are:

1. **Landing foot:** When a player catches the ball, the first foot that makes contact with the ground is called the *landing foot*. Players must keep this foot grounded or pivot on it if they wish to move with the ball. Lifting the landing foot while still holding the ball is considered a footwork violation or foul.
  - a. **One-foot landing:** In one foot landing, the player catches the ball and lands on one foot first, which becomes the landing foot. The player can then bring the other foot down and pivot on the landing foot to change direction. If the player does not want to turn or change direction before passing the ball, they can just pass the ball after bring the other foot down.
  - b. **Two-foot landing:** In two-foot landing, the player lands on with both feet at the same time. They then choose which foot to pivot on if they wish to turn and look for a teammate to pass the ball to or want to change to get more options before passing the ball. This landing is particularly useful for quick stops and making decisions about where to pass.
2. **Pivoting:** This is rotating, swivelling or turning on the ball of the landing foot to turn or change direction. The non-landing foot is free to move in any direction, allowing the players to adjust their position as needed.



A Video Tutorial on footwork for beginners

### Passing and Catching

Passing is the act of transferring the ball from one player to another. It is a fundamental skill that enables effective teamwork, movement and ball progression on the court. Since players cannot run or walk with the ball, passing is essential for advancing toward the goal and maintaining possession.

## Some Types of Passes in Netball

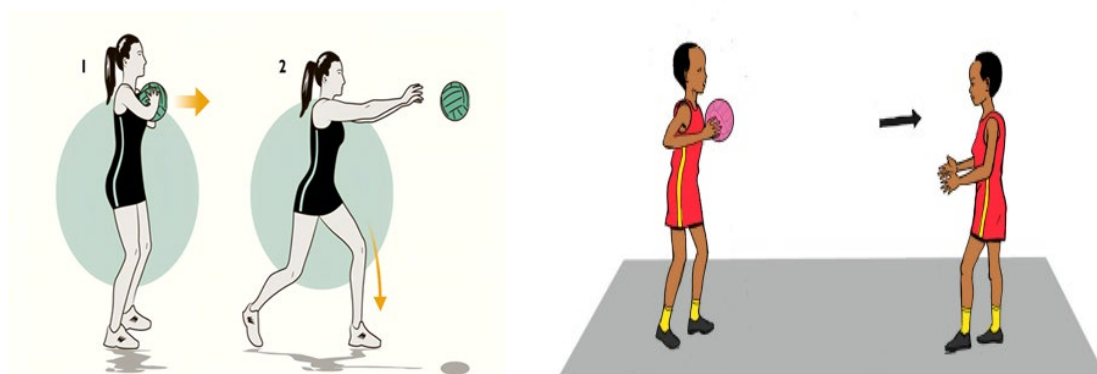
**Chest pass (recap):** A chest pass in netball is a fundamental passing technique where the ball is thrown from the passer's chest directly to a teammate's chest. This pass is known for its speed and accuracy and is one of the most used passes in netball. It is effective for short to medium distances and helps in maintaining possession by making it harder for defenders to intercept.

### How to successfully execute chest pass

1. **Positioning:** Stand with feet shoulder width apart for stability and knees slightly bent. Hold the ball at chest height with elbows bent and close to the sides of the body.
2. **Grip:** Hold the ball with both hands, fingers spread around it and thumbs pointing towards each other and forming a “W” shape at the back of the ball. Ensure the ball is touching the pads of the fingers and not just the palms.
3. **Body alignment:** Face the target or teammate with the body weight evenly distributed on both feet.
4. **Passing action:** Step forward with one foot towards the target for added power. Push the ball from the chest by extending the arms forwards with a quick snapping motion of the wrists. Release the ball by fully extending the arms and directing it straight toward the target or teammate aiming at the teammate's chest to make it easy for them to catch.
5. **Follow through:** After releasing the ball, follow through by pointing the fingers and thumbs in the direction of the pass. This ensures accuracy and helps the ball travel in a straight line.

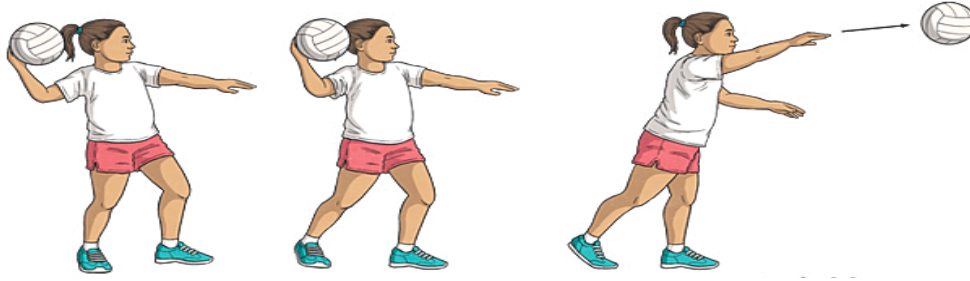


**Figure 8.6:** Holding the ball with the thumbs and the index fingers forming a “W” shape at the back



**Figure 8.7:** Chest pass in netball

**Shoulder pass:** A shoulder pass is a one-handed pass thrown from above the shoulder. The passing technique is useful for covering longer distances and bypassing defenders on the court with greater power and height. It is also effective for moving the ball quickly across the court or over defenders. It is commonly used for delivering the ball to a teammate further away such as when creating space during offensive plays.



**Figure 8.8:** *Shoulder pass*

### How to perform shoulder pass effectively

1. **Position the ball:** Hold the ball with both hands and then bring it up to the shoulder height on the dominant side. Spread fingers around the ball for a firm grip.
2. **Stance and footwork:** Stand with feet shoulder width apart and step forward with the non-dominant foot to prepare for the pass.
3. **Aim and look at the target:** Point the non-throwing arm towards the target to help with aiming. Keep eyes on where the ball will be going.
4. **Push and follow through:** Use the shoulder, arm and wrist to push the ball forward. Extend the arm fully as the ball is released and follow through with the fingers pointing towards the intended target.

**Overhead pass:** An overhead pass is a type of pass where the ball is thrown over the player's head, often with both hands, to cover a longer distance or to get the ball over defenders. The pass is executed by holding the ball above the head, then extending the arms and flicking the wrists to send the ball in a high, arcing course toward a teammate. The primary purpose of the overhead pass is to bypass opponents, especially when they are blocking shorter passes or when a teammate is further down the court. This type of pass is useful for moving the ball quickly over a defender's reach and maintaining possession, especially during fast-paced transitions in the game.

### How to execute the overhead pass effectively

1. **Grip the ball properly:** Hold the ball with both hands, positioning the fingers around the sides and thumbs at the back with the hands spread to give control over the ball.
2. **Position the body well:** Stand with the feet shoulder width apart. Position the dominant foot slightly forward to maintain balance and add power to the pass.
3. **Raise the ball overhead:** Lift the ball above the head with elbows slightly bent and look the target for accurate aiming.
4. **Step forward and release:** Step forward with the dominant foot while extending the arms fully to pass the. Push the ball using the wrists and fingers with a straight and high pathway.

5. **Follow through:** After releasing the ball, follow through with the arms pointing towards the intended target. This helps with accuracy and control.



**Figure 8.9:** *Overhead pass*

### HINT



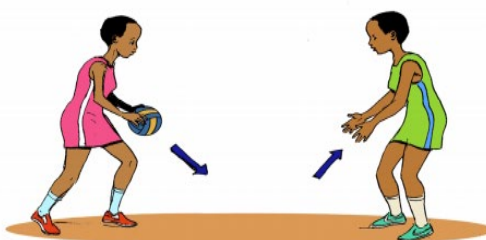
*How to identify the dominant foot. The dominant foot is the foot one naturally prefers to use when doing things like kicking a ball or taking the first step. It is the foot one feels stronger or more comfortable using. To find the dominant foot, try these quick tests;*

- *Kick a ball. The foot chosen is likely the dominant one.*
- *Take a step forward. The foot used first is often the dominant foot.*

**Bounce pass:** This is passing technique where the player throws the ball to bounce once on the ground before it reaches the intended teammate. The bounce should be timed and placed in a way that it arrives accurately to the teammate, making it harder for defenders to intercept. This pass is useful when there is a defender close by or between the player with the ball and his/her teammate because the low path of the ball makes interception more difficult.

### How to perform the bounce pass successfully

1. **Hold the ball:** Hold the ball with both hands, keeping it close to the chest.
2. **Step forward:** Step forward with one foot to add power to the pass.
3. **Aim and release:** Aim slightly closer to the teammate the is intended to reach and push the ball towards the ground with a firm but controlled motion. The should bounce once before reaching the target or teammate.
4. **Follow through:** Follow through with the arms pointing towards the target or teammate after the pass.



**Figure 8.10:** *Bounce pass*

## Catching

Catching in netball is a fundamental skill that involves receiving the ball securely from a pass that allows a team to maintain possession and quickly transition into the next phase of the play. Proper catching technique is important for accurate passing, quick decision making and effective teamwork.

### Steps for effective catching

1. **Positioning:** The catcher faces the passer directly with the feet shoulder width apart. The knees are slightly bent and the body balanced in readiness to move.
2. **Hand and finger placement:** The catcher extends the arms out towards the ball with hands open, and fingers spread wide. The thumbs and the index fingers are positioned in a “W” shape to create a target for the ball.
3. **Tracking the ball:** Catcher must always keep eyes on the ball, following it from the hands of the passer to the catcher’s hands.
4. **Absorbing the ball:** As the ball contact the hands, flex the elbows slightly to cushion its force and pull it toward the body to secure it and prevent it from bouncing off the hands.
5. **Securing the ball:** Grip the ball firmly with both hands, keeping it close to the chest. Ensure the fingers are wrapped around the ball with the thumbs pressing against its surface for control.

### Learning Tasks

1. Identify common passes in netball.
2. Describe the various positions in netball.
3. Demonstration of overhead and shoulder pass.
4. Describe how to effectively pivot in netball.
5. Explain the differences between the various passing techniques and when to use them.

## Pedagogical Exemplars

### Activity

#### 1. Starter

Show a short video or images of people playing netball and let learners describe the various skills they see.

#### 2. Introduction

Share a brief history of netball with learners, touching on the rules, positions, the various passes, etc to learners. Tell learners the skills to be learnt and demonstrate the skills to them.

#### 3. Warm-up activity

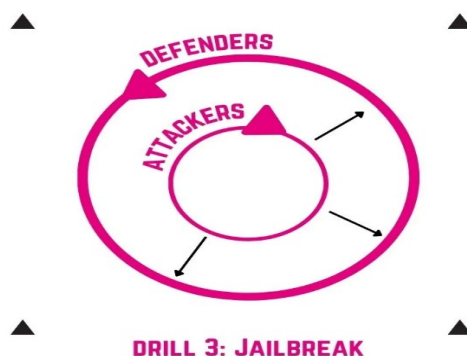
##### Jailbreak

Use markers or cones to mark the field or court into a square and get learners to make two circles in the centre of the square. Name one of the team **attacking team** and the second team **defending team**. Let the attacking team form the inner circle and the defending team the outer circle. Ask the attacking team members to run clockwise and the defending team to run anticlockwise. Ask learners to listen and act according to signals or instructions from you.

### Instructions

- Ask learners to start running in their route at the sound of the whistle until they hear a command from the you.
- Tell learners when they hear you shout *jailbreak*, the attacking team (the inner circle members) must escape. They should run to the outside of the square without being tagged by the defenders. As they run, they should be dodging the defenders. The defending team (the outer circle member) must try to tag as many of the attacking team as they can before they reach the outside of the square perimeter.
- Award points to the attackers depending on how many of their team members were able to escape without being tagged and to the defenders depending on how many attackers they tag.
- Repeat the activity twice and bring in a variation where points are no longer awarded but those tagged by the defenders join the defence team to tag more attackers and when there are no more attackers or the attackers are left with fewer members, end the activity.

This drill sharpens up defending and attacking movement skills, improves agility, dodging and encourages reaction time as they warm up.



*Movement of both team and direction of escape of attackers during Jailbreak*

**Note:** Teachers have the option to add more variations to this warmup activity or can choose to create their own suitable activities as a starter and warm-up.

4. **Main activity:** Footwork, shoulder and overhead pass

### Skill based learning

#### Fundamental landing and pivoting drill

- Demonstrate the one-foot landing and how to pivot to learners using hula hoops, circles or cones.

Ask learners to form a semi-circle so they can easily see the demonstration. Place hula hoops on the court or field, or draw circles, or use cones to mark where to step. Stand near a hula hoop or circle, then hop into it with one foot. Lift your other foot and place it outside the hoop, keeping it in line with the foot inside the hoop. Walk out of the hoop. Repeat this process three times.

- b. In mixed-ability groups, have learners line up in single file behind each hoop or circle. Each learner should practice what you've demonstrated and then go to the back of their line after their turn. Continue until everyone has had a chance to go.

Increase the distance between the learners and the hoop or circle so they take more than three steps to reach and step inside. Then, increase the distance further so they can jog to the hoop or circle. Ask learners to shout "ice" when their landing foot touches the ground inside the hoop, and "cream" when the trailing foot touches the ground outside the hoop. As they practice, they will say "ice" and "cream" with each step. Encourage them to use the foot they feel most stable on when stepping inside the hoop or circle.

- c. Demonstrate how to pivot by planting the pads of the foot on the ground firmly and using the other foot to rotate the body. Have learners practice pivoting in their groups.

**Shoulder pass:** Demonstrate the shoulder pass technique to learners.

### **Shoulder pass drill**

In groups, have learners practice the correct stance and grip with the ball. Let them stand sideways to their target with the imaginarily ball held above their shoulder in their dominant hand. Ask learners to step forward with their non-dominant foot, shifting their weight to that foot, which provides stability and power. Instruct them to extend their arm fully and snap their wrist as they throw the imaginarily ball and following through with their hands points toward their target. Allow learners practice this for a few minutes. Move around to correct and support those having difficulties with the skill.

### **Use target practice**

Set up targets, like cones or hoops, a few metres in front of the learners, who should be lined up in single file facing the targets. Encourage them to practice the full shoulder pass technique with balls, aiming for the targets. Move around to help and correct any learners who are struggling with the skill. Focus on accuracy and hitting the target. As learners improve, gradually increase the distance to challenge them.

### **Partner passing**

Pair up two groups and have them face each other about 3-5 metres apart with a ball. They should practice shoulder passes, focusing on proper form and aiming for their partner's chest. The learner at the front of one group passes the ball to the learner at the front of the other group, then moves to the back of that group. The receiver also passes the ball and then joins the back of the opposite group. This continues until everyone has had a turn, and the cycle repeats. Decide how long the practice will last before moving to the next activity. Remind learners to step forward with each pass and follow through with their wrist and arm to develop power and control for accurate passes

### **Circle passing drill**

Ask each group to form a circle, with one learner standing in the middle. The learner in the middle will use a shoulder pass to send the ball to others in the circle, and they will return the ball the same way. This helps reinforce the shoulder pass in a more dynamic setting.

Encourage learners to focus on both power and accuracy, gradually increasing distance as they improve. Watch each learner and provide feedback on their technique. Common areas to correct include making sure they step forward for power, using a full follow through and ensuring they snap their wrist for accuracy. If a learner is struggling, break down the motion again and let them practice each step slowly until they get comfortable.

### **Overhead pass**

Demonstrate the overhead pass technique to learners and have them practice it in their mixed ability groups.

### **Partner overhead passing drill**

Have two groups pair up and face each other about 5-7 metres apart, each with a ball. Instruct them to practice passing the ball to each other using the overhead pass technique. Remind them to step forward, extend their arms, and follow through with each pass. Encourage them to aim for their partner's chest height to make catching easier. After passing the ball to a member of the opposite team, learners should join their own team from behind. This drill helps learners practice delivering a controlled pass and become more comfortable passing to a partner.

### **Overhead pass with targets**

Place cones or hoops at varying distances on the court. Learners in their groups stand at one end and use the overhead pass to aim for the different targets. As they improve, increase the distance to the targets to challenge their accuracy and power. This drill helps learners work on distance and accuracy, while also teaching them to adjust the power of their pass for various distances.

### **Overhead relay pass**

Regroup learners into small groups of four or five, with each group forming a line. Place a cone or marker some distance away. The first learner in each line performs an overhead pass to the next person in line until the ball reaches the end, then returns to the starting point. The group that completes the relay first wins. This drill focuses on teamwork, passing under pressure, and reinforces proper form over multiple passes. Encourage and correct learners as they practice. Help those struggling with skill.

**Mini competition:** Organise a mini competition based on the skills learnt

**Cool down:** In a free formation, learners walk around and follow the teacher's directions and demonstrations. Use different actions to return the body to its normal resting state.

**Closure:** At the end of the session, recap the key elements of footwork, the shoulder pass and overhead pass in netball. Focus on foot placement, balance, body control, stance, stepping, snapping the wrist and following through. Encourage learners to keep practicing and offer positive reinforcement to boost their confidence.

## Key Assessments

### Level 1

1. Name two types of footwork techniques used in netball.
2. How many players are on a netball team?
3. Name three positions in netball and their abbreviations.
4. Identify two key steps in performing an effective overhead pass.
5. Identify two key steps in performing an effective shoulder pass.

### Level 2

1. Describe the footwork rule in netball?
2. Describe how to perform a two-footed landing in netball.
3. Describe the correct hand placement for an overhead pass.
4. Describe the hand position needed to perform a shoulder pass.
5. Describe the technique for following through when executing a shoulder pass.
6. Explain how stepping forward can improve the effectiveness of a shoulder pass.
7. Explain how the overhead pass can help players pass the ball over defenders.
8. Explain how the pivot helps in maintaining balance and control when receiving the ball.
9. Identify two situations in a netball game where using a shoulder pass will be advantageous.
10. In what situation will an overhead pass be more effective than a chest pass?

### Level 3

1. Compare the benefits of a one-footed landing versus a two-footed landing when stopping with the ball.
2. Compare the overhead pass with the shoulder pass in terms of effectiveness for long-distance passing.
3. Compare the shoulder pass to the chest pass, noting advantages and disadvantages of each.
4. Discuss how using an overhead pass can help break a defensive line during a netball match.
5. Explain how a player can use a shoulder pass to improve the accuracy and speed of ball movement down the court.
6. Explain how effective footwork can help a player avoid committing a footwork violation.
7. Explain how knowing the positions in netball can help make better decisions on the court.

### Level 4

1. Assess the potential challenges beginners may face when learning the shoulder pass and suggest ways to overcome them.
2. Create a practice plan that gradually increases in difficulty to help players develop strength and accuracy for overhead passes.
3. Create a training plan to improve footwork techniques in beginner netball players, considering common challenges they may face.

## WEEK 9

**Learning Indicator:** Apply core skills in performing individual and team sports (e.g., netball – shooting)

### FOCAL AREA: SHOOTING

#### Shooting in Netball

##### What is shooting?

Shooting in netball refers to the action of attempting to score by throwing the ball through the opponent's goalpost. It is a central skill for scoring points in a netball game. The effectiveness of a player's shooting ability can significantly influence the outcome of a match. For beginners, mastering the proper shooting technique can be challenging, but it is important for success on the court. Shooting in netball involves a one-handed or two-handed shot. Generating power for the shot comes from a combination of leg power and upper-body strength, allowing players to release the ball with a high arm and follow through with a wrist flick.

Proper body alignment and footwork are also critical components of a successful shot. Players must maintain a balanced stance, with their feet positioned shoulder-width apart and their hips and elbows aligned with the goal. The ball should be positioned above the head, with the shooting arm extended and the knees bent to provide a stable base. Developing a consistent and accurate shooting technique requires regular practice and repetition. By breaking down the shooting motion into smaller components and practicing each element separately, players can build muscle memory and improve their overall shooting performance.

##### Shooting Techniques

Shooting techniques in netball refers to the specific methods and mechanics used by a player to take a shot at the goal in an attempt to score. These techniques involve various aspects such as hand placement, body positioning, footwork, balance, and the motion of releasing the ball. A good shooting technique will optimise accuracy, control, and power to increase the chances of successfully scoring a goal.

In netball, shooting techniques can vary depending on the player's skill level, distance from the goal, defensive pressure, and personal preference. The most common shooting techniques include the one-handed shot and two-handed shot, which differ in how the ball is held and released during the attempt to score.

#### The two main shooting techniques allowed in netball

##### 1. One-handed shot

The shooter uses one hand to hold and release the ball. This technique is commonly used for accuracy and control, with the non-shooting hand used to steady the ball before releasing it. The shooter typically extends their shooting arm upward and flicks their wrist to guide the ball toward the hoop.

##### 2. Two-handed shot

The shooter uses both hands to hold the ball before releasing it. Both hands push the ball upward during the shot, providing extra stability and power. This technique is often used

by *beginners* for balance and control, though it may be less accurate than the one-handed shot for more experienced players.

Both techniques are legal in netball, but players often use the one-handed shot for greater precision, especially at higher levels of play.

In netball, the two primary shooting roles are performed by the Goal Shooter (GS) and Goal Attack (GA). Although both positions require excellent shooting skills, there are slight differences in their shooting techniques and responsibilities on the court.

## Primary Role, Characteristics, Area of Play and Responsibilities of Players Playing the Various Positions in Netball

### Goal Shooter (GS)

**Primary role:** Score goals by shooting from within the goal circle.

Personal characteristics

1. They are normally tall.
2. Have strong and excellent shooting accuracy.
3. They have strong one-handed shooting technique.
4. They can shoot accurately under pressure.
5. They have excellent footwork skills that help them in positioning themselves well to receive passes.
6. They have strong upper body strength to hold off defenders.
7. They quick reflexes to catch rebounds.

**Area of play:** The opposing team's goal third, including the goal circle.

Responsibilities and key skills

1. They always position themselves close to the goal post to receive passes and shoot.
2. They maintain accuracy in shooting and in making quick decisions on shot selection.
3. They work with the Goal Attack to create scoring opportunities.
4. They stay and work within the attacking third and goal circle.

### Goal Attack (GA)

**Primary role:** Assists the Goal Shooter in scoring and can also shoot for goals.

Personal characteristics

1. They are often shorter than the Goal Shooters.
2. They are more agile than the Goal Shooter.
3. They have strong mid-range shooting abilities.
4. They have excellent passing abilities that help them feed the Goal Shooter with ball for shooting.
5. They have good vision and court awareness to create scoring opportunities.
6. They can shoot accurately while on the move.

**Area of play:** The opposing team's goal third, including the goal circle and the centre third.

Responsibilities and key skills

1. They move between the centre and attacking thirds to feed passes to the Goal Shooter.
2. They create scoring opportunities and take shots when possible.
3. They assist in moving the ball from the midcourt to the attacking third.
4. They work on quick passes and positioning to dodge defenders.
5. They deliver accurate passes midcourt players to help move the ball towards the Goal Shooter.

### **Wing Attack (WA)**

**Primary role:** Feed the ball into the goal circle and support the attacking players.

Personal characteristics

1. They are very fast on court.
2. They have good passing skills.
3. They have excellent footwork and ball handling skills.

**Area of play:** The opposing team's goal third and centre third, excluding the goal circle.

Responsibilities and key skills

1. They position themselves in the centre and attacking thirds but stay outside the goal circle.
2. They deliver accurate passes to the Goal Shooter and Goal Attack.
3. They work on getting free from defenders and create passing options.
4. They maintain possession and control the flow of the ball towards the goal.

### **Centre (C)**

**Primary Role:** Initiates play, support defence and attack and distributes the ball.

Personal characteristics

1. They have stamina.
2. They have speed.
3. They are agile.
4. They are smart and think strategically in move down the court and giving passes.

**Area of play:** Anywhere on the court except the goal circles of both teams.

Responsibilities and key skills

1. Cover the whole court except the goal circles, providing options in all areas.
2. Quickly transition the ball from defence to attack and maintain possession.
3. Support both attacking and defensive players, depending on where the ball is.
4. Communicate and ensure team positioning and flow on the court.

## Wing Defence (WD)

**Primary role:** Defend against the opposing Wing Attack and help prevent the ball from entering the goal circle.

Personal characteristics

1. They are focused and swift to react to the catch ball.
2. They have good passing skills.
3. They have excellent footwork and ball handling skills.
4. They are good at reading the game and intercepting passes.
5. They are good at limiting the opposing Wing Attack's movements and passing options.

**Area of play:** The team's goal third and centre third, excluding the goal circle.

Responsibilities and key skills

1. They stay in the centre and defensive thirds, marking the Wing Attack.
2. They apply pressure on the Wing Attack to intercept or disrupt passes.
3. They block passing lanes and support the Goal Defence in marking attackers.
4. They quickly transition to offense and provide passing options when the team gains possession.
5. They work closely with other defenders to coordinate defensive plays.

## Goal Defence (GD)

**Primary role:** Mark the Goal Attack and prevent them from scoring.

Personal characteristics

1. They are usually among the taller players of the team.
2. They are focused and have quick footwork.
3. They are agile and quick to react to catch rebounds.
4. They are very good at countering the opponent's set-up to prevent them from scoring.
5. They are good jumpers.

**Area of play:** The team's goal third and centre third, including the goal circle.

Responsibilities and key skills

1. They operate in the defensive third and goal circle, blocking shots and intercepting passes.
2. They apply close marking on the Goal Attack, aiming to reduce their scoring opportunities.
3. They are catch rebound or missed shots and clear the ball to the Wing Defence or the Centre.
4. They support the Goalkeeper in guarding the goal circle.

## Goalkeeper (GK)

**Primary Role:** Defend the goal against the opposing Goal Shooter.

Personal characteristics

1. They are usually tall, so they reach and block shots and passes to make it harder for shooters to score.

2. They are very good communicators, as they effectively communicate with other defenders to ensure cohesive team play and cover the opposing players.
3. They have stamina and endurance ability to keep up with the physical demands throughout the game.
4. They are mentally tough with resilience to handle physical play and the demands of close marking since they are the last line of defence.
5. They are quick and able to keep up with the opposing shooter and intercept the ball.
6. They are good at anticipating the movement of the opposing team for timely interceptions and blocking shots.

**Area of play:** The team's goal third, including the goal circle.

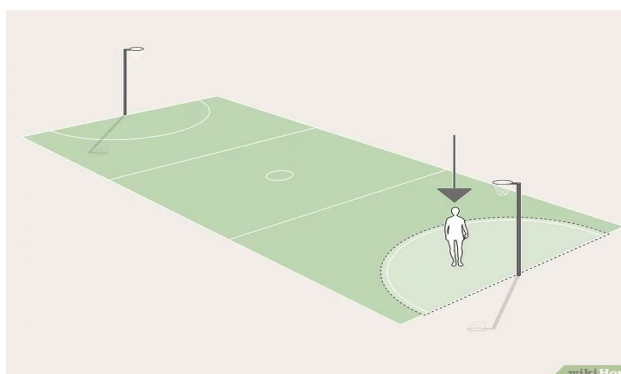
Responsibilities and key skills

1. They stay in the defensive third and goal circle to block shots and defend the goal.
2. They stay close to the Goal Shooter, restricting their movement and access to the ball to take a shot.
3. They rebound missed shots and initiate the counterattack for their team to regain possession or clearing the ball away from the goal area.
4. They communicate with the Goal Defence to ensure both attackers are marked.
5. They use their body positioning and footwork to limit the offensive team's options in the goal circle.

## Getting Ready to Shoot

1. **Wholly stand inside the goal or shooting circle.**

According to netball rules, a goal can only be scored in standing in the goal or shooting circle — see *Figure 9.1*.

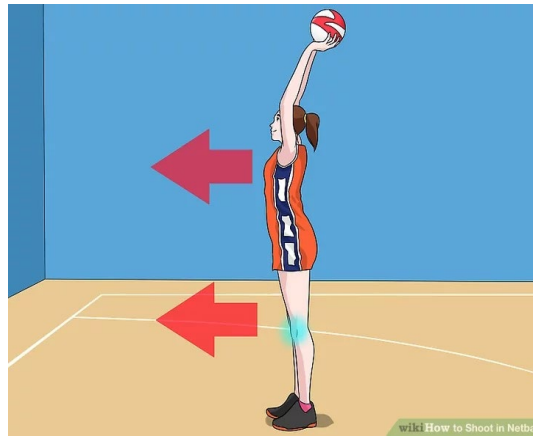


**Figure 9.1:** Standing inside the goal or shooting circle to shoot

2. **Position the body to shoot:** Aligning the body with the netball post.

**Stance:** Proper stance is the foundation to effective shooting technique.

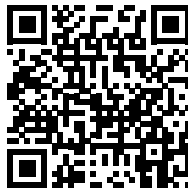
- a. The feet and arms should be hip or shoulder-width apart.
- b. Stand close to the ring with the hip, shoulders and elbows facing the goal post. — See *Figure 9.2*.



**Figure 9.2:** *Aligning the body with the netball post to shoot*

### 3. One-handed shot technique

- a. Hold the ball with both hands, with the shooting or dominant hand positioned under and the non-dominant or shooting hand on the side for support.
- b. The fingertips should be to cradle the ball softly. For better control, ensure that the gap between palm and the ball is minimal.
- c. Once the ball is firmly in the hands, extend the hand with the ball high above the head with the elbows near the ears and close the forehead. — See **Figures 9.3 to 9.6**.



[https://www.youtube.com/watch?v=N\\_kiYeeYvkU](https://www.youtube.com/watch?v=N_kiYeeYvkU)

*A Video Tutorial on one-handed shot in netball.*



**Figure 9.3:** *Holding the ball in the shooting or dominant hand*



**Figure 9.4:** *Supporting or stabilising the ball with the other hand*



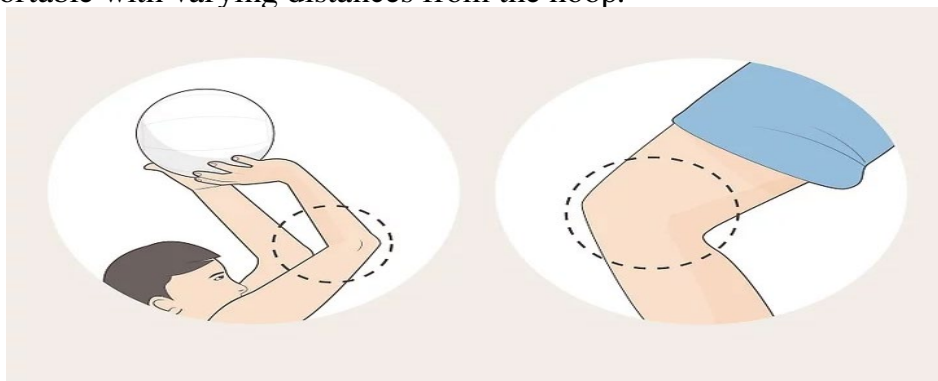
**Figure 9.5:** Holding the ball the correct way to shoot



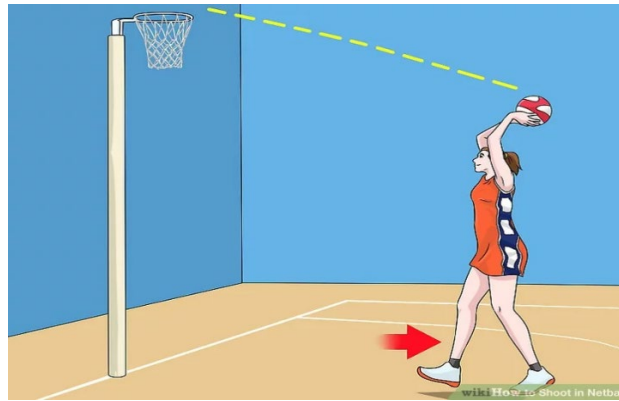
**Figure 9.6:** Extending the hand and the ball high above the head

#### 4. Shooting the netball

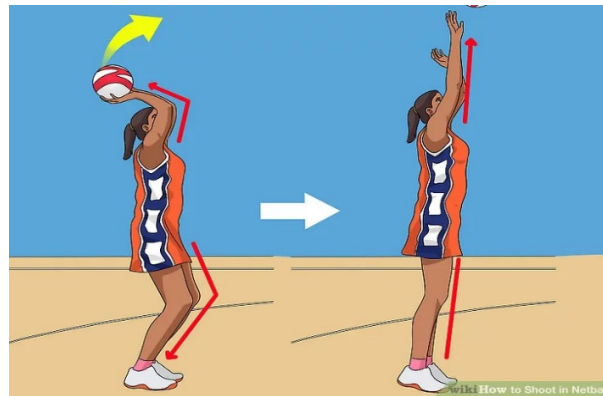
- a. Bend the elbows and the knees at the same time. Keep the elbows near the ears and close to the forehead and only move the top part of the arm. (Think of the elbow as a lever when shooting and only move the top portion i.e. forearm area).
- b. Focus on the goalpost and aim for the centre of the hoop above the net as the ball is released to shoot and flick the hand forward with the shooting arm.
- c. Straighten the elbows and knees and then release the ball.
- d. Push the ball up in an up-and-over motion toward the ring. It is important that the knees are bent before the release of the ball. The power of the shot comes from the knees.
- e. Flicking the hand will cause the ball to spin backwards after it is released. This helps with the accuracy of the shot. The back must be kept straight as the ball is released. — See *Figures 9.7 to 9.10*.
- f. Shooting from different positions within the shooting circle will help in becoming comfortable with varying distances from the hoop.



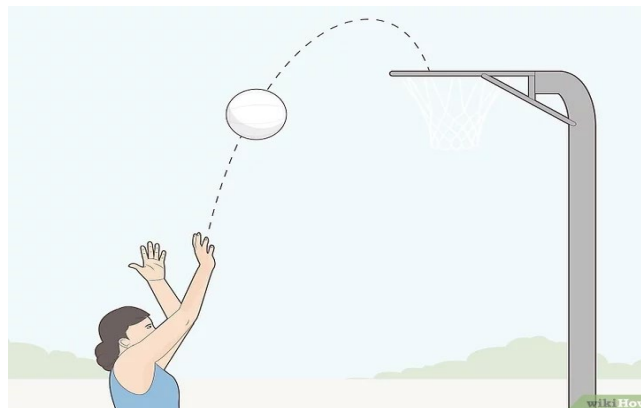
**Figure 9.7:** Bending the elbows and knees to generate power for shooting.



**Figure 9.8:** Focusing on the goalpost and aiming for the centre of the hoop above the net before shooting.



**Figure 9.9:** Straightening the arms, knees and the body to shoot the ball



**Figure 9.10:** Releasing the ball in an up-and-over motion toward the ring.

## 5. Remember the BEEF acronym

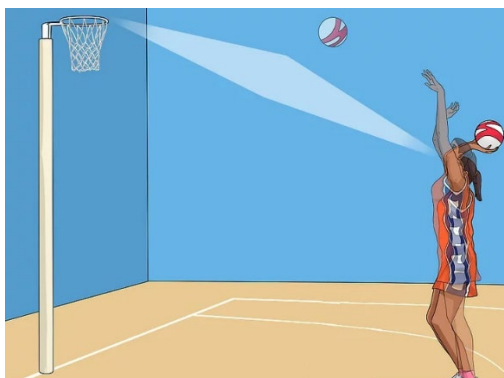
The shooting technique can be overwhelming because there are so many things to remember. **BEEF** can help and make it easier for learners to remember the key aspects of the shooting process. — See **Figure 9.11**.

**B** stands for balance. Keep the feet hip or shoulder width apart and facing the goal.

**E** stands for eyes. Keep eyes focused on where the ball is to go.

**E** stands for elbow. Keep the elbows close to the ears and near the forehead as you shoot.

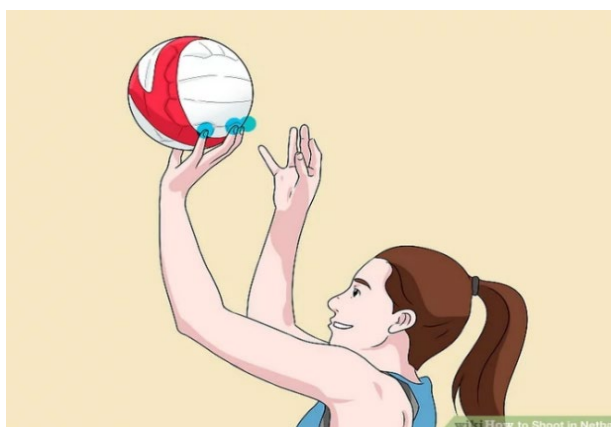
**F** stands for follow through. Always flick the hand and wrist at the end of the shot pointing towards the goalpost.



*Figure 9.11: Practicing the BEEF in shooting*

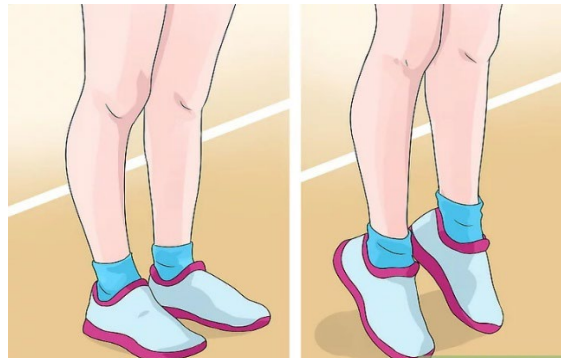
## Avoiding Common Errors

1. Use the fingers when shooting.
  - a. Keep the fingers relaxed and rest the ball on the pads of the fingers. When the fingers are too straight or stiff, the ball will not be held in the correct position.
  - b. Ensure that the fingers are spread out on the ball.
  - c. Be careful not to apply pressure to the ball with the supporting hand. Applying pressure with the supporting hand can change the path of the shot.
  - d. Do not hold the ball too tight, this will make releasing the ball difficult.
  - e. Continuing practice will help in correctly balancing the ball making sure it is stable on the pads of the fingers when shooting.



*Figure 9.12: Resting the ball on the pads of the fingers for shooting*

2. Maintain the correct shooting stance.
  - a. Make sure the feet are in a good position. If the feet are not hip or shoulder width apart, the player may be off balance when shooting.
  - b. Keep the feet parallel and do not let one foot be too far in front of the other.
  - c. Do not be too close to defenders while shooting.
  - d. The hips and shoulders should be in a straight line.
  - e. Do not move the shoulders forward which will cause the whole body to move forward. Leaning forward when shooting will change the path of the shot.
  - f. When having trouble keeping the hips and shoulder aligned, have someone hold shoulders back when shooting so that the correct position is felt.



**Figure 9.13:** *The correct shooting stance.*

### Learning Tasks

1. Describe the fundamentals of shooting techniques in netball.
2. Describe the grip and ball placement before shooting.
3. Demonstrate the shooting action.
4. Apply shooting techniques in a mini game.

### Pedagogical Exemplars

#### Activity

##### Starter

Start the class with a quick welcome and check-in with the learners. This help set a positive atmosphere for the class.

Explain the focus of the class to learner focusing on shooting techniques and accuracy in netball. Highlight on any specific safety rules for the class, like proper footwear, respect for others on the court, etc. Allow time for any questions, ensuring learners feel prepared and confident to start the main activities of the class.

##### Warm-up activities

**Dynamic warm up:** Jogging and movement drills: Start with a light jog around the court, then progress to movements specific to netball, like side shuffles, high knees, etc.

**Dynamic stretches:** Include stretches for the legs and arms. Examples include lunges, arm circles, and trunk twists. Emphasise flexibility and range of motion, which are essential for netball.

**Netball specific drills:** Ball familiarisation drills: Pair up students and have them practice passing drills, including chest passes, shoulder passes and overhead passes. This helps them get more comfortable with the ball and builds hand-eye coordination.

**Footwork drill:** Have learners practice quick steps and pivots to improve their footwork. Set up cones or markers for them to move around while maintaining their balance and control.

**Note:** Teachers can choose/create their own suitable activities as a starter and warm-up

**Main activity****Shooting****Collaborate learning/ Activity-based learning****1. Demonstrate the basic shooting technique to learners.**

Show learners the proper stance and the shooting form. Invite learners to ask questions.

**2. Focus shooting drill without the ball**

In small groups, have learners stand in single-file lines close to the hoop, about 1 to 2 metres away and practice shooting with no defenders, focusing on body alignment, hand placement and follow-through without the ball. Encourage learners to take their time, ensuring them to bend their knees, position their elbows well and follow through with their wrists after shooting the imaginarily ball.

**3. One-handed shooting drill with the ball**

Using the same single-file lines, assist learners to use only their shooting hand to push the ball up towards the hoop from the marked positions. Encourage learners to focus on flicking the wrist and pushing with the shooting hand in an up-and-over motion toward the ring. Move around to correct and support learners.

Give feedback specific to each part of BEEF during practice to help learners refine their form and build confidence and consistency under mild pressure. Focus on quality over quantity at first, encouraging learners to aim for consistency.

**4. One-hand shooting with support**

Regroup learners into mixed ability groups and have them shoot from the same spot. Guide learners to place their non-dominant hand lightly to support the ball to help build it into a complete shooting motion.

Guide learners to improve control and accuracy of the shot by using their non-shooting hand for support. Encourage learners to build confidence and precision as they become more familiar and more comfortable with the shooting process.

**5. Around the world**

Set up markers at different positions within the shooting circle, and have learners practice shooting from each spot. Learners take a shot from each position, moving to the next position only if they make the shot. If they miss, they stay at that spot until they successfully make a shot. This drill introduces a bit of friendly competition and allows them to practice shooting from various angles.

As correction and support is being offered, discuss the importance of focusing on form even when shooting quickly.

**6. Partner pass and shoot drill**

In pairs, ask one learner to act as the passer and the other as the shooter. The passer stands near the top of the shooting circle and passes the ball to the shooter, who is positioned near the hoop. The shooter catches the ball, pivots if needed and attempts the shot. Rotate roles every three shots to ensure each person plays both roles. Emphasise accuracy in passing as well as shooting. Combine passing and shooting to simulate game situations.

## 7. Close range rebound drill

Have learners in their groups stand at a marked spot close to the hoop and take a shot. Ask them to immediately move to retrieve their own rebound, then reset and shoot again. Emphasise the importance of staying alert and using both hands to secure the ball on the rebound. Encourage learners act fast following up shots with rebounds during practice to help develop accuracy and improve reaction time. Emphasise a quick, balanced pivot, proper footwork and shooting position before shooting again. Provide positive feedback for every close shot and catch of rebound to encourage learners.

### Mini game

#### Activity 9.1 Knockout shooting

The objective of this game is to score a goal before the person behind does, avoiding elimination and staying in the game as long as possible.

#### How to play

1. Divide learners into two teams based on their abilities and have them form single lines at a marked shooting position (vary the distance based on their skill levels).
2. Give balls to the first learners in each line.

#### Rules

1. Learners are to shoot from the marked spot and score.
2. If learners miss a shot, they can catch their rebound and try again. If they miss, they are “knocked out”.
3. All “knocked out” learners must step aside and form a new queue beside their main queue. The game proceeds with the remaining learners in the queue.
4. Learners who score, pass the ball to the next learner in line and move to the back of the shooting line.
5. The game continues with learners shooting in sequence. The process repeats until only one learner remains, who is declared the winner.
6. Allow knocked-out learners to rejoin the game in subsequent rounds for a best-of-three variation.

#### Winning the game

1. The last remaining learner in the first round is the winner.
2. In the best-of-three version, learners who win two consecutive times are declared the overall winners of the game.

#### Activity 9.2 Circle of shots

The objective is to shoot successfully from different marked positions around the shooting circle for practicing accuracy and consistency.

#### How to play

1. Mark six positions around the shooting circle using cones or markers.
2. The positions should be at varying distances and angles from the goal post.
3. Number each position from 1 to 6.
4. Divide the learners into two or three teams (depending on class size).

5. Each team starts at position 1 and each learner gets one shot from that position.
6. If a learner scores, they advance to the next position.
7. If they miss, they stay at that position until their next turn.

### **Rules**

Learners must shoot successfully from each position to move on to the next one, moving sequentially from 1 through 6.

**Winning the game**

The first team to have all members shoot successfully from all six positions wins.

If time is limited, set a timer and see how far each team can get within the time limit.

### **Cool down**

Have the learners form a large circle, giving everyone enough space to stretch comfortably.

Lead the group or ask a learner to lead the group through a series of slow, full body stretches to help relax the muscles after the physical activity.

### **Suggested stretches**

**Neck rolls:** Slowly roll the head in circles, then switch direction.

**Arm stretches:** Stretch arms across the body and hold for 15–20 seconds on each side.

**Quad stretch:** Balance on one foot, pulling the opposite foot toward the back to stretch the thigh.

**Hamstring stretch:** Reach down toward the toes while standing or sitting.

**Torso twists:** Gently rotate the torso from side to side.

**End with deep breathing exercises:** Ask learners to inhale deeply through the nose for 4 seconds, hold for 4 seconds, then exhale slowly through the mouth for 4 seconds. Repeat this 3–5 times.

### **Closure - Netball reflection circle**

This activity is to encourage learners to reflect on the lesson, highlight important takeaways and build a sense of closure and accomplishment as a group.

Ask learners to sit or stand in a circle, ensuring everyone can see and hear each other.

Go around the circle, allowing each learner to share their thoughts. Encourage everyone to give a brief response, ensuring each learner has a chance to contribute.

### **Some suggested reflective questions to ask during the activity**

1. What did you enjoy most about today's lesson?
2. What skill do you feel you improved on the most?
3. What was the most challenging part of the lesson for you?
4. How can you apply what you learned in future netball games?
5. What are you proud of from today's performance?

### **Key takeaways**

After everyone has shared, summarise key points from the day's lesson.

Highlight key skills learned (e.g., shooting technique, teamwork, etc), any moments where the class demonstrated good sportsmanship or teamwork and any areas for improvement and how the learners can work on them in future sessions.

**Celebrate success**

End on a positive note by acknowledging specific accomplishments of learners. Give a shout-out to individuals or the entire group for their efforts and improvements on the skills learnt.

**Next steps**

Briefly talk about what to expect in the next lesson and how today's skills will carry forward and will be applied in the next lesson.

*This activity fosters a sense of achievement, reinforces learning and strengthens group cohesion. It ensures learners leave class with a positive mindset, ready for future netball lessons.*

**Key Assessments****Level 1**

1. How many points are awarded when a goal is scored in netball?
2. Which two positions in netball are allowed to shoot?
3. What is the main objective of shooting in netball?
4. Identify which players are allowed in the goal circle during a match.
5. What is the role of the Goal Shooter (GS) in netball?
6. Name one key responsibility of the Goal Attack (GA) position.
7. In which area of the court is shooting allowed in netball?
8. Demonstrate how a Goal Shooter (GS) should hold the ball correctly before taking a shot.

**Level 2**

1. Describe the key techniques involved in shooting a successful goal in netball.
2. Describe the hand position needed to perform a shot.
3. Explain how the correct stance and balance help in shooting accurately in netball.
4. Identify two common mistakes players make when shooting in netball and explain how to correct them.
5. What is the primary difference between the responsibilities of the Goal Defence (GD) and the Wing Defence (WD) when preventing shots?
6. Describe how the position of the Goal Keeper (GK) can influence the shooter's ability to score.
7. Identify two key skills needed by a Goal Shooter (GS) to consistently score goals.
8. Demonstrate how to shoot using the one-handed technique.

**Level 3**

1. Analyse how the positioning of the Goal Keeper (GK) and Goal Defence (GD) can disrupt the shooting opportunities of the Goal Shooter (GS) and Goal Attack (GA).
2. Explain how teamwork and effective passing contribute to creating good shooting opportunities in netball.

3. How can the Wing Attack (WA) and Centre (C) support the shooters in creating better shooting opportunities?
4. Predict how a shooter's success rate might change based on different shooting angles and explain why.

**WEEK 10**

**Learning Indicator:** Apply the skills acquired from the previous lessons in a game situation

**FOCAL AREA: NETBALL GAME****Netball Game****Introduction**

The game of netball begins with a centre pass, which is taken by the team that wins the coin toss. The centre pass then alternates between the teams, regardless of which team has scored. Play restarts after every goal scored and after each quarter. Before the whistle, all players must stand at their assigned areas or designated positions on the court. When the umpire blows the whistle to start play, the goal attack, goal defence, wing attack and wing defence players can move into the centre third to receive the pass. The Centre (C) must stand in the centre circle with the ball. They can either have both feet inside the circle or one foot completely in the circle and the other foot outside. Then, the Centre (C) passes the ball to a teammate from inside the centre circle.



**Figure 10.1:** *Standing with both foot in the centre circle*

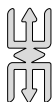


**Figure 10.2:** *Standing in the centre circle with one foot*

A goal is scored when the ball is successfully shot through the hoop from within the shooting circle. Teams can make substitutions, typically during breaks in play or at quarter-time.

The team with the most goals at the end of the match is declared the winner. If the match ends in a tie, depending on the league or tournament rules, extra time or a shootout may be used to break the tie.

A full match is divided into 4 quarters. Each quarter is 15 minutes with a 3-minute break after the 1<sup>st</sup> and 3<sup>rd</sup> quarter. The half time interval is 5 minutes. Teams switch ends at halftime which occurs after the first two quarters of the game.



### Note

Times are reduced in primary and senior high school where each quarter had a duration of 10 minutes.

1 <sup>st</sup> Quarter 15 minutes	3minutes break interval	2 <sup>nd</sup> Quarter 15 minutes	5 minutes half time interval	3 <sup>rd</sup> Quarter 15 minutes	3minutes break interval	4 <sup>th</sup> Quarter 15 minutes
---------------------------------------	-------------------------------	---------------------------------------	------------------------------------	---------------------------------------	-------------------------------	---------------------------------------

### *Match duration and breaks*

Whether played competitively or recreationally, netball offers an exciting and engaging experience for players and spectators alike.

## Focus for the week

Over the course of previous lessons, learners have been introduced to various netball skills, including passing, catching, movement, positioning and shooting. Now, it is time to transition from isolated drills and exercises to applying previously acquired skills in a full game situation. This approach allows learners to practise under realistic game conditions, sharpening their ability to make quick decisions, collaborate with teammates and respond to pressure. It will also allow learners to integrate technical and tactical abilities into real-time decision making within the context of a competitive match.

## Objectives

**Reinforce learned skills:** Enable learners to apply the core skills of netball, such as passing, positioning and shooting in real game scenarios.

**Promote teamwork and communication:** Encourage collaboration between teammates, helping learners understand the importance of communication and coordination on the court.

**Develop game awareness:** Teach learners how to read the game, anticipate opponents' movements and make quick decisions based on the game flow.

**Enhance tactical understanding:** Foster strategic thinking by encouraging learners to apply offensive and defensive strategies learned in previous lessons.

## Key Skills to Apply in a Game Situation

1. **Passing and catching:** Passing and catching are fundamental to maintaining possession and creating attacking opportunities. In a game, learners are expected to:

- a. **Utilise different passes:** Apply various types of passes (e.g. chest pass, shoulder pass, overhead pass, bounce pass) based on the distance of the teammate and defensive pressure.
- b. **Quick decision-making:** Decide which type of pass is most appropriate in the moment to avoid interceptions and maintain flow.
- c. **Accurate catching:** Secure the ball quickly and efficiently, minimising errors or mistakes that could lead to a team giving advantage to the opponent.

#### **Application in a game**

- a. Players should focus on positioning themselves to receive the ball and pass quickly to maintain momentum.
- b. Work as a team to move the ball up the court using short, sharp passes to outwit defenders.

## **2. Movement and positioning**

Effective movement off the ball and proper positioning are crucial for both attacking and defending. Learners should:

- a. **Create space:** Use footwork and dodging techniques to move into open space, making it easier for teammates to pass to them.
- b. **Stay within designated areas:** Understand the court positions and know where each player can legally move. For example, a Goal Shooter (GS) is confined to the attacking third and the shooting circle, while a Wing Attack (WA) must stay out of the shooting circle.
- c. **Support teammates:** Move into passing lanes to offer support and maintain team flow during offensive plays.

#### **Application in a game**

- a. Attackers should use feints and sudden directional changes to lose defenders and get open for a pass.
- b. Defenders need to stay goal-side of their opponents to block passes and limit their space.

## **3. Shooting:** Learners in shooting positions (Goal Shooter (GS) and Goal Attack (GA)) should apply the following:

- a. **Accuracy:** Focus on precision when aiming for the goal, using the correct shooting techniques they have practiced.
- b. **Composure under pressure:** Shoot confidently even with defensive pressure from the Goal Keeper (GK) and Goal Defence (GD).
- c. **Quick positioning:** Use footwork and movement to get into the shooting circle and take a clear shot without committing stepping violations.

#### **Application in a game**

- a. Goal Shooter (GS) and Goal Attack (GA) should communicate and position themselves effectively to receive passes and make shooting attempts from advantageous angles.
- b. They should also be prepared to follow up on rebounds if a shot is missed, applying pressure to the defence.

4. **Defence:** Defensive skills such as blocking, intercepting and marking are essential for preventing the opposing team from scoring. Learners should apply:
- Man-to-man defence:** Mark opponents closely to restrict their movement and passing options but must be mindful of the obstruction and the contact rules of netball games.
  - Positioning and anticipation:** Stay between the opponent and the goal and anticipate passes to intercept.
  - Timing of defence:** Apply pressure without infringing the three-foot (0.9 metres) distance rule during marking.

#### Application in a game

- Defenders need to communicate and cover their assigned players effectively, using agility and quick reflexes to intercept passes or block shots.
- The Goal Keeper (GK) and Goal Defence (GD) should work together to prevent shooting opportunities, using their body positioning to force the shooter into taking difficult shots.

### Learning Tasks

- Demonstrate the ability to play a full game of netball, adhering to the rules of the game and utilising the understanding of team roles, shooting techniques and strategic movement.
- Apply the skills learned in previous lessons (passing, defending, shooting, footwork and positioning) during live play.

## Pedagogical Exemplars

### Activity

#### 1. Starter/warm-up activity

##### Warm-up (5 minutes)

- Jogging (1 minute):** Light jog around the field or court to increase heart rate and get blood flowing.
- High Knees (15 seconds):** Run in place, lifting knees towards the chest as high as possible.
- Butt Kicks (15 seconds):** Jog in place, kicking heels back to touch the glutes or the butt.
- Arm Circles (15 seconds each direction):** Extend arms out to the sides and make small to large circles, then reverse.
- Hip rotations (15 seconds):** With hands on hips, rotate hips in a circular motion, both clockwise and counterclockwise.

##### Ball drops (1 minute)

- Partner learners up, with one holding a ball.
- The ball-holder drops the ball without warning and the other learner must react quickly and catch it before it bounces twice.

c. Switch roles after a few drops.

### **Figure 8 Movement (1 minute)**

- a. Set up two cones about 3-4 metres apart.
- b. Learners weave in a Figure 8 pattern around the cones at a high pace.
- c. Emphasise quick, controlled movements and using proper footwork when changing direction.

## **2. Main activity: Full game**

### **Structured Talk for learning**

Briefly recap the fundamental rules of the game (e.g., starting the game, number of players and their positions, footwork, obstruction, contact, offside, throw-ins, held ball, shooting, duration of the game etc).

### **Game-based learning**

Divide the class into two or more teams depending on the class size, assigning positions based on the skill levels of each learner (Goal Shooter (GS), Goal Attack (GA), Wing Attack (WA) Wing Defence (WD), Goal Defence (GD), Goal Keeper (GK), and Centre (C)).

Play a structured game of four quarters, each lasting seven (7) minutes, with a 2-minute break in between each quarter to allow for brief feedback and adjustments.

Rotate learners through different positions to develop an understanding of the game and skills learned. Learners in their groups compete among themselves. Place emphasis on the right application of the skills.

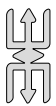
## **Key Assessment**

**Level 1:** Identify two skills used in the game.

**Level 2:** Describe any three skills used during the game.

**Level 3:** Demonstrate one of the skills used during the game.

**Level 4:** Describe the reason why each of the skills identified in question 1 are important to the game of netball.



### **Note**

Learners' scores for the group project work should be ready for submission to the STP.

## SECTION 5: HEALTH AND WELLNESS – PART TWO: DISEASE PREVENTION

### STRAND: PHYSICAL ACTIVITY AND HEALTH

#### SUB-STRAND: HEALTH AND WELLNESS

**Learning Outcome:** *Explain the concepts of disease prevention*

**Content Standard:** *Demonstrate understanding of health and wellness*

#### HINT



- Teachers are requested to administer the End of Semester Examination in week 12 and document it for submission to the Student Transcript Portal (STP) after evaluation.
- Please refer to **Appendix D** for the table of items specification at the end of this section, as well as the Teacher Assessment Manual and Toolkit for more details on administering the End of Semester Examination.
- The end of the semester examination occurs in Week 12; therefore, all scores that need to be submitted to the STP should be completed by the end of Week 11.

### INTRODUCTION AND SECTION SUMMARY

This section introduces the concept of disease prevention. Disease prevention is a crucial component of public health that focuses on reducing the risk of developing diseases, maintaining well-being and enhancing the quality of life. Understanding and learning strategies to prevent diseases are essential skills for promoting healthier individuals and communities. As teachers, we play a vital role in equipping our learners with the knowledge and habits necessary to protect themselves and others from illnesses. This section provides comprehensive information on the role of vaccination and immunisation in preventing infectious diseases by building immunity at both individual and community levels. The importance of personal responsibility in preventing disease spread and promoting public health. By the end of this section, learners will be empowered to take control of their health, contribute to public health efforts and reduce the spread of diseases in their surroundings.

**The weeks covered by this section are:**

**Week 11:** Discuss vaccination and immunisation as a form of disease prevention.

**Week 12:** Discuss the concepts of menstrual health and hygiene.

## SUMMARY OF PEDAGOGICAL EXEMPLARS

Teachers are expected to employ diverse teaching methods, catering for varied learning styles through visual and audio-visual aids, group discussions and hands-on activities. Learners must grasp the conceptual framework of disease prevention, understand vaccination and immunisation and develop the interest and favourable attitude towards vaccination. For gifted and talented learners, additional content may include exploring and conducting case studies on historical pandemics and how vaccines were used to prevent future occurrences of such pandemics.

## ASSESSMENT SUMMARY

To evaluate learners' knowledge, understanding and skills on the concepts under this section, there is the need for the teacher to use varying assessment strategies to differentiate among the various levels of Depth of Knowledge (DoK). This can include oral test, quizzes, individual assignment, exit tickets, group presentations and role play. Teachers must provide timely feedback and maintain records of learners' progress. The assessment activities should be aligned with learning indicators and pedagogical activities. The recommended mode of assessment for each week is as follows:

**Week 11:** Gamification

**Week 12:** End of First Semester Examination

**WEEK 11**

**Learning Indicator:** Discuss vaccination and immunisation as a form of disease prevention

**FOCAL AREA: DISEASE PREVENTION****Vaccination and Immunisation as a Form of Disease Prevention**

Prevention also called preventive health is any action taken to keep people healthy and well, and to prevent or avoid risk of poor health, illness, injury and early death. Prevention focuses on increasing the chances for individuals to stay healthy and well for as long as possible.

The World Health Organization (WHO) defines prevention as approaches and activities aimed at reducing the chances that a disease or disorder will affect an individual, interrupting or slowing the progress of the disorder or reducing disability (WHO, 2004).

**Immunisation**

Immunisation is a process by which a person becomes protected against a disease through vaccination. This term is often used interchangeably with vaccination or inoculation. Immunisation is a public health intervention that protects individuals from infectious diseases by stimulating the immune system to develop immunity against specific pathogens. It is normally administered through vaccines. Immunisation has been instrumental in reducing the spread of infectious diseases, preventing severe illness and saving millions of lives globally. Widespread immunisation efforts contribute to herd immunity, where a large portion of a population becomes immune, thereby reducing the likelihood of disease transmission and protecting vulnerable groups who cannot be vaccinated. Regular immunisations are essential for both individual and community health, supporting disease prevention on a global scale. Immunisations are also called needles, shots or jabs. Immunity (protection) by immunisation is similar to the immunity a person gets from disease, but instead of getting the disease, the individual gets a vaccine. This is what makes vaccines such powerful medicine. Most vaccines are given by needle (injection) but some are given by mouth (orally) or sprayed into the nose (nasally).

**Some Key Terms Related to Vaccination and Immunisation**

**Adjuvant:** A substance added to a vaccine to enhance the body's immune response to the vaccine.

**Antibody:** A protein produced by the immune system to neutralise or destroy foreign substances like bacteria and viruses.

**Antigen:** A substance (often part of a virus or bacteria) that triggers an immune response, causing the body to produce antibodies.

**Booster shot:** An additional dose of a vaccine given periodically to “boost” the immune system's response and extend immunity.

**Contraindication:** A specific situation or condition where a vaccine should not be given because it may harm the individual (e.g., certain allergies or medical conditions).

**Effectiveness:** How well a vaccine works in the real world, outside of controlled trials.

**Efficacy:** The ability of a vaccine to produce the desired immune response and prevent disease under ideal conditions (e.g., in clinical trials).

**Herd immunity:** When a high percentage of the population is immune to a disease (usually through vaccination), providing indirect protection to those who are not immune.

**Immune memory:** The immune system’s ability to “remember” a pathogen after exposure, allowing for a faster and stronger response upon re-exposure.

**Immunity:** Protection against a particular disease. Immunity can be acquired through vaccination or by recovering from the disease.

**Inactivated vaccine:** A type of vaccine made from pathogens that have been killed or inactivated, so they cannot cause disease.

**Live-attenuated vaccine:** A vaccine containing a weakened form of the live pathogen that induces immunity without causing illness.

**Outbreak:** A sudden increase in cases of a particular disease in a specific area or population.

**Pathogen:** A microorganism (such as a virus, bacteria, or fungi) that can cause disease.

**Side effect:** Any unintended effect of a vaccine, which can range from mild (e.g., soreness at the injection site) to more severe, although severe reactions are rare.

These terms provide foundational knowledge for discussing and understanding the science and significance of vaccination and immunisation.

**Vaccine Preventable Diseases (VPDs):** Diseases that can be prevented through vaccination, such as measles, polio and influenza.

**Vaccine schedule:** A series of recommended vaccinations, often starting in infancy, designed to provide immunity over time against various diseases.

**Vaccine:** A biological preparation that provides immunity to a specific disease. Vaccines often contain weakened or inactivated parts of a pathogen to stimulate an immune response. — See *Figure 11.1*.

## Types of Immunities

1. **Naturally acquired active immunity:** This is an immunity that occurs after an infection. This type of immunity develops when the body’s immune system responds to pathogen by producing antibodies and memory cells after exposure to the infectious agent. This response helps protect against future infections by the same pathogen.
2. **Artificially acquired immunity:** This is an immunity that is obtained through medical intervention rather than through natural infection. There are two main types.
  - a. **Artificially acquired active immunity:** This is achieved through vaccination, where a person is exposed to the weakened or inactivated form of the pathogen (or part of it) to stimulate the immune system to produce antibodies and memory cells. This provides long term protection without causing illness.
  - b. **Artificially acquired passive immunity:** This is achieved by directly administering antibodies into the body, normally through immunoglobulin therapy or antiserum. This method provides rapid but short-term protection, as it does not stimulate the immune system to produce its own antibodies. It is commonly used in situations where immediate immunity is needed, such as after exposure to diseases like rabies or Hepatitis B.



**Figure 11.1:** Vaccine

## Vaccination

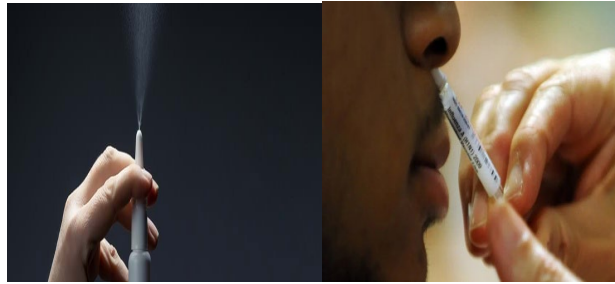
Vaccination is a medical process of administering a vaccine to stimulate a person's immune system to recognise and fight specific diseases. Vaccines are a biological preparation that contain weakened or inactive, killed or fragmentary form of a particular organism (antigen) that triggers an immune response within the body when introduced into the body. Vaccines prompt the immune system to recognise and remember how to fight diseases caused by viruses or bacteria. They do this by introducing a weakened, killed, or partial form of the disease into the body without causing the actual illness. This helps the body respond more effectively if it encounters the disease in the future. Most people are fully protected against a particular disease after getting vaccinated. In rare cases, vaccinated people can still get the disease because the vaccine gives them only partial protection. This is more common in people with underlying medical conditions that affect their immune system. Although these people may still get the disease, they will most likely get a milder sickness and are less likely to suffer serious complications.



**Figure 11.2:** Giving vaccine by needle (injection)



**Figure 11.3:** Giving vaccine by mouth (oral drops or orally)



**Figure 11.4:** Giving vaccine by spraying into the nose (nasally).

## How Vaccines Work

When a person is vaccinated, the person's body is tricked into thinking that it has been infected with the disease. It makes antibodies that kill the germs. These antibodies stay in the body for a long time and remember how to fight the germ. If the germs from the disease enter the body in the future, the antibodies destroy the germs before the person can become sick. It is much safer to get a vaccine than the disease.

## Types of vaccines

1. **Live-attenuated vaccines:** This vaccine contains a weakened form of the germ. For example, vaccines for Measles, Mumps, Rubella (MMR) and Chickenpox vaccines.
2. **Inactivated vaccines:** This type of vaccine contains a killed version of the germ. For example, vaccines for Polio and Hepatitis A.
3. **Subunit, Recombinant, Polysaccharide and Conjugate vaccines:** These vaccines contain only the essential parts of the germ, like its protein or sugar. They are used against Human Papillomavirus (HPV) and Hepatitis B virus.
4. **Messenger RNA (mRNA) vaccines:** This vaccine contains part of the virus's genetic material, which instructs cells to produce a protein that triggers an immune response. For example, COVID-19 vaccines.
5. **Viral vector vaccines:** Use a different virus to deliver instructions to produce an immune response. For example, AstraZeneca COVID-19 vaccine.

## Community immunity

Community immunity which is also known as herd immunity, refers to a situation where a high percentage of a population in a particular community, region, nation or world is vaccinated to reduce the overall spread of a particular disease. Community immunity protects those who cannot be vaccinated, such as newborn babies, individuals with certain health conditions or allergies to vaccine components. If enough people are vaccinated, it is harder for the disease to spread to those people who cannot have vaccines. This means vaccination helps to protect oneself and others around them.



*Video on herd immunity or community immunity*

Source: <https://www.youtube.com/watch?v=UqKP-ETVvrc>

## 1. Differences between vaccination and immunisation

- a. **Definition:** Vaccination is the process of administering a vaccine to stimulate the body's immune response, while immunisation is the process by which a person becomes protected against a disease, often as a result of vaccination.
- b. **Purpose:** The purpose of vaccination is to introduce a harmless form of pathogens (antigens) that help the immune system to recognise and fight similar pathogens, while the purpose of immunisation is to build immunity or resistance to a specific disease.
- c. **Method:** Vaccination normally involves the injection of a vaccine, which contains weakened or inactive parts of a particular organism whereas immunisation can occur naturally through exposure to the disease or artificially through vaccination.
- d. **Immediate effects:** Vaccination itself does not immediately create immunity, it initiates a process that leads to immunity while immunisation results in the body's ability to resist future infections, it is the outcome of the immune system's response.
- e. **Side effects:** Vaccination may cause mild side effects, like soreness at the injection site or mild fever, as the body builds its response whereas immunisation itself does not have side effects, any side effects are normally associated with the vaccination process.
- f. **Scope:** Vaccination is one method of achieving immunisation whereas immunisation can occur against multiple diseases over a person's lifetime through different vaccines or natural exposures.
- g. **Targeted pathogens:** Vaccination targets specific pathogens and is often specific to one disease at a time.
- h. **Duration of protection:** Some vaccines provide lifelong protection, while others may require booster doses to maintain effectiveness while immunisation duration varies, as some forms provide lifelong immunity while others require boosters.
- i. **Administration:** Vaccines can be administered via injection, oral drops or nasal sprays, depending on the disease and age group whereas immunisation is the end state of immunity, where the body can recognise and defend against a specific pathogen.
- j. **Timing:** Vaccination is an event (this means it is a one time or series-based procedure as medical intervention), whereas immunisation is a process that continues as the immune response builds.
- k. **Focus:** Vaccination focuses on exposure to a disease-causing organism to prompt immune system learning without causing illness while immunisation emphasises the outcome where the body developed ability to protect against illness after exposure to antigens.
- l. **Direct action:** Vaccination is an external action taken by healthcare providers, while immunisation is an internal response within the body of an individual.
- m. **Dependency:** Vaccination depends on medical intervention, whereas immunisation can occur naturally without medical intervention.
- n. **Specificity:** Vaccination targets specific diseases with vaccines, while immunisation can occur broadly as immunity develops through various exposures.
- o. **Effectiveness:** Vaccination efficacy can vary, while immunisation effectiveness depends on the immune system's response.

- p. **Repetition:** Some vaccines require multiple doses for effectiveness, whereas once immunised, a person may have lifelong or long-term immunity.
- q. **Outcome:** The goal of vaccination is to stimulate the immune system, while the outcome of immunisation is actual protection against infection.

## 2. Similarities between vaccination and immunisation

- a. **Disease prevention:** Both aim to prevent disease by building resistance.
- b. **Immune system involvement:** Both processes involve activation of the immune system.
- c. **Public health benefits:** Both contribute to community health and help reduce the spread of diseases.
- d. **Decreased mortality:** Both reduce the risk of severe disease outcomes and death.
- e. **Pathogen exposure:** Both introduce the immune system to parts or forms of pathogens to promote a response.
- f. **Dependence on immune memory:** Both rely on the immune system's ability to "remember" pathogens.
- g. **Long-term protection:** Both can provide long-lasting protection if effective.
- h. **Herd immunity:** Both contribute to herd immunity, protecting unvaccinated individuals indirectly.
- i. **Preventative healthcare:** Both are integral parts of preventive healthcare strategies.
- j. **Reduction of disease incidence:** Both decrease the overall incidence of the targeted diseases in a population.

These points illustrate how vaccination and immunisation, while distinct in their purpose and definitions, work together closely as key components in disease prevention.

## 3. Benefits of vaccination and immunisation

- a. **Reduction in disease incidence:** Vaccination and immunisation have significantly reduced the occurrence of diseases like measles, rubella, tetanus, whooping cough, diphtheria, covid 19, chicken pox, etc.
- b. **Lower mortality rates:** Vaccination and immunisation prevent millions of people from serious and potentially deadly diseases worldwide, especially among children.
- c. **Economic benefits:** Vaccinated and immunised populations contribute to economic stability by reducing healthcare costs and promoting a healthier workforce.
- d. **Global health impact:** Vaccination and immunisation programmes in low-income countries play a crucial role in improving public health and reducing healthcare disparities.
- e. **Protect other people in your family and community:** Vaccination and immunisation help stop diseases spreading to people who cannot have vaccines, such as babies too young to be vaccinated and those who are too ill to be vaccinated
- f. **Reduces or even get rid of/eradicate some diseases:** If enough people are vaccinated, diseases can be eradicated.
- g. **Can reduce the severity of the disease:** Vaccination and immunisation can stop adults and children from getting really sick and having to go to hospital.
- h. **Prevents death:** Stops people dying from diseases that could be prevented.

- i. **Reduces the risk of having long-term health issues and disabilities:** Long term health issues and disabilities caused by disease can be reduced through the prevention of the disease.
- j. **Prevents spread:** Stops people from passing diseases to others, particularly to those who may not have strong immune systems. (Sometimes called ‘herd immunity’.
- k. **Reduced illness:** May mean having to take less time off school or work due to getting sick.
- l. **Safer pregnancies:** During pregnancy helps keep both mother and baby safe.

## Reasons to get vaccinated

### 1. Vaccine preventable diseases have not gone away

Viruses and bacteria that cause illness and death still exist and can be passed on to those who are unvaccinated and unprotected. While many preventable diseases are no longer common, global travel makes it easy for these diseases to spread.

### 2. Vaccines help in keeping us healthy

The Centres for Disease Control and Prevention (CDC) recommends vaccines throughout life to help protect against many infections. When someone skips vaccines, they become vulnerable to illnesses such as flu, measles, HPV and hepatitis B which are all leading causes of cancer.

### 3. Vaccination can mean the difference between life and death

Vaccine preventable diseases can be deadly. Before the COVID-19 pandemic, approximately 1.5 million people worldwide, including children died from vaccine preventable diseases.

### 4. Young and healthy people can get very sick, too

Although infants and older adults are at increased risk for serious complications, vaccine preventable diseases can strike anyone, at any time. If you are young and healthy, getting vaccinated can help you stay that way.

### 5. Vaccine preventable diseases are expensive

Diseases have a direct impact on individuals and families, and carry a high price tag for society as a whole, exceeding \$10 billion per year. An average flu illness can last up to 2 weeks, typically with 5 or 6 missed work or school days. And adults who get hepatitis A lose an average of one month of work.

### 6. Vaccines protect our families and communities

When someone gets sick, their children, grandchildren and parents may also be at risk.

For example, adults are the most common source of whooping cough (pertussis), which can be deadly in infants. Staying up to date on all recommended vaccines helps protect oneself and the family as well as those in our community who are not able to be vaccinated.

## Six Vaccine Preventable Childhood Diseases, Along with Examples of Other Diseases and Their Vaccines

The six vaccine-preventable childhood diseases, often called the “six killer diseases,” are common in tropical regions and spread easily. They are called “killer diseases” because they have a high death rate among children. These diseases are tuberculosis, diphtheria, pertussis (whooping cough), tetanus, polio, and measles.

## Tuberculosis

Tuberculosis also referred to as (TB) is an ongoing (chronic) infection caused by bacteria. It usually infects the lungs. But can affect other organs such as the kidneys, spine, or brain in the body. The TB bacteria is spread through the air when an infected person coughs, sneezes, speaks, sings or laughs. A child usually does not become infected unless they have repeated contact with the bacteria however can be infected with the TB bacterial and not have the active disease. TB is not spread through personal items, such as clothing, bedding, cups, eating utensils, a toilet or other items that a person with TB has touched. — See *Figure 11.5*.

### The three stages of TB infection

1. **Primary infection or exposure:** This is when a child has been in contact with a person who has TB, but the child still has a negative TB skin or blood test, a normal chest X-ray and no symptoms.
2. **Latent TB infection:** This is when a child has TB bacteria in their body but does not have symptoms. The infected child's immune system controls the infection and causes the TB bacteria to be inactive. For most people who are infected, the TB will be latent for life. This child would have a positive TB skin or blood test but a normal chest X-ray and no TB symptoms and so cannot spread the infection to others.
3. **Active TB disease or TB disease:** This is when a child has signs and symptoms of an active infection. This child would have a positive or negative TB skin or blood test and testing showing active TB disease in the lungs or another site in the body. They can spread the disease if the infection is in the lungs and is untreated.

### Children are at risk for TB

Any child can develop TB after being exposed. A child is more at risk for TB if they:

1. live with someone who has TB.
2. are homeless.
3. come from a country where TB is common.

Very young children are more likely than older children to have TB spread through their bloodstream and cause complications, such as meningitis.

### Prevention of TB

Bacillus Calmette-Guerin (BCG) is the vaccine for prevention TB. This vaccine is given to babies at birth.



**Figure 11. 5:** A suffering from Tuberculosis

## Diphtheria

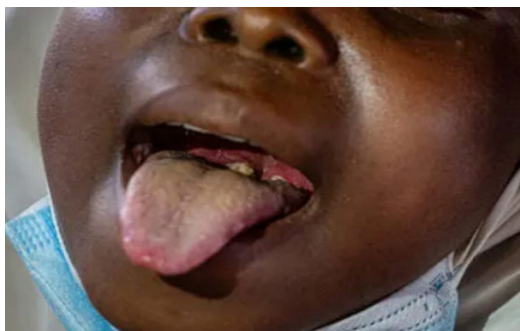
Diphtheria is an illness caused by bacteria. There are 2 types, namely respiratory diphtheria and Skin (cutaneous) diphtheria.

1. Respiratory diphtheria affects the throat, nose and tonsils while skin (cutaneous) diphtheria affects the skin.
2. Diphtheria bacteria enter the body through the nose and mouth or a break in the skin. It is spread by breathing in droplets that contain diphtheria bacteria from an infected person when they cough, sneeze or laugh.

## Prevention of diphtheria

Diphtheria, tetanus and pertussis (DTaP) is the combination of vaccines used to protect against diphtheria in children. Children need 5 DTaP shots at the following ages for protection:

1. Shot 1 at 2 months old
2. Shot 2 at 4 months old
3. Shot 3 at 6 months old
4. Shot 4 between ages 15 months and 18 months
5. Shot 5 when a child enters school at 4 to 6 years old
6. Children are to get booster dose of another form of this vaccine called Tdap at preteen (age 11 or 12).



**Figure 11.6:** A child suffering from Diphtheria

## Pertussis (Whooping cough)

Pertussis, commonly referred to as whooping (hoo-ping) cough is a very contagious disease that is caused by the *Bordetella pertussis* bacteria. It mainly affects babies younger than 6 months old who aren't yet fully protected by immunisations, and children 11 to 18 years old whose immunity has started to fade. Whooping cough causes severe coughing spells, which can sometimes end in a “whooping” sound when the child breathes in.

Whooping cough used to be called the 100-day cough because it can last for weeks or months. The illness often starts like the common cold, with a runny nose, sneezing, and a mild cough or fever. After 1 to 2 weeks, severe coughing starts. The cough often ends with a whooping sound as air is inhaled. During coughing spells, it's hard for babies and children to eat, drink, or breathe. These spells can last for weeks. In babies, it may cause periods of not breathing (apnoea). Whooping cough is worse for children under 1 year of age. It can be fatal in some cases.

## Prevention of pertussis

DTaP shots for maximum protection against pertussis is given to babies younger than 6 months old. A DTaP shot is a combination vaccine that protects against 3 diseases; diphtheria, tetanus and pertussis. The first 3 shots are given at ages 2 months, 4 months and 6 months. The fourth shot is given between ages 15 months and 18 months. The fifth shot is given at 4 to 6 years old. Children aged 11 or 12 need to get a booster dose of Tdap. The Tdap booster protects against tetanus, diphtheria and pertussis. Immunity from the vaccine only lasts about 10 to 20 years. A Tdap booster is recommended for all adults who have not been vaccinated before and then a Tdap or Td booster every 10 years. Older adults who have been in close contact with a child with whooping cough, such as a grandparent, are at extra risk if they have not had a Tdap booster vaccine. All pregnant people should get the vaccine during every pregnancy, even if they have had the Tdap before.



**Figure 11.7:** *A baby suffering from whooping cough*

## Tetanus

Tetanus is a severe illness of the central nervous system caused by bacteria. The bacteria usually enter the body through a wound in the skin. Tetanus bacteria live in soil and animal manure. Tetanus occurs more often in warmer climates or during the warmer months. Although not a contagious illness, tetanus is a severe illness of the central nervous system that can cause death. Tetanus can be prevented by a vaccine. After a child is exposed to tetanus bacteria, it may take from 3 to 21 days for symptoms to start. In babies, symptoms may take from 3 days to 2 weeks to start. (Tetanus is also known as lockjaw). The most common symptoms of tetanus include:

1. Stiffness of the jaw (lockjaw)
2. Stiffness of the belly (abdominal) and back muscles
3. Contraction (tightening) of the facial muscles
4. Convulsions
5. Fast pulse
6. Fever
7. Sweating
8. Painful muscle spasms near the wound area. If these spasms affect the larynx or chest, the child may not be able to breathe.
9. Trouble swallowing

Tetanus can also be found in the umbilical stump of infants in developing countries. This occurs in places where the tetanus vaccine is not often used, and people may not know how to care for the stump after the baby is born.

## Prevention of tetanus

The Centres for Disease Control and Prevention (CDC) advises that children receive a series of 5 DTaP vaccines, which protects against tetanus. These doses are scheduled as follows:

1. The first 3 doses are administered at 2, 4, and 6 months of age.
2. A fourth dose is given between 15 and 18 months.
3. A fifth dose is given between 4 and 6 years of age.
4. Tdap booster at 11 or 12 years of age.

During pregnancy, a Tdap booster is recommended between 27 and 36 weeks of each pregnancy. This booster helps protect the baby after birth by increasing antibody levels.



**Figure 11.8:** A baby suffering from Tetanus

## Poliomyelitis (Polio)

Polio is a very contagious disease caused by a poliovirus that can lead to spinal and respiratory paralysis and in some cases death. There are 3 types of the virus, type 1, 2 and 3.

Polio is often spread through contact with infected faeces, especially when children do not wash their hands properly. It can also spread by consuming food or water contaminated with the virus. Additionally, it can be spread when an infected child coughs or sneezes, releasing virus-containing droplets into the air. The virus can remain in a child's faeces for several weeks.

Children are most contagious right before and right after symptoms start although most children who are infected with polio have no symptoms at all. Possible complications of paralytic polio can include permanent paralysis of certain muscle groups. This may include the leg muscles. Fortunately, very few children with polio develop paralysis. — See **Figure 11.9**.

Polio is now very rare in Ghana and other parts of the world due to vaccination. The three variations of poliovirus are called wild poliovirus type 1, 2 and 3 (WPV1, WPV2 and WPV3). Wild polio types 2 and 3 have been eradicated (no longer exist) but wild polio type 1 still exists in a few parts of the world.

## Prevention of polio

To protect them, children are given Inactivated Polio Vaccine (IPV) through a shot at the following ages:

1. 2 months
2. 4 months
3. Between 6 and 18 months
4. Between ages 4 and 6



**Figure 11.9:** *Children who suffered polio*

## Measles

Measles, also called rubella, 10-day measles or red measles, is an extremely contagious virus disease caused by morbillivirus. It is an airborne disease, which means it spreads through the air when an infected person breathes, coughs, sneezes or talks. Measles can spread if you breathe in particles from someone who has the virus. The airborne droplets can stay in a room for up to two hours after the infected person has left. These droplets can also land on surfaces, spreading the virus that way. — See *Figure 11.10*.

### Measles can be spread by:

1. Sharing drinks or food with someone with measles.
2. Kissing someone who has measles.
3. Shaking hands, holding hands or hugging someone with measles.
4. Touching a surface contaminated by the virus and then touching the mouth, nose or eyes.
5. From pregnant people to their babies, either during the pregnancy, delivery or while nursing.

### Prevention of measles

#### 1. MMR vaccine

Two doses of the MMR vaccine are recommended for children. The first shot is given when children are around 12 to 15 months old. The second dose is given when they are 4 or 5 years old. If a child has not been vaccinated, measles can still be prevented by receiving the vaccine within three days of exposure to the virus.

#### 2. MMRV vaccine

This vaccine combines the measles-mumps-rubella vaccine with the chickenpox (varicella) vaccine. It is only available for children ages 12 months to 12 years of age. (Anyone older than 13 is given the MMR vaccine.) The second shot can be given three months after the first shot.



**Figure 11.10:** *A child suffering from measles*

Other diseases that can be prevented through vaccination among children and adults are; yellow fever, chicken pox, meningitis, pneumonia, dengue fever, Ebola, hepatitis A, hepatitis B, malaria, covid-19 and mumps.

## Summary of the six killer diseases and other diseases preventable by vaccines

	Disease	Vaccines	Age categories
1	Tuberculosis (TB)	Bacillus Calmette–Guerin (BCG)	Children under five years of age who have a higher risk of catching TB. Some travellers and people at risk through their work.
2	Diphtheria	DTaP (Diphtheria, tetanus, and pertussis) Tdap (Tetanus, diphtheria, and pertussis) Td (Tetanus and diphtheria) and Pentavalent	All infants and children younger than 7 years old.
3	Whooping cough (pertussis)	DTaP (Diphtheria, tetanus, and pertussis) Tdap (Tetanus, diphtheria, and pertussis) Td (Tetanus and diphtheria) Pentavalent	All children from 2 months to 18 months old are given the first to fourth dose. The fifth dose is given when they are 4 to 6 years old and the booster dose is given at age 11 or 12.
4	Tetanus	DTaP (Diphtheria, tetanus, and pertussis) Tdap (Tetanus, diphtheria, and pertussis) Td (Tetanus and diphtheria) Pentavalent	Children at 2 months, 4 months, 6 months, 18 months, 4 years, and between 11 and 13 years. Pregnant women in the third trimester. 50 years old and above if they have not had a tetanus vaccine in the last 10 years. Tdap is recommended for older children and adults and DTaP is recommended for infants and young children.
5	Polio	Inactivated polio vaccine (IPV)	Children under 5 years of age. However, anyone of any age who is unvaccinated can contract the disease.
6	Measles	MMR II and PRIORIX	All children. First dose at 12 to 15 months of age and the second dose at 4 to 6 years of age.
7	Yellow fever	YF-VAX (Yellow Fever Vaccine)	Children aged 9 to 12 months old through to 59 years of age. People who are not vaccinated and are travelling to or living in at risk areas.

8	Chicken pox	Varivax and ProQuad	Children: First dose at 12 to 15 months old and the second dose at 4 to 6 years old. Adults: Those without immunity to chicken pox (who have not had the disease or been vaccinated) should get two doses at least 28 days apart.
9	Meningitis	MenACWY vaccine MenAfriVac	All babies and adults aged 65 and above
10	Pneumonia	Pneumococcal conjugate vaccines (PCV15, PCV20) and Pneumococcal polysaccharide vaccine (PPSV23)	Babies, first dose at 12 weeks and booster dose at 1 year. Adults over 65, one dose.
11	Dengue fever	Dengvaxia	Children 9 through 16 years old.
12	Ebola	rVSVΔG-ZEBOV-GP and Ad26. ZEBOV, MVA-BN-Filo	Adults over 18 years of age, not including pregnant and lactating women.
13	Hepatitis A	HAVRIX and VAQTA	Children aged 12 to 23 months and catch-up vaccination for children ages 2 to 18 years who have not previously received the hepatitis A vaccine.
14	Hepatitis B	Pentavalent Engerix-B Heplisav-B and Recomb Ivax HB	All infants at birth, unvaccinated children younger than 19 years of age, adults aged 19 to 59 years and adults aged 60 years and older.
15	Malaria	RTS, S and R21	Children aged 5 to 36 months.
16	COVID-19	There are different vaccines for different strains. Examples include Moderna Spikevax and Sputnik V	Everyone aged 6 months and older.
17	Mumps	MMR vaccine	Children aged 12 to 15 months and 4 to 6 years.

## Common Myths and Facts About Vaccination and Immunisation

1. **Myth:** Vaccines cause autism.

**Fact:** Extensive research, including large-scale studies has shown no link between vaccines and autism. This myth originated from a study published in 1998, which has since been retracted due to fake data and unethical practices.

2. **Myth:** Vaccines contain harmful ingredients that are unsafe.

**Fact:** Vaccines are thoroughly tested for safety. While they do contain preservatives and adjuvants (e.g., aluminium) to enhance efficacy, these are present in extremely low and safe amounts and are often naturally found in other foods and the environment.

3. **Myth:** Natural immunity is better than vaccine acquired immunity.

**Fact:** Natural immunity can come at a high cost, as contracting the disease can lead to severe complications, long-term health issues or death. Vaccination provides a safe way to develop immunity without risking serious illness.

4. **Myth:** Vaccines can overload the immune system.

**Fact:** The immune system is equipped to handle multiple challenges daily. Vaccines contain fewer antigens than everyday environmental exposures, and modern vaccines are carefully designed to be safe and manageable for the immune system, even when multiple vaccinations are given at once.

5. **Myth:** Vaccines are not necessary for rare diseases in our area.

**Fact:** While some diseases are rare in certain areas, this is largely due to successful vaccination programmes. If vaccination rates drop, these diseases can return and spread rapidly, as evidenced by outbreaks of measles in areas with low vaccination coverage.

6. **Myth:** Vaccines have severe side effects and are dangerous.

**Fact:** Most vaccine side effects are mild (like temporary soreness or fever). Serious side effects are extremely rare and the risk of complications from the disease itself is far greater than the risk of severe vaccine side effects.

7. **Myth:** Vaccination is not necessary if everyone else is vaccinated (herd immunity will protect me).

**Fact:** Herd immunity can help protect those who cannot be vaccinated, but it only works when a high percentage of the population is immunised. Relying on others for immunity weakens the community's defences and can lead to outbreaks.

8. **Myth:** I am healthy, so I do not need vaccines.

**Fact:** Even healthy individuals are at risk of contracting and spreading infectious diseases. Vaccination helps protect people and those around them, including those who are more vulnerable to severe complications, like young children and the elderly.

9. **Myth:** Once vaccinated, I am protected for life.

**Fact:** While some vaccines offer lifelong protection, others require booster shots to maintain immunity. The duration of immunity varies depending on the vaccine and the individual.

### Learning Tasks

1. What is vaccination and immunisation?
2. Describe common diseases that vaccinations can help prevent.
3. Describe how vaccination can lead to herd immunity.
4. Describe how vaccines work to protect the body from disease.
5. Describe the benefits of getting vaccinated.

## Pedagogical Exemplars

### Activity

#### 1. Starter Activity: “Virus and Bacteria Tag” Simulation

The objective of this activity is to demonstrate how diseases can spread and how vaccination can prevent the spread.

**Setup:** Designate one learner as “Patient Zero” (the only one “infected” at the start) and ask them to wear a coloured sticker or badge to signify they are the “virus”. All other learners are “healthy individuals”. (If possible, give a few learners “immunity” badges or stickers to represent vaccinated individuals).

#### Activity

The activity begins: Patient Zero tries to “tag” other learners within a set time (e.g; 1–2 minutes). Any learner who gets tagged is now “infected” and must wear a “virus” sticker, spreading the “infection” further by tagging others. Meanwhile, those with immunity badges cannot be tagged (showing how vaccines prevent the disease from spreading).

**Reflection:** After the activity, discuss:

- a. How quickly the “virus” spread.
- b. How the “immune” learners helped slow down the spread.
- c. How this relates to real-life vaccination and disease prevention (herd immunity).

This quick, interactive starter makes the concept of disease transmission and prevention immediately relatable and will set the stage for the lesson on vaccination and immunisation.

2. **Digital-based learning:** With the aid of their digital devices, learners in mixed ability groups search the meaning of vaccination and immunisation and diseases that can be vaccinated against including the six killer childhood diseases. Guide learners to also search terms related to vaccination and immunisation. Examples of such terms are antibodies, vaccine, etc. Ask learners to appoint secretaries to write down their finding for class presentations and further discussions.

3. **Group based activity:** Immune system relay

Divide learners into small groups and provide each group with cards representing different parts of the immune response (e.g., pathogen, antibody, memory cell).

Arrange the antibody and memory cell cards for each group on a table in front of the class. Give the pathogen cards to the various groups. Ask each group to race to match the pathogen card with the appropriate immune response cards, showing how the body identifies and remembers the pathogen for future protection.

After matching the cards discuss how the immune system builds “memory” through vaccination, so the body can respond more quickly if it encounters the actual disease. Explain this well so learners can understand how the immune system responds to a vaccine and builds immunity.

Allow learners to ask questions for clarification.

4. **Experiential Learning and group activity:** Assist learners to watch a video on the types of vaccination and how vaccines work. Learners think about the video watched and how it can be applied to promote good health.

Also, guide them to discuss the misconceptions about vaccination providing real-life situations to aid the discussion. To effectively do this, prepare cards with statements about vaccines, some true and some false. Guide learners to work in pairs or small groups to sort the cards into “Fact” and “Myth” piles and then discuss each statement to clarify any confusion. Go over the correct answers as a class, providing explanations for each myth to reinforce understanding.

Providing facts to counter myths can help learners understand the benefits and safety of vaccines. This can lead to informed decision-making among learners, who can then also become advocates for public health.

5. **Guided Discussion:** Guide learners to lead the discussion on differences and similarities between vaccination and immunisation, benefits of vaccination and immunisation and reasons to get vaccinated. Arrange seats in a circle to foster eye contact and create an atmosphere of equal participation. This setup helps learners listen actively and address each other directly rather than speaking to the teacher. Facilitate by keeping the conversation focused and encourage learners to dive deeper by asking follow-up questions, challenging ideas and inviting quieter learner to share their thoughts. Encourage learners to build on each other’s ideas, ask clarifying questions and respectfully disagree with or challenge perspectives.

## Key Assessment

### Level 1

1. What is vaccination?
2. Name two common vaccines and the diseases they prevent.
3. Define the term “immunity.”
4. State three differences between vaccination and immunisation?
5. List three benefits of vaccination for individuals.
6. What is the purpose of a booster shot?

### Level 2

1. Explain how a vaccine works to protect the body from diseases.
2. What is the role of antibodies in the immune system after vaccination?
3. Describe the difference between inactivated and live-attenuated vaccines.
4. Why is it important for children to follow the vaccination schedule?
5. How does herd immunity help protect those who cannot be vaccinated?

### Level 3

1. Analyse the impact of declining vaccination rates in a community. What are the potential public health consequences?
2. Evaluate the role of vaccinations in the eradication of diseases such as polio.
3. Explain the importance of vaccination to someone who is hesitant about getting vaccinated?

4. Compare the effectiveness of vaccines in preventing disease outbreaks versus relying solely on individual immunity.
5. Given an outbreak of a vaccine preventable disease, suggest strategies for improving vaccination coverage in a community.

#### **Level 4**

1. Design a public health campaign poster to promote vaccination in a community with low vaccination rates. Include key messages and strategies.
2. Investigate the historical impact of vaccination campaigns in reducing mortality rates and present your findings on one specific vaccine preventable disease.
3. Create a proposal for a new government policy aimed at increasing vaccination rates among hesitant populations. Justify your policy with data and evidence.
4. Analyse four advantages and disadvantages of vaccinating school-age children against flu every year. What factors would influence a decision to make this mandatory?
5. Imagine a scenario where a new disease outbreak occurs, and an effective vaccine is developed. Develop an implementation plan for mass vaccination to minimise the impact on society.

### **Additional Reading**

Task learners to read on key milestones in the development of vaccines and their impact on public health. Sample questions to guide learners' reading:

1. Who developed the first vaccine and for which disease was it created?
2. How did Edward Jenner's work with smallpox lead to the development of modern vaccination?
3. What was the role of Louis Pasteur in the development of vaccines and how did his work contribute to immunisation efforts?
4. How did the invention of the polio vaccine in the 1950s change the course of public health globally?
5. What is the significance of the World Health Organization's campaign to eradicate smallpox?
6. Impact of the COVID-19 vaccine on global health and society.

## WEEK 12

**Learning Indicator:** Discuss the concepts of menstrual health and hygiene

### FOCAL AREA: PERSONAL AND MENSTRUAL HYGIENE

#### Introduction to Personal and Menstrual Hygiene

Personal hygiene refers to practices that help maintain cleanliness and health by preventing the spread of germs and infections. Key aspects of personal hygiene include regular bathing, proper handwashing, oral hygiene and wearing clean clothes. Good personal hygiene is essential for physical well-being, social confidence and overall health.

Menstrual hygiene is a specific aspect of personal hygiene that focuses on the safe and hygienic management of menstruation. It involves practices such as regularly changing sanitary products, washing the genital area with clean water and safely disposing of menstrual waste. Proper menstrual hygiene helps prevent infections, promotes comfort and supports dignity during menstruation. Both personal and menstrual hygiene are fundamental to health and self-care, especially for young people as they help in building healthy habits, preventing diseases and fostering a positive self-image.

#### What is personal hygiene?

Personal hygiene is the daily habits and routines individuals follow to keep themselves clean and healthy.

**Good personal hygiene:** Good personal hygiene is the practice of keeping oneself clean and maintaining healthy habits to prevent illness, promote well-being and ensure social comfort. This includes routine activities such as regular handwashing, bathing, brushing and flossing teeth, trimming nails, wearing clean clothes and taking care of the hair and skin. Practicing good personal hygiene helps prevent the spread of germs, reduces the risk of infections and fosters self-confidence and positive social interactions.

**Poor personal hygiene:** Poor personal hygiene is neglecting regular cleaning and health-maintaining habits, which can lead to the buildup of dirt, bacteria and germs on the body. Common signs of poor hygiene include infrequent handwashing, lack of regular bathing or showering, unbrushed teeth, untrimmed nails and wearing unwashed clothes. This neglect can increase the risk of infections, illnesses and unpleasant body odours and can negatively affect physical health, mental well-being and social interactions.

#### Impact of Personal Hygiene on Social Relationships

Personal hygiene has a significant impact on one's social relationships, as it directly influences how others perceive and interact with us.

1. **First impressions:** Good hygiene makes a positive first impression, signalling to others that one is responsible, respectful and mindful of self-care, which can foster trust and approachability. Equally, poor hygiene may lead to negative first impressions, causing people to avoid close interactions.
2. **Social comfort:** Poor hygiene can lead to unpleasant odours, visible dirt or an unkempt appearance, which may cause discomfort for others and lead them to distance themselves

physically and emotionally. People are generally more comfortable around individuals who maintain cleanliness.

3. **Self-esteem and confidence:** Practicing good hygiene often boosts self-confidence, making individuals feel better about themselves, which can make them more open and engaging in social situations. Confidence in appearance and health positively impacts social interactions and relationship-building.
4. **Health implications:** Good hygiene helps prevent the spread of germs and illness, protecting both the individual and their social circle. Poor hygiene, on the other hand, can lead to contagious conditions like colds or skin infections, which can strain relationships or cause isolation.
5. **Perception of responsibility:** Consistently practicing good hygiene conveys a sense of responsibility and self-respect which are qualities that are valued in friendships, work relationships and romantic partnerships.

## The Relationship Between Personal Hygiene and Self-Confidence

The association between personal hygiene and self-confidence is closely interconnected, as maintaining good hygiene practices meaningfully influence how individuals feel about themselves and how they are perceived by others.

1. **Positive self-image:** When individuals practice good personal hygiene, such as showering regularly, brushing teeth and wearing clean clothes, they often feel better about their appearance. This positive self-image boosts self-esteem and makes individuals feel more comfortable in their own skin.
2. **Feeling of freshness and cleanliness:** Maintaining good personal hygiene promotes a sense of cleanliness and freshness, which reduce feelings of discomfort or embarrassment. This sense of well-being enhances an individual's confidence, especially in school and in other social or professional settings.
3. **Social acceptance:** Good personal hygiene helps individuals meet social and cultural standards, which make them feel more accepted in various groups. When people feel they are conforming to societal norms, their confidence in social interactions tends to rise.
4. **Improved mental health:** Regular personal hygiene routines are linked to improved mental health, including reduced stress and anxiety. When people feel physically clean and healthy, it helps them ease concerns about body odour, acne or other hygiene-related issues, which in turn, lead to greater confidence in social situations.
5. **Reduced negative judgment:** Poor personal hygiene leads to negative judgments from others, potentially causing embarrassment or self-doubt. In contrast, practicing good personal hygiene prevents such judgments, allowing individuals to feel more confident in their interactions with others. Maintaining personal hygiene not only improves physical health but also contributes meaningfully to an individual's sense of self-worth, emotional well-being and overall confidence.

## Importance of Nail Care

Nail care is an important aspect of personal hygiene as it contributes to both physical health and social well-being. Nail care is important for the following reasons:

1. **Prevention of infections:** Regular nail care, such as trimming and cleaning, helps prevent the build-up of dirt, bacteria and fungi under the nails, which can lead to infections like fungal nail infections (onychomycosis) or bacterial infections.

2. **Prevention of injury:** Well-maintained nails are less likely to break or cause injury to the surrounding skin. Jagged or long nails can accidentally scratch or puncture the skin, leading to pain, bleeding or infection.
3. **Hygiene and cleanliness:** Clean nails are crucial for overall cleanliness, as nails can harbour germs and dirt that can be transferred to the mouth, food or other surfaces. Regular nail care ensures that the hands remain hygienic and less likely to spread bacteria.
4. **Aesthetic appearance:** Well-groomed nails contribute to a neat and polished appearance, which positively impacts personal confidence and the way others perceive us. In professional or social settings, good nail hygiene is often seen as an indicator of self-care and responsibility.
5. **Prevention of nail diseases:** Keeping nails trimmed and properly cleaned prevents nail diseases such as ingrown nails, hangnails or painful nail bed conditions.
6. **Protection of fingers and toes:** Nails provide a protective barrier to the sensitive skin underneath, especially on the fingertips and toes. Neglecting nail care may lead to damaged or infected nail beds, which may interfere with daily activities.

## Steps to Improve Personal Hygiene Practices in a School Setting

Improving personal hygiene practices in a school setting is important for the well-being of learners and staff. Some effective steps to improve hygiene practices:

### 1. Educate learners and staff

Learners and school staff should be educated on the importance of personal hygiene, including handwashing, bathing and dental and nail care through classroom lessons, posters and school assemblies. And from time to time, workshops or seminars should be organised for both learners and staff on proper hygiene practices.

### 2. Ensure access to hygiene facilities

Schools should ensure there are enough clean washrooms with access to soap, clean water and paper towels or tissues. Classrooms and common areas should be stocked with hand sanitisers and wipes for easy access throughout the day. Schools through NGOs should provide toothbrushes and toothpaste in school washrooms for learners to maintain oral hygiene after meals or encouraging learners to come to school with their toothbrush and toothpaste.

### 3. Promote regular handwashing

Clear handwashing instructions should be displayed in bathrooms and classrooms to remind learners to wash their hands after using the washroom, before eating and after coughing or sneezing. Handwashing campaigns and events should be organised to reinforce the importance of this practice.

### 4. Encourage routine hygiene practices

School authorities and teachers should encourage learners to bring clean uniforms each day. Schools should set a schedule for grooming that includes regular haircuts and nail trimming where every Wednesday morning, learners' uniforms, teeth and nails are inspected before lessons begin. Learners should be reminded to keep their nails trimmed and to avoid biting nails to prevent the spread of germs.

### 5. Promote healthy eating and hydration

Learners should be encouraged to drink plenty of water to stay hydrated and promote overall skin health. Schools should ensure healthy snacks and meals are sold at school to

learners and parents encouraged to give healthy snacks and meals to their children to promote healthy eating.

#### 6. **Maintain cleanliness in school premises**

Schools should ensure classrooms, hallways and playgrounds are regularly cleaned and sanitised, if possible, to reduce the spread of germs. Learners should be assigned hygiene duties such as wiping down desks or keeping personal spaces clean to encourage responsibility and cleanliness.

#### 7. **Encourage peer role models**

Schools should create learner hygiene ambassador programmes, where learners lead by example and encourage their peers to maintain personal hygiene. Learners or classrooms that demonstrate excellent hygiene practices should be recognised and rewarded or given certificates.

#### 8. **Address hygiene-related issues early**

Schools should have a confidential system in place for learners to report hygiene issues, whether related to access to hygiene products or personal habits. Schools should also provide support for learners who may face barriers to practicing good hygiene, such as access to clean clothes, regular bathing or dental care by seeking help from NGOs and benevolent individuals to assist such learners.

#### 9. **Incorporate hygiene into school policies**

A personal hygiene code of conduct should be included in the schools' rule and regulations to establish expectations for cleanliness and grooming. Hygiene checks should be implemented during school events, sports and activities to reinforce the importance of personal hygiene at all times.

#### 10. **Provide hygiene supplies**

Schools should ensure that learners have access to personal hygiene products, such as soap, deodorant and sanitary products, through school resources or programmes that provide these for those in need. Implementing these steps can help schools to foster a culture of good hygiene, which promotes health, prevents illness and creates a positive learning environment.

## **Menstrual Hygiene**

Menstruation which is commonly called a “period” is a natural biological process in which the lining of the uterus or womb (endometrium) is shed once a month through the vagina, when pregnancy does not occur. It is a normal vaginal bleeding, lasting between 3 to 7 days, that occurs as part of a girl or woman's monthly cycle. Every month the body prepares itself for pregnancy. If no pregnancy occurs, the uterus or womb sheds its lining. The menstrual blood is partly blood and partly tissue and mucus from inside the uterus or womb.

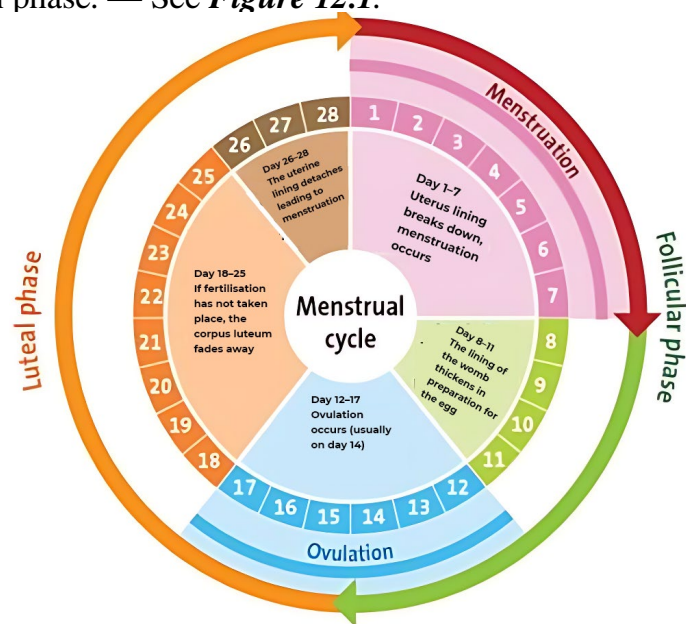
Most girls have their first period also called menarche, between the ages of 11 to 14 and have regular menstrual cycles until about age 50 where they will experience menopause (they will stop menstruating).

The average length of a menstrual cycle is 28 days, but everyone's cycle is different. Hence, it is normal to have a cycle that is a few days shorter or longer. For example, some teenagers may have cycles that last 45 days, whereas some adolescents may have cycles that last 21 to 38 days. The days of a menstrual cycle are counted from Day 1 of menstrual bleeding to Day 1 of the next menstrual bleeding. The menstrual cycle is guided by hormonal signals sent by the brain. Oestrogen causes the uterine lining to develop and thicken and progesterone helps to maintain

the thickened uterine lining, making it nutrient-rich and ready to support a fertilised egg to attach itself to the walls of the womb or uterus for development.

## Menstrual Cycle

The menstrual cycle is a monthly process or series of changes a girl or woman's body goes through to prepare for a possible pregnancy each month. Once a month, the body grows a new uterine lining (endometrium) that is ready to receive and nourish a fertilised egg. The process of change occurs in four different stages referred to as phases of the menstrual cycle. These phases are menstrual phase, the follicular phase, ovulation phase and the luteal phase. Different things happen at each phase. — See *Figure 12.1*.



**Figure 12.1:** Menstrual cycle timeline for 28 days cycle

## Menstrual Phase

The menstrual phase occurs from day 1 to 5 of the menstrual cycle and marks the beginning of a new cycle. It is a natural part of the cycle that resets the reproductive system and prepares it for the possibility of pregnancy in an upcoming cycle. It is followed by the follicular phase, where the body begins to prepare for ovulation. This happens when pregnancy did not occur, leading to the decrease in the amounts of oestrogen and progesterone production in the body. This means that the thickened lining of the womb or uterus, which would support a pregnancy, is no longer needed. The lining is broken down and expels out of the body along with blood and mucus, through the vagina. This is what is observed as menstrual bleeding. During the menstrual phase many people experience a varied range of symptoms due to hormonal changes and the shedding of the uterine lining. The symptoms may vary in intensity from person to person and can range from mild to severe.

## Some Common Symptoms One Experiences During the Menstrual Phase

1. **Painful cramps (Dysmenorrhea):** This is caused by contractions of the womb or uterus to help shed the lining, leading to lower abdominal pain. It can be experience before or during menstruation.

2. **Bloating:** This is a sensation of fullness, tightness or swelling in the abdomen, often accompanied by discomfort or pain. It can cause the stomach area to feel and appear larger than usual due to water retention as hormonal changes occur in the menstrual cycle.
3. **Headaches:** This headache is triggered because of the drop in oestrogen production which affect the chemicals in the brain.
4. **Breast tenderness:** This is due to hormonal variations making the breasts feel swollen or sore.
5. **Mood swings or irritability:** This happens as a result of changes in hormone levels, especially oestrogen and progesterone, which affect mood-regulating chemicals in the brain.
6. **Lower back pain:** This occurs sometimes as an association with cramping and muscle tension in the lower back area.
7. **Fatigue:** The body feels more tired due to the physical demands of menstruation and changes in hormone levels.
8. **Digestive issues:** Some people experience diarrhoea or constipation, which is linked to hormonal shifts affecting the digestive system.

## Follicular Phase

The follicular phase occurs from day 1 to 13 of the menstrual cycle. Starting on the first day of menstruation and ending with ovulation, during which the body prepares an egg for release by stimulating the growth of follicles in the ovaries. (Note, there is some overlap with the menstrual phase). It starts when the hypothalamus signals the pituitary gland in the brain to release follicle-stimulating hormone (FSH). This hormone stimulates (inspires) the ovaries to produce around 5 to 20 small sacs called follicles. Each follicle contains an immature egg. Only the healthiest egg will eventually mature. (On rare occasions, a female may have two eggs mature). The rest of the follicles will be reabsorbed into the body. The maturing follicle causes an increase in oestrogen production that thickens the lining of womb or uterus to create a nutrient-rich environment for an embryo to grow. The average follicular phase lasts for about 13 days but can range from 11 to 27 days, depending on ones' cycle.

## Ovulation Phase

The ovulation phase occurs around the middle of the cycle when a mature egg is released from the ovary into the fallopian tube. This occurs around day 14 for a 28-day cycle and lasts for about 24 hours. The egg travels down the fallopian tube towards the womb or uterus. It is the time when fertilisation by a sperm is most likely to occur. After a day, the egg will die or dissolve if it is not fertilised. During ovulation, some people experience a variety of symptoms due to hormonal changes:

## Common Symptoms of Ovulation

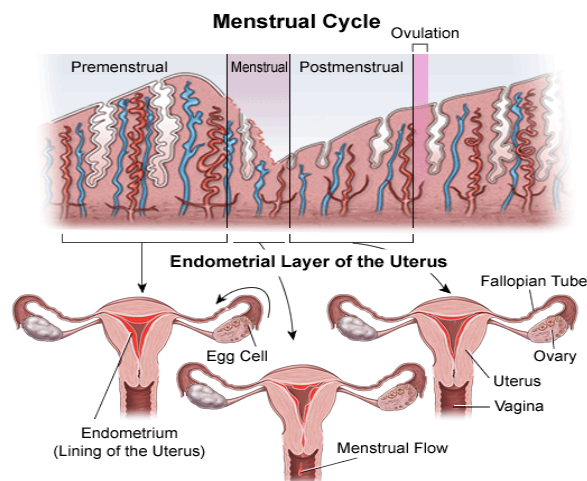
1. **Mild abdominal pain:** Some feel a slight ache or cramp on one side of the lower abdomen, often where the ovary is releasing an egg.
2. **Increased cervical mucus:** The consistency of cervical mucus becomes clear, stretchy and slippery, resembling egg whites.
3. **Higher body temperature:** The body temperature may slightly increase after ovulation due to a rise in progesterone levels in the body.

4. **Breast tenderness:** Hormonal fluctuations, especially the rise in oestrogen may cause tenderness or mild swelling in the breasts.
5. **Increased libido:** Many people experience a natural increase in sexual desire around ovulation.
6. **Heightened senses:** Some people become more sensitive to smell, taste or vision, may become more sensitive to light and may become easily irritated.
7. These symptoms may vary in intensity and may not be noticeable in everyone, as hormonal fluctuations affect each body differently.

## Luteal Phase

The luteal phase occurs from day 15 to 28. It is the part of the menstrual cycle after ovulation where the body produces progesterone to prepare the uterine lining for pregnancy. If pregnancy does not occur, progesterone production levels decrease leading to menstruation. Premenstrual syndrome (PMS) experiences here include:

1. Bloating
2. Breast swelling, pain, or tenderness
3. Mood changes
4. Headache
5. Weight gain
6. Changes in sexual desire
7. Food cravings
8. Trouble sleeping



**Figure 12.2:** The nature of the uterine lining layers before, during and after menstruation and during ovulation.

## Menstrual Hygiene

Menstrual hygiene refers to the practices and care taken to manage menstruation in a safe and healthy manner. Menstrual hygiene includes the use of clean menstrual products (such as sanitary pads, tampons or menstrual cups), regular changing of these products, proper disposal and personal hygiene practices, such as washing the genital area. Menstrual hygiene also emphasises access to facilities for safe and private changing and disposal of menstrual products,

adequate water and soap and education on menstruation and reproductive health. Good menstrual hygiene is essential for physical health, helping to prevent infections. It also plays a key role in dignity particularly for girls and women in environments where resources and education on this topic may be limited due to cultural and societal norms.



*Video on menstrual hygiene education*

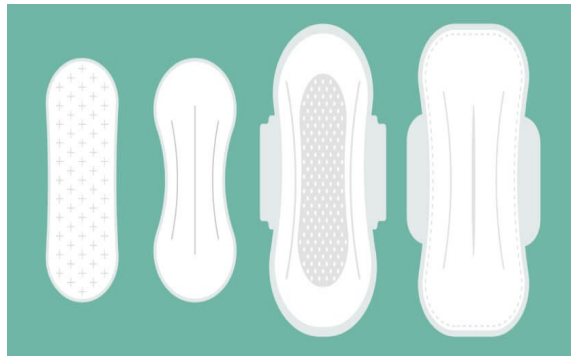
Source: <https://www.youtube.com/watch?v=-kqNCLVyKFc>

## Menstrual Products

Menstrual products are items designed to help manage menstrual flow during menstruation or period. They are used to absorb or collect blood and other materials shed from the uterine lining and help maintain hygiene and comfort during menstruation.

### Common Types Menstrual Products

1. **Disposable products:** items designed for single use. This means they are meant to be thrown away after each use. These products offer convenience but often contribute to environmental waste due to their non-reusable nature. Examples include:
  - a. **Sanitary pads:** soft absorbent products worn externally in the underwear to absorb menstrual blood. Absorbent pads have an adhesive strip that sticks to the underwear. They come in various sizes and absorbency levels for light to heavy flow. — See **Figure 12.3**.



**Figure 12.3:** *Sanitary Pads*

- b. **Tampons:** small absorbent cylinders that are inserted into the vagina to absorb menstrual blood and vaginal secretions during menstruation. Unlike pads, which are worn externally, tampons are placed inside the vaginal canal. Once properly inserted, a tampon stays in place and expands as it absorbs the menstrual flow. Tampons are available in different absorbency levels and may come with or without applicators. Tampons are safely removed from the vagina canal by pulling out the cords attached to them.



**Figure 12.4:** *Tampon without and with applicator*

- c. **Panty liners:** Panty liners are thin pads that are very much like sanitary pads, only that they are thinner, smaller and less absorbent. Unlike sanitary pads that are used during period days, panty liners are meant to be used during non-period days and are used when experiencing vaginal discharge. Even though vaginal discharges are completely natural and are important as a vagina's self-cleaning technique, excess discharge can stain panties and make it feel wet and sticky. They can also be used during light spotting or at the beginning or end of a period when blood flow is less.

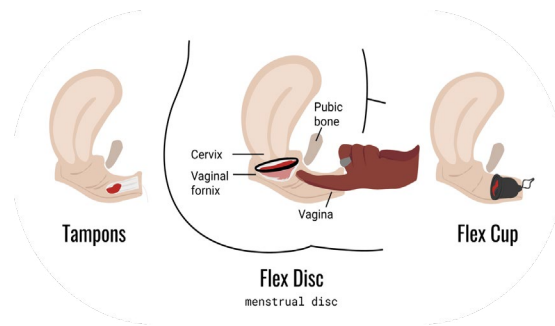


**Figure 12.5:** *Panty liners*

- d. **Menstrual discs:** Menstrual discs are menstrual product designed to collect menstrual blood inside the vagina. They are similar to menstrual cups but with a different shape and insertion method. Menstrual discs are smaller and flatter than menstrual cups which are shaped like a small bell. Menstrual discs have a flexible rim that allows them to be inserted into the vaginal canal and positioned around the cervix to collect menstrual flow. They offer a longer wear time than tampons or pads and are disposed of after use.



**Figure 12.6:** *Menstrual discs*



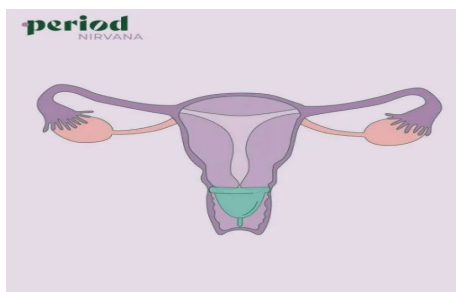
**Figure 12.7:** Position of a menstrual disc in the vagina

## 2. Reusable Products

- a. **Menstrual cups:** Menstrual cups are reusable menstrual products designed to collect, rather than absorb menstrual blood. Menstrual cups are usually shaped like a small bell or cone with a stem at the bottom. The stem helps with removal and the cup's flexible body allows it to fit comfortably inside the vagina. To use a menstrual cup, it is folded and inserted into the vagina, where it opens and forms a gentle seal with the vaginal walls. This seal prevents leaks and the cup sits below the cervix to collect blood. Menstrual cups can hold more fluid than tampons or pads and can be worn for up to 12 hours, depending on flow level. Once filled, the cup needs to be removed, emptied, rinsed and reinserted. Menstrual cups come in different sizes to suit different needs, often based on factors like age and flow. Many brands offer small and large sizes. When inserted correctly, menstrual cups are comfortable and can be used during physical activities, including swimming, exercise and even while sleeping.



**Figure 12.8:** Menstrual cups



**Figure 12.9:** The position of a menstrual cup in the vagina.

- b. **Cloth pads:** Cloth pads are reusable menstrual products made from layers of absorbent fabric that are worn externally like disposable pads. They are designed to be washed and reused. Some cloth pads have waterproof backing to prevent leaks. Cloth pads come in various shapes and sizes, similar to disposable pads. They have options for light, regular and heavy flow as well as overnight protection. They have “wings” with snap buttons to

secure them around the underwear. They are available in different thicknesses and lengths to accommodate light to heavy menstrual flow, similar to regular, super or overnight disposable pads. After use, cloth pads are washed, dried and stored until the next cycle. With proper care, they can last for several years, reducing the need for disposable pads and minimising waste. Many people find cloth pads more comfortable, especially those with sensitive skin, as they are free from chemicals and synthetic fibres often found in disposable pads.



**Figure 12.10:** Cloth pads

## How to Properly Dispose of Sanitary Pads

1. **Changing pad:** When ready to change pad, remove the used pad from the underwear and roll it up: Carefully remove the pad and roll it up tightly and neatly, starting from one end to the other. Roll it up so that the soiled part is on the inside and the adhesive part is on the outside. Rolling up the pad will make it easier to wrap and minimise the space it takes up in dustbins.



**Figure 12.11:** How to roll the used pad

2. **Wrap the pad in a piece of paper:** Use a piece of newspaper, toilet paper, tissue or wastepaper to carefully wrap the rolled-up pad to help keep the odours controlled. The wrapper from a fresh pad can also be used to wrap up used pad. If the wrapper has an adhesive tab on it, use that to help keep the wrapped pad secure. Tampons must also be wrapped just like pads.



**Figure 12.12:** What to use to wrap up the used pad

3. **Drop the wrapped pad or tampon in a dustbin:** Put the wrapped pad or tampon in a dustbin. Preferably, put them in a dustbin with a bag or liner and a lid. This will make it easier to dispose of the pads and other waste materials when it is time to take out the trash. Never flush a used pad or tampon down the toilet. Doing so will clog the pipes.



**Figure 12.13:** *Where to put used wrap up pad*

4. **Wash hands when done:** Thoroughly wash hands with soap and water once pads, tampons, discs are disposed of. This will help prevent the spread of germs and rinse away any menstrual blood that may have gotten on the hands. It is also important to wash the hands before changing pads, tampons, discs and cups. This will help prevent accidental introduction of unwanted germs into the genital area.



**Figure 12. 14:** *Washing hands after changing pad*

## Hygienic Practices During Menstruation

### Use clean and reliable menstrual products

Choose the right product: Selecting the right product is important for comfort and usefulness. Menstrual products come in different sizes and absorbencies, choosing based on flow type can help prevent leakage and ensure comfort. Choosing the wrong menstrual products can lead to discomfort, health risks and other inconveniences. Risks of choosing the wrong products include:

#### 1. Increased risk of infections

**Bacterial growth:** Using overly absorbent tampons for longer periods or failing to change them frequently may encourage the growth of bacteria, increasing the risk of Toxic Shock Syndrome (TSS), a rare but dangerous infection.

**Yeast or urinary tract infections (UTIs):** Incorrect products or improper hygiene may lead to changes in the vaginal environment, increasing the likelihood of yeast infections or UTIs.

## 2. Skin irritation and rashes

**Friction burns and rash:** Pads with rough textures or synthetic materials may cause abrasion, skin irritation or rashes particularly with prolonged use or during physical activity.

**Allergic reactions:** Some pads and tampons contain fragrances, dyes or chemicals that may cause skin irritation or allergic reactions in sensitive individuals. Avoid scented pads and tampons.

## 3. Leakage and discomfort

**Inadequate absorbency:** Choosing a product with lower absorbency than needed may lead to frequent leakage, staining clothes and causing embarrassment.

**Too much absorbency:** Using a highly absorbent tampon when it is not needed can cause vaginal dryness and irritation, making removal uncomfortable and increasing the risk of micro-abrasions.

## 4. Physical discomfort

**Improperly fitted products:** Products that do not fit well, such as a menstrual cup that is too large or a pad that does not stay in place, can cause discomfort and even pain, particularly during movement.

**Limited activity:** Inappropriate choices, like a pad during sports instead of a tampon or cup, can restrict mobility, leading to discomfort and limiting one's lifestyle during menstruation.

## Menstrual cups

Menstrual cups should be:

1. **rinsed and cleaned during each use:** When emptying the cup, it should be rinsed with clean water or if in a public washroom, wipe with toilet tissue or a cup-safe wipe until it can be rinsed.
2. **sterilised after each cycle:** Boil the cup for 5 to 10 minutes at the end of each menstrual cycle or use a sterilising solution to kill any lingering bacteria.
3. **stored in a breathable bag:** Between cycles, store the cup in a breathable cloth bag to prevent moisture buildup and reduce the chance of bacteria or mold growth. Proper cleaning and storage practices will help maintain good vaginal health, reduce the risk of infection and keep the cup in good condition for long-term use.
4. **changed regularly:** Menstrual cups can be left in for 6 to 12 hours, depending on flow, but should still be emptied and cleaned regularly.

## Personal Cleanliness

1. **Wash regularly:** Regular showers or baths during menstruation help maintain cleanliness and reduce discomfort.
2. **Gentle cleaning:** Clean the genital area with warm water, but avoid harsh soaps or scented products, as these can disturb the vaginal pH and lead to irritation or infections. Use mild, fragrance-free soap if needed.
3. **Wipe properly:** Always wipe from front to back after using the washroom. This practice helps prevent the spread of bacteria from the anus to the vaginal area, reducing the risk of urinary tract infections (UTIs) and other infections.

## Wear clean, breathable clothing

1. **Choose comfortable underwear:** Cotton underwear is ideal during menstruation because it is soft, absorbent and breathable, helping to keep the area dry and reducing the risk of irritation.
2. **Change clothing if necessary:** When experiencing leakage or staining, change the underwear or clothes to maintain cleanliness and comfort. Wearing dark-coloured clothing may be more comfortable on heavy-flow days, as it can minimise the appearance of potential stains.

## Stay hydrated and eat nutritious foods

1. **Hydration and Nutrition:** Drinking plenty of water and maintaining a balanced diet is beneficial for both menstrual comfort and overall health.
2. **Iron-rich foods:** Menstruation can lead to lower iron levels, so including iron-rich foods like leafy greens, beans and lean meats can help replenish it and reduce feelings of fatigue.
3. **Magnesium and Vitamin B6:** These nutrients can help relieve cramps and mood changes. Foods like nuts, seeds, bananas and whole grains are beneficial.
4. **Limit salt and caffeine:** Salt and caffeine can contribute to bloating and discomfort. Reducing these during menstruation can help prevent these symptoms and support hydration.

Maintaining these hygienic practices help alleviate menstrual discomfort, prevent infections and ensure a comfortable experience. Menstrual hygiene education is also essential to break stigmas and empower individuals to practice these routines confidently and healthily.

## How To Manage Discomfort During Menstruation

Managing discomfort during menstruation can improve well-being and allow for a more comfortable experience. Here are some effective ways to reduce menstrual discomfort:

### 1. Using pain relief techniques

**Using heating pads:** Applying heat to the lower abdomen or back can relax muscles, improve blood flow and reduce cramping. Heat wraps, hot water bottles or heating pads are great options.

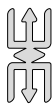
**Taking warm baths:** Taking a warm bath can relieve muscle tension, ease cramps and promote relaxation.

### 2. Exercise and physical activity

**Engaging in gentle exercise:** Light like walking, swimming, cycling, light jogging or running, stretching or gentle relaxation exercise are effective in reducing menstrual discomfort and improving mood by increasing blood flow and releasing endorphins, the body's natural painkillers.

### 3. Dietary adjustments

**Drinking water:** Drinking plenty of water can reduce bloating and ease cramps. Some herbal supplements like ginger tea, turmeric tea, moringa tea, peppermint tea, lemongrass tea, clove tea and fenugreek have anti-inflammatory properties that have a calming effect and can help to relieve cramps.



## Note

a healthcare provider should be consulted before using such supplements.

### 4. Sleep

**Getting adequate sleep:** Good sleep is very good for mood regulation and overall well-being. Get enough restful sleep, using a pillow under the knees or lying on the side to reduce abdominal pressure and all help to relieve menstrual discomfort.

If menstrual pain is severe and is not lessening after trying other remedies and is interfering with daily activities, consult a doctor as specialist treatment may be required.

## Socio-Cultural Beliefs and Misconceptions About Menstruation and Menstrual Hygiene Practices

Socio-cultural beliefs and misconceptions about menstruation and menstrual hygiene practices vary and are influenced by traditional and religious factors. Some of these beliefs and misconceptions influence how menstruation is managed, the types of products used and the general attitudes toward menstrual health.

Some common socio-cultural beliefs and misconceptions about menstruation and menstrual hygiene practices include:

### 1. Menstrual taboos and restrictions

- a. **Menstruating individuals are “unclean” or “impure”:** It is believed that menstruating girls and women are unclean or impure in some communities, so therefore should avoid cooking or handling food because it is considered taboo. The belief is that their presence in food preparation could affect the food’s purity and safety. This leads to stigmatisation and social exclusion against girls and women in such communities leading to shame around menstruation which may affect their emotional well-being.
- b. **Menstrual blood is powerful and poisonous:** It is a widespread myth in some ethnic groups that menstrual blood has spiritual or mystical power which can harm people when they come in contact with it. This belief has led to the avoidance of menstruating girls and women touching specific household items or interacting closely with others to avoid “contamination” or to “protect” them from the perceived harm. For instance, menstruating girls and women are disallowed to touch or use the same bucket with others. This myth is a baseless belief, as menstrual blood is not different from any other bodily fluid.
- c. **Restriction from religious spaces:** Some religions restrict menstruating girls and women from entering places of worship, participating in certain rituals or handling religious objects.
- d. **Menstruating women should avoid bathing or washing their hair:** Some ethnic groups believe that girls and women should not bathe or wash their hair during menstruation because it is thought to disrupt the menstrual flow or cause health problems. This is not true, regular bathing and washing during menstruation is important for comfort and health.
- e. **Using sanitary pads for too long can make a woman infertile:** It is believed that using sanitary pads for extended periods can cause infertility. This is not true, as long as sanitary pads are used properly and changed regularly to avoid infections it is safe and will not affect childbearing ability of any girl or woman.

- f. **Menstruation is caused by a girl or woman's bad behaviour:** It is believed that menstruation is a punishment or a result of bad behaviour or sins. This belief can contribute to shame and negative attitudes towards menstruation. It is never true that girls or women menstruate because they are being punished by the gods. Menstruation is a natural biological process that indicates a well-functioning reproductive system capable of producing healthy offspring.
- g. **Menstruating women cannot participate in physical activities:** Some groups of people believe that menstruating girls and women should avoid physical activities like sports or dancing because it might worsen their menstrual flow or cause harm to their bodies. This is a misconception as physical activities can help to ease menstrual discomfort.

## 2. Stigma and secrecy

- a. **Need for privacy:** Menstruation in some communities is seen as a private matter and discussing it openly is discouraged, especially in mixed-gender settings. This secrecy prevents young girls from learning about proper menstrual hygiene.
- b. **Embarrassment and shame:** Menstruating individuals in some communities, face teasing or shaming if their menstruation becomes noticeable. This can cause shame and discourage open discussions about menstrual health.

## 3. Cultural practices of menstrual education

- a. **Elderly women as educators:** In some communities, knowledge about menstruation and menstrual hygiene is passed down by grandmothers or elderly women and mothers.
- b. **Rites of passage:** Some ethnic groups in Ghana perform rites of passage to celebrate a girl's first menstruation, marking her transition into womanhood. These rites vary by community and may include teaching menstrual hygiene practices.

## 4. Economic and access factors

**Limited water and sanitation facilities:** Some beliefs restrict menstruating individuals from accessing communal water sources or sharing spaces due to concerns about menstrual blood contaminating the area.

## 5. Traditional menstrual hygiene practices

**Use of traditional materials:** In many communities, there is a belief that spending on sanitary products is unnecessary, especially where financial resources are limited. This reinforces the reliance on less hygienic traditional materials or other low-cost alternatives. Examples of such materials include:

- a. **Cloth or rags:** Pieces of old fabric or cloth are cut out from old clothing and used as absorbent materials. These cloths or rags are washed, dried and reused over multiple cycles.
- b. **Cotton wool:** Some people use raw cotton or cotton wool as an absorbent material either alone or wrapped in cloth for additional protection.
- c. **Sponge:** Natural sponges beaten out roots of some trees are also occasionally used as absorbent materials. These are sometimes inserted like a tampon which are washed and reused, though they are less common now due to the potential health risks.

- d. **Dry grass or plant fibres:** In some very rural settings, some girls or women use dried grasses or other plant fibres to absorb menstrual blood. This is now rare and often used only when no other materials are available.
- e. **Paper:** Some individuals also use layers of paper, such as tissue or toilet paper, for temporary absorption, often folding it several times for thickness. However, this material is less effective and can be uncomfortable.
- f. **Leaves:** Some large, absorbent leaves from specific plants are also used to manage menstruation in very resource-limited areas, though this is uncommon and often a last resort.
- g. **Sawdust or ash:** In rare cases, girls and women use sawdust, wrapped in cloth or even ash as absorbent material. These practices are uncommon and can have health risks.
- h. **Old sanitary pad wrappers:** In some very economically constrained areas, some girls or women reuse parts of the old sanitary pad wrappers or linings if they cannot afford new products.

These socio-cultural beliefs can impact the menstrual hygiene practices of women and girls and sometimes can lead to inadequate hygiene practices, discomfort and a lack of access to modern menstrual products. Efforts to improve menstrual hygiene education to reduce stigma are increasingly being promoted in Ghana, helping communities shift towards healthier and more inclusive practices.

### Learning Tasks

1. Describe personal hygiene practices and how these can impact individuals.
2. Explain menstrual terms.
3. Create a menstrual hygiene plan.
4. Track and record a menstrual cycle.
5. Search and present on menstrual products.
6. Describe the proper disposal of used menstrual products.
7. Describe how to manage menstrual discomfort.
8. Create a menstrual health awareness campaign.

## Pedagogical Exemplars

### Activity

#### 1. Starter Activity: “Personal and menstrual health word cloud”

##### Overview of the activity

This activity involves creating a word cloud, where learners brainstorm terms related to personal hygiene and menstruation. It is a fun and interactive way to see what learners already know and introducing them to the topic in a non-intimidating manner. It is a light but inclusive way to normalise the topic and create a more comfortable learning environment.

**How it works**

- a. At the beginning of the lesson, ask learners to shout out or write down any words, phrases or terms they associate with personal hygiene and menstruation in their jolters. Encourage participation letting the learners freely share their words. As they share write them on the board. Some examples might include: bathing, period, brushing teeth, body odour, cramps, sanitary pad, bathing, underwear, premenstrual syndrome, pads, blood, menstrual cycle, menstrual flow, hormones, hygiene, discomfort, tampons, pain, embarrassment, etc.

As words are added, they form a visual word cloud, which will highlight the most commonly mentioned terms. Once the cloud is built, briefly discuss the most common words and clarify any misconceptions. For instance, if “pain” or “embarrassment”, “odour” are mentioned frequently, address how these are common feelings but how menstruation can be managed in a healthy way.

**Alternative twist**

- b. Ask learners to write down one question they have about personal hygiene and menstruation or a myth they have heard and then address those questions or myths throughout the lesson. This activity encourages learner engagement and reflection while establishing a supportive space to explore menstrual health and hygiene. It also provides a visual representation of how menstruation is perceived, helping the teacher tailor the lesson to the class’s needs and misconceptions.

**2. Group work/Collaborative learning/Digital learning**

In mixed-ability groups, learners search and discuss the following; the meaning of personal hygiene, menstruation and menstrual hygiene, impact of personal and menstrual hygiene on social relationships, the relationship between personal and menstrual hygiene and self-confidence, importance of nail care and steps to improve personal and menstrual hygiene practices in a school setting with the help of their digital devices. By providing probing questions, guide learners to analyse what they have seen and link it to what they experience and practice in everyday life. Encourage learners to accept varied opinions. Give further explanation to learners who need support by using probing or leading questions for them to clarify responses where necessary for better understanding. Summarise what learners have said and add to responses if needed.

In the same groupings, learners explore using the internet or other sources, to come up with their own definition of the menstrual cycle. Learners discuss the four phases of the menstrual cycle, some common symptoms experienced during the phases of the menstrual cycle, menstrual products used during menstruation and their types. Encourage learners to contribute to the discussions verbally, through writing or any other means they are comfortable with. Create opportunities for learners who can explore from multiple sources to provide a wider range of information.

**3. Talk for learning**

Guide learners to suggest and discuss how to properly dispose of used disposable menstrual products and how to maintain the reusable ones, hygienic practices during menstruation and how to manage discomforts during menstruation. Let learners turn to an elbow partner and share what they have learned with their partners while ensuring mixed gender pairing where possible.

#### 4. **Structured Talk for Learning and Collaborative learning**

In mixed ability, mixed cultural and mixed religious groupings, learners engage in structured discussion on socio-cultural beliefs and misconceptions on menstrual hygiene practices and traditional menstrual hygiene practices in their localities. Provide learners with facts to demystify their previous knowledge on menstruation. Task learners in their groups to prepare a list of menstrual misconceptions and factual information to counter them. Ensure all learners collaborate and contribute to the discussion. Guide learners to make notes for class presentation using different modes to present their findings. They can present using any of the following; written, oral, PowerPoint, Google Slides or any other means they are comfortable with to help accommodate different learning styles. Encourage shy learners in each group to lead the discussion with the help of their colleagues while emphasising the need for patience and respect for each other. Invite leaders from each group to share their findings with the whole class for add on and clarifications where necessary.

### **Key Assessment**

#### **Level 1**

1. What is menstruation?
2. Define personal and menstrual hygiene?
3. List two common symptoms of menstruation.
4. Name two hormones involved in the menstrual cycle.
5. State one hygiene product used during menstruation.
6. Identify the phase in the menstrual cycle when ovulation occurs.
7. What is the average length of a menstrual cycle?
8. Name one type of exercise that can help manage menstrual cramps.
9. Identify two practices that are part of good personal hygiene.
10. Why is it important to keep the nails clean and trimmed?
11. Identify two lifestyle changes that can help manage menstrual discomfort.
12. List two dietary changes that can help reduce menstrual discomfort.
13. Identify three socio-cultural beliefs associated with menstruation in Ghana.
14. What is the purpose of wrapping used menstrual products before disposal?

#### **Level 2**

1. Describe the role of oestrogen and progesterone in the menstrual cycle.
2. Give two reasons why menstrual hygiene is important.
3. Describe two ways good personal hygiene can positively impact social relationships.
4. Describe the steps for safely disposing of a used sanitary pad.
5. Identify two potential health risks associated with poor menstrual hygiene.
6. Discuss three advantages and three disadvantages of using disposable pads compared to reusable pads.
7. Explain why it is important to change menstrual products regularly during menstruation.

#### **Level 3**

1. Analyse the potential effects of poor personal hygiene on health.
2. Analyse the potential effects of poor menstrual hygiene on health.

3. Explain how lack of personal and menstrual hygiene could lead to social isolation.
4. Create brief guidance on how to educate someone about the safe disposal of menstrual products.
5. Describe how to create a self-care plan for managing menstrual discomfort.
6. Examine the impact of socio-cultural beliefs on menstrual hygiene practices.
7. Discuss why some Ghanaian communities restrict certain activities for women during menstruation.
8. Analyse how socio-cultural beliefs about menstruation affect school attendance among Ghanaian girls.
9. Develop a weekly personal hygiene plan for managing menstruation.
10. Discuss how cultural beliefs and myths can affect menstrual hygiene practices.
11. Explain the relationship between menstrual hygiene and preventing infections.

#### Level 4

1. Propose ways teachers and school leaders can support girls experiencing stigma related to menstruation in Ghanaian schools.
2. Design an educational programme that addresses socio-cultural beliefs about menstruation to improve menstrual hygiene practices in rural Ghana.
3. Develop a community-based intervention that can help mitigate the impact of menstrual taboos on girls and women's participation in public life in Ghana.
4. Design an awareness campaign for your community on the importance of menstrual hygiene.
5. Evaluate the potential effects of poor menstrual hygiene on mental health and social relationships.

#### HINT



- The Recommended Mode of Assessment for Week 12 is **End of semester Examination**.
- Refer to **Appendix D** at the end of Section 5 for further information on how to go about the end of semester examination.



## APPENDIX D: END OF FIRST SEMESTER EXAMINATION

**Nature:** The end of first semester examination questions should cover Weeks 1-12 focal areas in the Teacher Manual. It should include:

- A. **MCQs 40 items**
- B. **Five (5) Essay type questions** where learners will select and answer three of them.

### 1. *Sample of principles to consider when designing effective multiple-choice questions (MCQ's)*

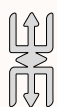
- a. Write questions that are clear and straightforward so learners can easily understand them.
- b. Make sure each question matches the learning goals and the topics that have been taught in the course.
- c. Add incorrect answer choices (distractors) that seem believable and are closely related to the correct answer.
- d. Ensure each question has only one clear and correct answer. Avoid using options like “all of the above” or “none of the above,” which can sometimes confuse learners.
- e. Create questions with different levels of difficulty to distinguish between learners with varying levels of understanding.
- f. Make sure questions are free from cultural, language, or gender bias. Use language and examples that are fair and accessible to all learners, regardless of their background.

### 2. *Sample of principles to consider in developing essay-type questions*

- a. Write questions that are clear and straightforward so learners can easily understand them.
- b. Make sure each question matches the learning goals and the topics that have been taught in the course.
- c. Add incorrect answer choices (distractors) that seem believable and are closely related to the correct answer.
- d. Ensure each question has only one clear and correct answer. Avoid using options like “all of the above” or “none of the above,” which can sometimes confuse learners.
- e. Create questions with different levels of difficulty to distinguish between learners with varying levels of understanding.
- f. Make sure questions are free from cultural, language, or gender bias. Use language and examples that are fair and accessible to all learners, regardless of their background.

### 3. Table of Specification for the End of First Semester Examination.

Weeks	Focal Area	Type of questions	DoK Levels				Total
			1	2	3	4	
1	Performing service and reception in table tennis.	Multiple choice	1	1	1	-	3
2	Performing forehand and backhand strokes in table tennis.	Multiple choice	2	2	1	-	5
		Essay		1	1	-	2
3	Forehand and Backhand Stokes	Multiple choice	2	2	1	-	5
		Essay	1				
4	Concepts of human diseases.	Multiple choice	2	3	1	-	6
		Essay			1		1
5	Classification of human diseases.	Multiple choice	1	2	1	-	4
6	Origins and importance of traditional games.	Multiple choice	-	2	1		3
		Essay		1			1
7	Arm wrestling and tug of war.	Multiple choice	1	2	1		4
8	Footwork, shoulder and overhead pass.	Multiple choice	1	1	1	-	3
9	Shooting	Multiple choice	1	1	2	-	4
10	Netball game	Multiple choice	1	1	1	-	3
11	Discuss vaccination and immunisation as a form of disease prevention.	Multiple choice					
12	Discuss the concepts of menstrual health and hygiene	Multiple choice					
Total			12	17	11	-	40
			1	2	2		5



#### Note

Strictly follow the 30% DoK level 1, 40% DoK level 2, 30% DoK level 3 and 4

## SECTION 6: TRADITIONAL GAMES – PART TWO

### STRAND: PHYSICAL ACTIVITY AND HEALTH

#### SUB-STRAND: TRADITIONAL GAMES

**Learning Outcome:** *Demonstrate the ability in performing African cloth parachuting or sail*

**Content Standard:** *Demonstrate the ability to apply core movements in performing traditional games*

#### HINT



- Remind learners to include a copy of their end-of-first semester examination results in their individual portfolios.
- The Recommended Mode of Assessment for Week 13 is **class exercise**. Please ensure to organise it and record the scores for submission to the STP.
- Remind learners about their **individual portfolio**. Engage them to find out where they have reached and offer support where necessary.

### INTRODUCTION AND SECTION SUMMARY

African cloth parachuting or sail is a culturally significant activity that combines creativity, teamwork and physical coordination. This activity is traditionally rooted in African play culture and uses large, colourful cloths to create a parachute or sail-like structure. By tying the cloth around the waist and pulling it over the head with hands raised high, participants perform various coordinated movements that promote physical fitness, rhythm and social bonding. Engaging in this activity helps learners to explore cultural heritage while developing motor skills, cooperation, and a sense of community. The ability to perform African cloth parachuting requires mastery of fundamental skills such as handling the cloth, synchronised movement and group coordination. Through this activity, learners also develop a deeper appreciation for African traditions and their relevance in fostering physical activity and recreation. This section emphasises not just the technical ability to perform the activity but also the teamwork and cultural awareness it promotes. The activity is particularly suitable for fostering inclusivity, as it can be adapted for all age groups and fitness levels. In this section, learners will understand the origins and cultural significance of African cloth parachuting or sail as a traditional activity. Learn the basic techniques of handling and manipulating the cloth to create effective parachute or sail movements. Develop physical coordination and teamwork by practicing and performing group movements with the cloth. By the end of this section, learners will demonstrate proficiency in executing African cloth parachuting activities while appreciating their cultural and recreational value.

**The week covered by this section is:**

**Week 13:** Identify the core skills in performing the African cloth parachuting or sail.

## SUMMARY OF PEDAGOGICAL EXEMPLARS

In this section, teachers are encouraged to adopt effective teaching approaches to support learners in achieving the content objectives. This can be achieved by employing strategies such as collaborative learning and group performance to actively engage learners in the session's tasks. Grouping strategies, such as mixed-ability, mixed-gender or gender-based groupings where appropriate should be thoughtfully applied, considering the nature of the task. Special attention should also be given to learners with additional needs to ensure they are fully included and benefit from the lesson. Furthermore, teachers should promote respect for individual differences, including beliefs, tribes, religions, abilities and temperaments, fostering an inclusive and supportive learning environment.

## ASSESSMENT SUMMARY

Assessment of learners in this section should be practical demonstrations and oral quizzes to evaluate their understanding of the meaning, origin and description of how the game is performed. Evaluate their application of the core rules for fun, fitness and safety. To ensure fairness and consistency, develop rubrics that provide clear criteria for assessing performance and adherence to safety guidelines. Document learners' progress, highlighting areas needing improvement and recognising those excelling in their skills. Use this information to guide future lesson planning, provide individualised feedback and support learners in enhancing their abilities in subsequent activities. The recommended mode of assessment for week 13 is class exercise.

**WEEK 13**

**Learning Indicator:** Identify the core skills in performing the African cloth parachuting or sail

**FOCAL AREA: AFRICAN CLOTH PARACHUTE****African Cloth Parachute****What is the African cloth parachute or sail game?**

The African cloth parachute or sail game is a game in which participants tie cloth around their waist, hold the remaining portion over their heads to catch the wind and run around mimicking the movement of wind filled sails. This game is both imaginative and symbolic often representing sailing or flight. The game is particularly popular among participants in the coastal or fishing communities in Ghana as it reflects the maritime culture and the use of sails in daily life. It is designed to stimulate the experience of sailing or gliding which encourage physical activity, creativity and joy through movement and play.



**Figure 13.1:** African cloth parachute or sail game

**Origin and cultural significance of the game in Ghana**

The African cloth parachute or sail game is rooted in communal traditions that emphasise teamwork and creativity. It draws inspirations from maritime cultures in Ghana, especially in the coastal communities where the use of sails for fishing boats is prevalent. The game symbolises the importance of wind, sailing and movement, much like how boats rely on wind to move across the water.

**Purpose of the game**

The game is designed to be fun and engaging, encouraging physical movement and collaboration. It helps develop a sense of unity as participants work together to manage the cloth like a sail. The game also sparks creativity as participants use their imagination to inspire the act of sailing or flying, exploring freedom of movement and enjoying the play environment.

**Materials and preparation**

A large piece of light, durable cloth is needed to make the game more effective. The cloth should be large enough to stretch over the head or across two individuals in a pair but not too heavy to hinder movement. Suitable cloth choice could include cotton sheets, printed cloths or any other cloth that is strong enough to catch the wind. The material must be strong enough to withstand running and the tension applied while it is held overhead.

## Safe ways to tie the cloth around the waist

To ensure safety and proper execution of the game, participants tie the cloth securely around the waist without it being too tight or too loose to ensure the cloth stays in place without restricting movement or causing discomfort. The cloth should not be too long or too short. It needs to hang down sufficiently to allow the remaining piece to be held overhead.

## Ensuring safety in the playing area

The area used for the game must be free from obstacles or objects that could cause tripping or falling. The space should be wide enough for participants to run without crashing into each other or any objects. If outdoors, the wind conditions should be taken into consideration, as strong winds could make the cloth more difficult to control and lead to accidents.

## Techniques of the Game

1. **How to properly hold the cloth:** The cloth properly is held by grasping it at both ends and raising it above the head. The aim is to have the cloth puff in the wind, mimicking a sail or parachute. Even grip should be maintained to allow the cloth to catch the wind effectively. Stance should be adjusted to account for the wind's resistance.
2. **Running technique to mimic sailing or gliding:** For the cloth to catch the wind, participants must maintain an upright posture while running with a slight lean to mimic the wind's pull. Participants should adjust their speed and direction based on how the cloth behaves in the wind, ensuring they can maintain control of the cloth and avoid running into other participants.
3. **Balancing and maintaining coordination while moving:** The game requires balance and coordination especially when running with the cloth overhead. The arms should be used to stabilise the movement and adjust the cloth's position overhead to help maintain control.

## The Role of the Game in the Life of a Ghanaian Child

The African sail or parachute game plays a significant role in the traditional childhood of a Ghanaian child, contributing to their physical, social, cultural, and emotional development. The game:

### 1. Promotes physical development

- a. The game encourages strength, endurance and agility as participants run, turn and move with the sail.
- b. It enhances coordination and balance, helping participants develop motor skills as they maintain the cloth overhead while moving.
- c. It improves aerobic fitness through sustained movement and active play.

The game involves a lot of running which helps improve cardiovascular endurance. As participants engage in continuous motion their heart rate increases leading to the development of stamina and fitness. The varied intensity of the running or movement contributes to improving aerobic capacity and muscle strength.

### 2. Fosters social skills

- a. The game provides opportunities for teamwork and collaboration, as participants often play in groups, learning to coordinate their movements and work together.
- b. It teaches communication skills as participants plan and execute group movements or relay activities.
- c. It encourages fair play and respect for others through interactions and shared rules during the game.

The game emphasises teamwork as participants work together in their groups to compete and win as a group. They learn to communicate, share ideas, support and cheer each other in a pursuit of a common goal. This nurtures a sense of community and belonging, helping to build social connections among participants.

### 3. Cultural education

- a. The game connects participants to Ghanaian heritage, as the game often incorporates traditional cloth like Kente or wax prints, which carry cultural and symbolic significance.
- b. It instils a sense of pride and belonging, as the game reflects a shared cultural experience among peers.

The use of cloth to represent a sail or parachute ties back to Ghana's coastal fishing communities, where sails are integral to the operation of fishing boats. By recreating this action in the game, participants engage with the cultural heritage of the coastal Ghana, understanding the connection between nature (wind, sail) and the livelihood of the communities.

The sail also represents many things in Ghanaian culture, such as the journey by water, freedom from slavery where our forefathers were transported across the ocean to the western world and, fishing for a living. Running with the cloth overhead reflects movement towards a common goal and aspirations, reflecting the collective effort required to move forward, much like how communities work together to achieve common goals.

### 4. Sparks creativity

- a. The game allows participants to express themselves through innovative movements with the sail, encouraging imagination and originality.
- b. It provides opportunities to create patterns or movements, promoting artistic expression tied to cultural rhythms.

The game offers participants an opportunity to express themselves creatively, exploring different movements while using the cloth. It encourages imagination and spontaneous play, which is deeply rooted in African culture's focus on communal and expressive forms of entertainment.

### 5. Builds emotional resilience

- a. The game offers an outlet for joy and stress relief, as the playful nature of the game helps participants release energy and feel a sense of freedom.
- b. It teaches problem-solving skills, as they navigate challenges like keeping the sail steady or coordinating movements with others.
- c. It boosts self-confidence, as participants master the skill of handling the sail and participate actively in group activities.

### 6. Enhances connection to nature

- a. The game is played outdoors, which help participants develop an appreciation for the environment, as they 'catch the wind' and experience the joy of moving in natural spaces.
- b. In traditional Ghanaian childhood, the African cloth sail or parachute game is more than just play. It is a multifaceted activity that integrates culture, physical activity, creativity and community-building, forming an essential part of a child's holistic development.

## Learning Tasks

1. What is African cloth parachute or sail game?
2. Explain the cultural roots and purpose of the game.
3. Discuss the role of the game in the life of the participants.
4. Demonstrate how to tie the cloth and grip it overhead.
5. Perform the sailing or gliding.

## Pedagogical Exemplars

### Activity

#### 1. Starter Activity: Catching the wind (Storytelling)

##### Step 1: Set scene

Have learners sit in a horseshoe formation and tell a brief but engaging story to capture their attention and set the tone for the activity.

##### Step 2: The story

- a. A long time ago, in the heart of a lively Ghanaian village, life was full of energy and tradition. The village was alive with the talk of market women, the rhythmic pounding of fufu and the melodies of birds that danced in the skies above. But it was the laughter of participants that truly filled the air, carrying a sense of joy and wonder wherever it went.

One day, after their morning chores, the participants gathered at the edge of the village where the open fields stretched as far as the eye could see. Each child brought a colourful cloth of bright yellows, deep reds, lemon greens and orange and blue, some passed down from their elders and others freshly woven by their mothers. These cloths were not just pieces of fabric, but symbols of their heritage, their family and their dreams.

As the midday sun cast long shadows over the fields, the wind began to blow. The participants tied the cloths comfortably around their waists, lifting the free ends high above their heads. With the wind catching the fabric, the cloths rose like sails on mighty ships. "Look at me" one boy shouted, his cloth rising as he sprinted across the grass. "I am flying like an eagle"

Others joined in, spinning and weaving through the fields with their colourful sails painting the landscape with movement and life. Some imagined they were birds, gliding effortlessly on the wind, while others saw themselves as explorers, journeying to far-off lands on the sea. Together, they created a harmony of laughter and excitement, their cloths rippling and snapping like flags in the breeze.

But this game was more than just a play. It brought the participants together, teaching them how to move as one when they formed lines and circles, holding hands and coordinating their sails to catch the same gusts of wind. It reminded them of their shared heritage, the strength of unity and the beauty of their culture. Elders watching from the shade smiled knowingly, recognising that this simple game was weaving bonds that would last a lifetime.

As the sun began to set and the wind grew softer, the participants gathered in a circle, their sails draped over their shoulders. They shared stories of their imaginary adventures and laughed about who had the most “powerful” sail. Before heading home, one child stood up and said, *“One day, when I have children, I will teach them this game too. It feels like freedom.”*

And so, the tradition of catching the wind was passed down, generation after generation, as a symbol of joy, unity and the boundless spirit of Ghanaian childhood.

Today, we will step into their shoes, embrace the wind and relive the magic of “catching the wind” together. Let us see how high our sails can fly.

- b. Continue by briefing talking about the cultural significance of the game, its origins and the role it plays in traditional childhood.

**Note:** Teachers can craft their own stories to depict the game of old.

## 2. Warm-up movement

- a. Ask learners to imagine they are the participants from the story. Without the cloths yet, have them spread their arms wide like sails, feeling the “wind” around them.
- b. Call out directions (e.g., run like the wind or turn with the breeze, the wind is blowing in the north and learners run in that direction) to get them moving in different ways and jogging, turning and stopping. Add variations like ‘strong wind’ (run faster), ‘gentle breeze’ (run slower or walk) and ‘swirling wind’ (spin in a circle). Finish with a collective ‘Calm wind’ (and ask everyone to slow to a stop).

## 3. Main Activity

### **Talk for Learning: Introduce the cloths**

Have learners take their cloths they will be using for the game and explain how it becomes their sail. Demonstrate how to securely tie the cloth around the waist and hold the top corners above the head for optimal sail effect. Let learners practice tying the cloth around their waist, ensuring it is secure but comfortable. Teach them to grip the loose end of the cloth with both hands above their head. Have them practice holding the cloth steady while walking or standing still. Assist learners having difficulties in tying the cloth. Guide learners to observe the wind’s direction and strength, then position themselves and sail against it to catch the wind effectively and create the desired sailing experience. Ensure learners observe safety measures by maintaining awareness of the surroundings and proper techniques to avoid tripping or falling while running with the sail.

### **Collaborative Learning and Teamwork Practice: Running with the sail**

Group learners into small groups and have them practise individually, in pairs and in groups, promoting teamwork and enhancing their experience with the activity. Have them start by walking followed by slow jogging while holding the cloth high like a sail and gradually increasing the speed to mimic catching the wind. Introduce straight-line running and then curved or zigzag paths.

Encouraging them to maintain the sail shape while moving. Appreciate learners performing the sail well and support those finding it difficult to perform.

**Group-based Learning: Turning and manoeuvring activity**

Learner's practice turning in wide circles while keeping the sail stable. Introduce tighter turns to test their coordination by adding challenges, such as switching directions on a clap or signal. Challenge learners to create unique movements with their sails, such as spinning, waving or forming shapes. Allow each learner or group to showcase their creative ideas. Celebrate and provide feedback on their creativity and effort.

**Group based Learning: Group Coordination activity**

Pair or regroup learners to run together, keeping equal spacing. Introduce patterns, such as running in a large semi-circle or weaving between teammates. Guide learners to practice maintaining harmony and avoiding collisions. Focusing on teamwork and spatial awareness.

**Key Assessment****Level 1**

1. What is African cloth parachute or sail game?
2. What is the purpose of the African cloth parachute or sail game?
3. List at least two significances of the African cloth parachute or sail game in the lives of children

**Level 2:** Demonstrate how to properly tie the cloth around the waist.

**Level 3:** Demonstrate how the African cloth parachute or sail game is played.

**SECTION 6 REVIEW**

Section 6, part two provides learners with a comprehensive knowledge and understanding of the African cloth parachute or sail game. By the end of week, learners will understand how to perform the game and its cultural significance and physical benefits. The key ideas looked at included the meaning of the African cloth parachute or sail game, the origin of the game, the purpose of the game, the materials needed to play the game, the safety precautions during the game, running techniques and the role of the game in the life of a Ghanaian child. During the lesson, learners who grasped the technique early were engaged to support their peers and additional support was provided to those who needed help understanding the game.

## SECTION 7: INDIVIDUAL AND TEAM SPORTS – PART THREE

### STRAND: PHYSICAL ACTIVITY AND HEALTH

#### SUB-STRAND: SPORTS PARTICIPATION

**Learning Outcome:** *Demonstrate the ability to use core skills in performing individual and team sports (e.g., table tennis, netball, volleyball, etc)*

**Content Standard:** *Demonstrate the ability to apply core skills in performing individual and team sports (e.g., Table tennis, netball, volleyball, etc)*

#### HINT



Assign **individual project work** to each learner by **Week 14**, to be submitted by **Week 20**. Refer to **Appendix E** at the end of section 7 for a sample of individual project task and guidelines.

### INTRODUCTION AND SECTION SUMMARY

Volleyball is a team sport played by two teams of six players on a rectangular court divided by a net. The aim of each team is to score points by sending the ball over the net into the opponent's court in such a way that the opposing team cannot return it or commit a fault. Players use their hands, arms or other body parts to strike the ball, following specific rules to keep it in play. The game promotes physical fitness, teamwork and strategic thinking. There are some primary skills that need to be mastered for the game to be played effectively and enjoyed by both players and spectators. Some of the core skills are serving, digging, passing, setting, spiking and blocking.

This section will focus on underarm serve, digging reception, zones and rotational order on court in volleyball. The underarm serve, digging reception and rotational orders are fundamental skills in volleyball that form the foundation of effective gameplay. These techniques are important for initiating play and maintaining ball control during rallies. The underarm serve allows players to deliver a controlled and accurate ball into the opponent's court and making it an ideal skill for beginners and intermediate players. Digging reception is a defensive technique used to handle low and fast balls to help a team to transition smoothly from defence to attack. Mastering these core skills helps to enhance individual performance and contribute to the overall success of a team. The Rotational order on court is the arrangement of players on the court and the prescribed sequence in which they rotate positions after gaining the serve. By the end of this section, learners will confidently perform the underarm serve, digging reception and rotate correctly, demonstrating accuracy and control while understanding their importance in a real game situation.

**The weeks covered by this section are:**

**Week 14:** Apply core skills in performing individual and team sports (e.g., volleyball - underarm serve and digging reception in volleyball).

**Week 15:** Apply core skills in performing individual and team sports (e.g., volleyball -reinforcement of underarm serve and digging reception in volleyball).

**Week 16:** Apply core skills in performing individual and team sports (e.g., volleyball - zones and rotational order on the court in volleyball).

**SUMMARY OF PEDAGOGICAL EXEMPLARS**

In this section, teachers are encouraged to employ effective teaching strategies that support learners in achieving the lesson objectives. Approaches such as Talk for Learning (TFL), Collaborative Learning and Group-based activities among others can be used to actively engage learners in the learning tasks. Pedagogical methods should include diverse groupings, such as mixed-ability and mixed-gender groups where appropriate and based on the nature of the task. It is important to consider the needs of learners with additional support requirements, ensuring they can fully participate in the lesson. Teachers should also foster an environment of respect for individual differences and abilities.

**ASSESSMENT SUMMARY**

Assessment modes in this section should include practical demonstrations, homework and oral quizzes to assess learners' understanding of the skills learnt. In Week 14, evaluate learners' comprehension of the practical aspects of volleyball through oral descriptions and explanation of how to execute the underarm serve and the dig reception and the key steps involved in performing the underarm service and digging reception in volleyball and the importance of the skills learnt. In Week 15, focus on assessing practical skills by observing how learners perform the skills, how to position themselves in executing the underarm service and the digging reception, paying attention to the fundamental skills and rules of the game. In Week 16, observe learners' ability to demonstrate the skills learnt in a mini volleyball game and to be able to identify court zones and correctly execute rotations. Take note of areas for improvement and those excelling in their skills, using this feedback to guide future lesson planning and provide individualised feedback for their progression in future lessons. The mode of assessment for each week is given below:

**Week 14:** Role play

**Week 15:** Multiple choice

**Week 16:** Demonstration

## WEEK 14

**Learning Indicator:** Apply core skills in performing individual and team sports (e.g., volleyball – underarm service, digging reception in volleyball)

### FOCAL AREA: UNDERARM SERVE AND DIGGING RECEPTION IN VOLLEYBALL

#### Background

Volleyball was invented in 1895 by William G. Morgan, physical director of the Young Men’s Christian Association (YMCA) in Holyoke, Massachusetts. It was designed as an indoor sport intended for older persons in a recreational setting who found the new game of basketball too vigorous. Morgan called the sport “**mintonette**,” until a professor from Springfield College in Massachusetts noted the volleying nature of play and proposed the name of “**volleyball**.” The original rules were written by Morgan and printed in the first edition of the Official Handbook of the Athletic League of the Young Men’s Christian Associations of North America (1897). The game soon proved to have wide appeal for both sexes in schools, playgrounds, the armed forces, and other organisations in the United States, and it was subsequently introduced to other countries.

In 1916 rules were issued jointly by the YMCA and the National Collegiate Athletic Association (NCAA). The first nationwide tournament in the United States was conducted by the National YMCA Physical Education Committee in New York City in 1922. The United States Volleyball Association (USVBA) was formed in 1928 and recognised as the rule-making, governing body in the United States. From 1928 the USVBA, now known as USA Volleyball (USAV), has conducted annual national men’s and senior men’s (age 35 and older) volleyball championships, except during 1944 and 1945. Its women’s division was started in 1949, and a senior women’s division (age 30 and older) was added in 1977. Other national events in the United States are conducted by member groups of the USAV such as the YMCA and the NCAA.

Volleyball was introduced into Europe by American troops during World War I, when national organisations were formed. The Fédération Internationale de Volley Ball (FIVB) was organised in Paris in 1947 and moved to Lausanne, Switzerland, in 1984. The USVBA was one of the 13 charter members of the FIVB, whose membership grew to more than 210 member countries by the late 20th century.

#### Basic Rules of Volleyball

1. **Team composition**
  - a. Each team consists of six players on the court at a time.
  - b. Teams are allowed substitutes, who can rotate in following specific rules.
2. **Scoring system**
  - a. Matches are played using a rally scoring system, where a point is awarded on every rally regardless of which team served.
  - b. The first team to score 25 points with at least a two-point lead wins the set.
  - c. Matches are normally best-of-five sets; the fifth set, if necessary, is played to 15 points.
3. **Service rules**
  - a. The server must serve the ball from behind the baseline.

- b. The serve must cross the net and land inside the opponent’s court without touching the net (net serves are allowed if the ball goes over).
  - c. Teams rotate clockwise after winning a point on the opponent’s serve.
4. **Ball contact**
- a. Each team is allowed up to three touches to return the ball over the net.
  - b. A player cannot hit the ball twice consecutively (except during a block or the first touch).
  - c. The ball must not be held, lifted or carried.
5. **Net rules**
- a. The ball must pass over the net within the designated boundaries.
  - b. Players must not touch the net during play.
  - c. A player’s body may cross under the net if it does not interfere with the opponent.
6. **Rotation and positioning**
- a. Players must maintain their rotational order during service.
  - b. After the serve, players can move freely but must return to their positions for the next rotation.
7. **Boundary lines**
- a. Balls landing on the boundary lines are considered in.
  - b. If the ball touches anything outside the boundary lines (e.g., walls, ceiling), it is considered out.
8. **Attacking and blocking**
- a. Back-row players cannot attack the ball above the net from in front of the attack line (10-foot line).
  - b. Blocking a serve is not allowed.
  - c. A block does not count as one of the three touches.
9. **Timeouts and substitutions**
- a. Each team is allowed two timeouts per set.
  - b. Substitutions can occur during stoppages but must follow rotation rules.

## Fundamental Skills in Volleyball

Fundamental skills in volleyball are the core techniques and actions that form the foundation of the game. These skills are the essential elements players must develop to actively engage in and contribute to a volleyball match. Proficiency in these skills allows players to implement offensive and defensive strategies, collaborate effectively as a team and respond to different game situations. These skills are fundamental because they are required for every player, regardless of their position, to perform successfully in a volleyball game.

### Some examples of the fundamental skills in Volleyball include:

**Serving:** Starting the rally by sending the ball over the net into the opponent’s court.

**Passing:** Receiving the ball and directing it to a teammate, usually using the forearm pass (bump).

**Setting:** Preparing the ball for an attack by accurately positioning it for a teammate to spike.

**Spiking:** Striking the ball forcefully downward into the opponent’s court to score points.

**Blocking:** Preventing the ball from crossing the net after an opponent’s attack.

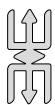
**Digging:** Defending against an opponent’s attack by keeping the ball in play through a low pass.

## Serving in volleyball

Serving in volleyball is the act of starting a rally by sending the ball over the net into the opponent's court. It is an important skill used to initiate play at the beginning of a game, after a point is scored and following a side-out. The serve is performed from behind the baseline and its main objective is to make it difficult for the receiving team to control the ball, giving the serving team a potential advantage to win a point.

### Common types of serves in volleyball include

1. **Underarm serve:** The ball is held in one hand and struck with the opposite hand using an underhand motion. This serve is easy to execute and is commonly used by beginners.
2. **Overarm serve:** The ball is tossed into the air and struck with the dominant hand in an overhand motion. It allows for more power and control compared to the underhand serve.
3. **Jump serve:** A more advanced serve where the player tosses the ball into the air, jumps and hits it with force. This serve generates significant power and speed, making it harder for opponents to return.
4. **Float serve:** This is similar to the overarm serve but with minimal spin, causing the ball to “float” randomly in the air. It is challenging for the receiving team to anticipate its movement.
5. **Topspin serves:** An overarm serve where the player imparts spin on the ball, causing it to drop quickly after crossing the net. It is used to pressure opponents with its speed and sudden drop.



#### Note

- This week we will be looking at only the underarm serve and digging reception in volleyball.
- A rally in volleyball is a sequence of plays where both teams continuously hit the ball back and forth over the net, trying to score points by making the ball land on the opponent's side of the court. It ends when the ball touches the ground or a fault is committed by one team.

## Underarm serve

The underarm serve in volleyball is a serving technique where the player hits the ball with an underarm motion, using one hand to hit the ball from below the waist. The ball is usually tossed slightly into the air before being hit with the palm or the heel of the hand. This serve is generally easier to control than other types of serves, making it a good option for beginners or for players who are less confident in their serving skills. The goal of the underarm serve is to send the ball over the net and into the opponent's court while minimising the risk of error.

### How to serve underhand in volleyball

1. Stand behind the service line or the baseline with the non-dominant foot slightly forward and focus on the target area of the opponent's court.
2. Hold the ball steady at thigh-height in front of the non-dominant hand.
3. Make a fist with the dominant hand.
4. Bring the dominant arm straight back.
5. Step with the dominant leg forward and swing arm forward.
6. Hit the ball with the top of fist or palm send it over the net.

## Part one: Positioning

1. **Get the feet into position:** Stand and position the non-dominant foot in front with the toes facing forward and the dominant foot behind with the toes pointing slightly out. Slightly shift the body weight to the dominant foot with the hips facing straight forward and not angled to the side.



**Figure 14.1:** *Standing the right way behind the service line or the baseline*

2. **Ready the ball:** Cup the non-dominant hand slightly and place the ball in it. Ensure the ball is securely balanced so it will not wobble or fall out of the hand. Keep the fingers slightly loose to distribute the weight of the ball to help it stay balanced. The ball should not be gripped with the fingers. It must stay stable but must still be able to fly out of the hand when hit.



**Figure 14.2:** *Holding the ball the right way*

3. **Lower the ball:** Bring the arm holding the ball across to the side of the body in front of the hitting arm. The ball should be at the height of mid-thigh. Straighten the arm with the ball in it and move it to the side by shifting the arm at the shoulder and not the elbow.



**Figure 14.3:** *Holding the ball at the correct height*

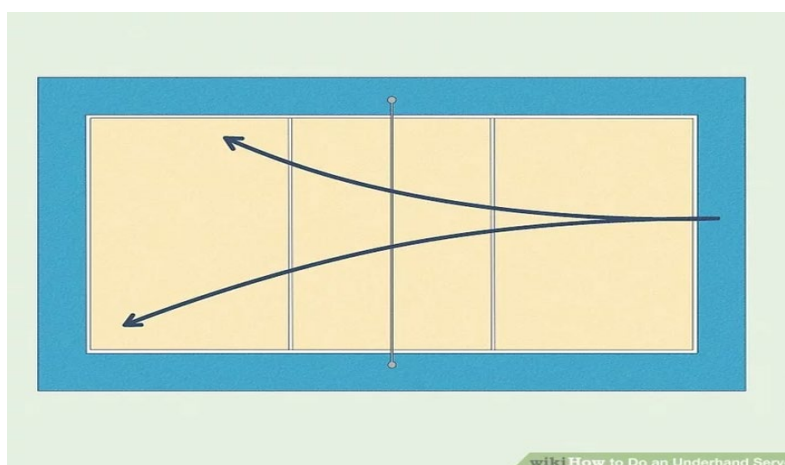
4. **Lean the shoulders forward:** Move the hips back and keep the upper back straight as the shoulders is brought towards the ball. This brings the body a little closer to the ball to have more control over it. As the hips move back, raise the toes of the front foot so the heel is touching the ground and the toes are pointing up.



**Figure 14.4:** *Leaning at the right angle and the position of the hitting arm*

## Part two: Aiming

1. **Choose the correct spot to send the ball:** Choose a strategic place for the ball to land. Direct the ball to planned spot on the court. Aim for the deep right or deep left of the court. This will force passers to move out of formation. Aim for places between players. This will cause players to be confused about who should get the ball, which will improve the tactical advantage.



**Figure 14.5:** *The deep right or deep left of the court to aim at when serving*

2. **Adjust the angle to the net:** When aiming for the deep left, the shoulders should point left and the back foot should move slightly right, and vice versa. Trace a straight line with the eyes across the court. Bring the eyes from the chosen landing spot to the point on the bottom of the ball where the fist or palm will hit. If the head moves to the side to trace the line from the landing point to the contact point on the ball, then feet and shoulders must be adjusted so the body can face the chosen landing point.



**Figure 14.6:** *Tracing the spot to send the ball with the eyes and where to hit the ball*

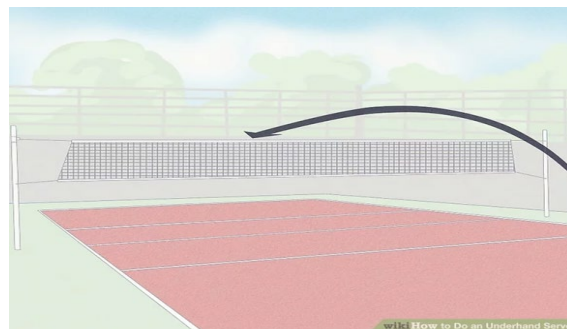
3. **Squeeze the hitting hand into a fist:** Rotate the arm and closed fingers so that the inside of the wrist will face up. Picture the first hitting the contact point on the ball and following a line to the point where the ball is to land. It is also possible to have your fist facing the side, with the wrist turned inside and thumb facing up.



**Figure 14.7:** *How to rightly squeeze the hitting hand into a fist*

### Part three: Serving

1. **Determine the arc of the ball.** The desired arc of the ball depends on whether the ball lands deep on the opposing side or closer to the server. Hitting the ball with more force forward will let the ball fly lower and faster to the back of the court, while hitting the ball upward will let the ball fly higher and land closer to the net. Decide whether to send the ball forwards or upwards.



**Figure 14.8:** *Deciding the movement of the ball*

2. **Draw the hitting arm straight back:** The hitting hand is moved quickly like a pendulum and swung forward firmly, hitting the bottom of the ball with a closed fist. The ball should be hit just below the centre so it will follow an upward path over the net. The speed of the swing should be increased just before it makes contact with the bottom of the ball.



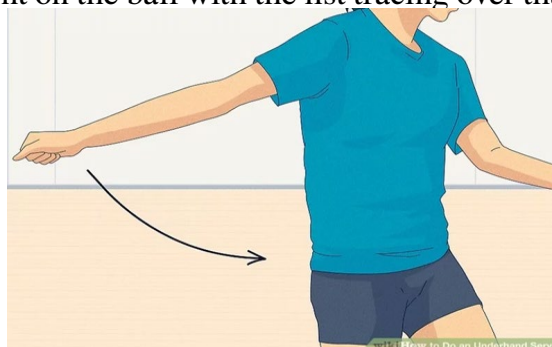
**Figure 14.9:** *How to hit the ball correctly*

3. **Swing the arm and step forward:** The body weight should be shifted onto the non-dominant foot which is in front. The whole body moves forward and up, propelling the ball over the net.



**Figure 14.10:** *How to swing the arm and step forward when serving*

4. **Follow through with the arm:** Allow the arm to continue in an upward arc after hitting the ball. Bringing the arm all the way up will improve the chance of a straight and true flight path over the net. Keep the arm straight. It should swing straight up like a pendulum to a height equal to or just above the head. Recall the imaginary line traced from the landing point to the contact point on the ball with the fist tracing over that line as it follows through.



**Figure 14.11:** *Following through with the hitting arm after serving*

## Digging in volleyball

Digging in volleyball is a defensive skill used to prevent or stop a ball from hitting or touching the ground after an opponent's attack, such as a spike. It requires quick and sharp reflexes and accurate execution to maintain control of the ball to keep the ball in play to allow the team to transition from defence to offense.

## Digging reception

Digging reception in volleyball refers to the defensive skill of receiving a served ball. It involves using quick reactions and proper methods, usually the forearms, to control and pass the ball

accurately to a teammate or a setter. The aim is to ensure the serve is handled cleanly and directed in a way that allows the team to transition smoothly into offense.

## How to Perform the Dig

1. **Assume the ready position:** Stay low with the feet shoulder-width apart, knees bent and hands ready. Keep the body weight slightly forward on the balls of the feet.
2. **Read the play:** Watch the hitter's body language and arm swing to anticipate where the ball will go. Be prepared to move quickly in any direction.
3. **Move to the ball:** Take short and controlled steps to position the body under or near the ball's path. Maintain balance to stay grounded for stability.
4. **Create a platform:** Extend both arms and lock the elbows to form a flat surface with the forearms and keep the hands together with thumbs aligned.
5. **Contact and redirect the ball:** Let the ball hit the forearms near the wrists while keeping the arms steady to absorb the impact. Use the legs to gently and slightly push upward to guide the ball towards a teammate or over the net into the opposing team's court.
6. **Stay in the play:** After digging, quickly return to a ready position to remain engaged in the rally.
7. **Communicate and recover:** When a ball is directed, call out clearly to claim responsibility for the ball. Return to a ready position after receiving and redirecting it or sending it over the net to the opponent's court to stay engaged in the rally.



**Figure 14.12:** *How to get ready to receive a ball*



**Figure 14.13:** *The right way of forming a flat surface with the forearms to receive the ball*

## Importance of Underarm Serve in Volleyball

1. **It is a beginner-friendly technique:** The underarm serve is simple and easy to learn, making it ideal for beginners and young players who are still developing strength and coordination.
2. **It ensures consistency:** With a controlled motion and minimal difficulty, the underarm serve helps players consistently deliver the ball into play, reducing the chances of errors.
3. **It is effective for short and precise serves:** It allows for precise placement, enabling servers to target specific areas of the opponent's court, such as weak zones or spaces between players.
4. **It promotes team engagement:** The underarm serve starts the rally with a manageable ball for the receiving team, encouraging longer rallies and greater team interaction during practice or recreational play.
5. **It builds confidence for advanced skills:** Mastering the underarm serve gives players the confidence to progress to more advanced serves, such as the overhand or jump serve.
6. **It is ideal for controlled gameplay:** In casual games or situations requiring controlled play, such as drills or training sessions, the underarm serve minimises disruptions and maintains game flow.
7. **It is adaptable to all players:** The serve can be executed by players of all skill levels and physical capabilities, including those with limited upper-body strength or mobility.

### Learning Tasks

1. Identify the purpose of the underarm serve in volleyball.
2. List key steps of performing an effective underarm serve.
3. Describe the importance of the underarm serve.
4. Describe digging reception in volleyball.
5. Demonstrate the underarm serve in volleyball.
6. Demonstrate digging reception in volleyball.

## Pedagogical Exemplars

### Activity

#### 1. Starter/warm-up activity - Musical movement

The aim of this warm-up is to get the learners moving and activating different muscle groups through fun and rhythmic movements.

#### How to do it

- a. Set up a sound system or use a music box to play music with an upbeat rhythm.
- b. When the music plays, ask learners to move freely around the space in a way that matches the rhythm. This could include:
  - i. Walking or jogging to the beat of the music.

- ii. Side shuffles or skipping in different directions.
  - iii. Arm swings and hip rotations to loosen up the upper body.
  - iv. High knees and butt kicks for lower-body activation according to the rhythm of the music.
- c. Every 20-30 seconds, pause the music. Ask learners to freeze in a pose when the music stops (e.g., standing tall, in a squat, balancing on one foot or any pose of choice). Restart the music after 7-10 seconds and ask learners to continue the activity with different movements. After the set time for the activity, have learners stretch.

## 2. Introductory activity - Ball control challenge

The goal is to engage learners and introduce volleyball basics and set a fun tone for the lesson.

### How to do it

Group learners and give each group a volleyball or two and ask them to perform simple tasks like:

- a. balancing the ball on their forearm.
- b. tossing it lightly and catching it.
- c. passing it to a partner using only forearms.

Gradually introduce a team-based activity called ‘Keep the ball alive.’

- a. Split the class into small groups and have them stand in a circle.
- b. Task each group to pass the ball to a group mate using only the forearms.
- c. Tell them to keep the ball in the air as long as they can without the ball dropping to the ground.
- d. Ask them to count how many consecutive touches the group can achieve without the ball hitting the ground.

**Note:** This activity introduces the importance of ball control and teamwork in volleyball in a fun hands-on way. It sparks curiosity and builds excitement while easing learners into the key skills of the game. Make it fun.

### Transition

After the task, connect the activity to the lesson by explaining how the skills practised (forearm passing and control) are the foundation for underarm serves and digging reception and how they directly connect to the lesson objectives on underarm serves and digging reception.

**Hint:** Improvised balls can be used for this introductory activity. Also, teachers can come up with their own warm up and introductory activities.

## 3. Main Activity: Serving and Receiving

### Talk for Learning/Demonstration of skill

- a. Briefly take learners through the history and rules of the game, the purpose of the skills of being learnt, the importance of the skills and the key steps involved in executing the skills.
- b. Demonstrate the stance, grip, ball position, ready position, platform formation, hand position and the swing mechanics for the underarm serve and digging reception for learners to observe. The demonstration can be done by the teacher or a learner who knows how to play volleyball.
- c. Learners practice the proper stance, grip, ready position, platform formation, hand position and the swing mechanics without the ball. Guide them to hit an imaginary ball and follow through with the hitting arm with the desired power and direction. Help them to focus on a smooth acceleration through the ball upon contact and avoid tensing up as it can affect their accuracy and path of the movement of the ball. Encourage gifted learners and those who have grasped the skill easily to assist those who are new to the sport or are less skilful.

### **Group-based Learning/Practicing Underarm Serving**

- a. In a semi-circular formation, learners in mixed-ability groupings practice the underarm serve technique with a ball. Have learners stand 3 metres apart. Task the group to serve the ball to each other. Learners receiving the serve catch the ball and serve back to a different member of the group. Focus on the toss, proper arm swing, ball contact and follow-through. Move around the groups to correct and encourage where necessary.
- b. Mark a target on the opposite court in different zones with markers or cones. Learners in their groups stand a few meters away and practice serving the ball to hit the target in a designated zone. Reward points for accuracy and gradually increase the distance as accuracy improves. Rotate zones after a few attempts to cover the entire court.

### **Group-based Learning/Practicing Digging Reception**

- a. In groups and in any suitable formation of choice, one learner tosses the ball to others to dig back to the one who tossed. The tosser lightly tosses the ball directly to the first learner who will quickly get into the digging stance; feet shoulder-width apart, knees bent, hands clasped together to form a platform, eyes focused on the ball and digs the ball back to the tosser. Rotate learners after each dig and emphasise proper hand placement, bent knees and low posture. Correct the following; posture and platform formation, using legs for power instead of swinging arms and maintaining control to send the ball to the tosser.
- b. Task the tossers to vary the ball's placement (slightly left, right or short) and ask the diggers to move quickly to the ball, adjust their stance and perform the dig. Emphasise smooth movement and resetting to the ready position after each dig. Rotate learners after each attempt and focus on quick footwork to reach the ball, staying low and balanced during movement and controlled digs to maintain accuracy during this practice time.

### Group-based Learning/Practicing Underarm Serving and Digging Reception

- a. Regroup the class into two teams (6 players per team or adjust based on the class size and labelled them Team 'A' and 'B' or 'A', 'B', 'C' and 'D') depending on the class size. Team A lines up behind the service line, ready to perform underarm serves. Team B positions three learners in the backcourt for reception, while three others wait to rotate in.
- b. **Serve execution**  
A learner from Team A serves the ball using the underarm serve, aiming to land the ball in Team B's backcourt.
- c. **Reception**  
Team B focuses on using digging to receive the serve, ensuring proper posture and hand positioning to control the ball and direct it back to the server.
- d. **Rotation**  
After each serve, learners rotate positions clockwise. (Team A diggers move to Team B to become servers). After the rotation, they move out to join their various groups from behind and a new set of learners from the group step in for their turn. Repeat until all learners have practiced serving and digging.

### Mini Game: Serve and Dig Rally Challenge

#### Set-up

**Players:** Divide the class into 4 to 6 small teams (3-5 players per team, depending on class size).

**Court:** Use half court for each game to ensure active participation. Multiple games can run simultaneously if space allows.

**Equipment:** One volleyball per court and a net or a rope as a divider.

#### Rules

**Game Start:** One team serves the ball using the underarm serve to the opposing team. The opposing team must receive the ball using proper digging technique and attempt to return it over the net or rope.

**Rally Play:** Teams can touch the ball up to three times (dig-dig-over). Players must alternate touches within their team.

#### Scoring:

- 1 point for a successful underarm serve that lands inbounds or inside the demarcated court.
- 2 points for a successful dig that keeps the rally alive.
- 3 points for a team that successfully returns the ball over the net.

No points if the ball is out, touches the net or improper technique is used.

**Rotation:** After every 3 serves, teams rotate their players to ensure everyone practices both serving and receiving. Teams switch roles (serving vs. receiving) after every rally.

#### Game Format

**Duration:** Each mini-game lasts for 4-6 minutes.

**Rounds:** Play in a round-robin format if there are multiple teams. Winning teams advance to a final match.

**End of Game:** The team with most points wins.

## Key Assessments

### Level 1

1. What is the main purpose of the underarm serve in volleyball?
2. Name one rule that must be followed when performing an underarm serve.
3. List two key steps involved in performing an underarm serve.
4. How many times can a player touch the ball in a rally in volleyball?
5. What is the maximum height a player should aim for when performing an underarm serve?
6. What is the proper stance for performing an underarm serve in volleyball?
7. Name the primary body parts involved in a proper dig reception.
8. How should the hands be held when performing a dig reception?
9. What is the purpose of using the underarm serve in volleyball?
10. What is the first step to perform a successful underarm serve?

### Level 2

1. Describe the importance of aiming the ball towards the opposite side of the court during an underarm serve.
2. Explain the role of the non-dominant hand during the underarm serve.
3. How does the correct stance and body position affect the success of an underarm serve?
4. Why is it important to use proper digging technique when receiving an underarm serve?
5. Describe the correct arm movement needed to perform an effective underarm serve.
6. What steps should be taken to ensure the underarm serve reaches the desired target on the opposite side of the court?
7. Why is it important to bend the knees when performing a dig reception?
8. How does proper communication between teammates improve the reception and return of the ball after a serve?

### Level 3

1. In a volleyball match, why might a coach instruct a player to use the underarm serve over other types of serves? Provide two reasons.
2. Analyse how the underarm serve contributes to a team's overall strategy during a game.
3. If a team struggles with receiving underarm serves, what adjustments could be made to improve their performance in receiving?
4. Explain how the timing of the serve and reception can influence the flow of the game.
5. During a rally, if the digs are consistently going off-target, what adjustments can be made to improve accuracy?

## WEEK 15

**Learning Indicator:** Apply core skills in performing individual and team sports (e.g., volleyball –reinforcement of underarm serve and digging reception in volleyball)

### FOCAL AREA: REINFORCEMENT OF UNDERARM SERVE AND DIGGING RECEPTION IN VOLLEYBALL (SKILL POLISHING)

**Recap of Previous Lesson:** Underarm Serve and Digging Reception in Volleyball

#### History of Volleyball

Volleyball was invented in 1895 by William G. Morgan in the United States. It was designed as a less physically demanding alternative to basketball, intended for older individuals in a recreational setting. Over time, it evolved into a competitive sport played worldwide and is now an Olympic sport. Key features of the game include teamwork, skill execution and strategy with six players per side.

#### Basic Rules

1. **Team composition:** Each team has six players on the court, with three in the front row and three in the back row.
2. **Scoring:** Matches are played to 25 points (best of five sets), with a team needing a two-point lead to win a set.
3. **Service and rotation:** Teams rotate clockwise after winning the serve, and the serve must go over the net into the opponent's court.
4. **Hits or touches per side:** A team is allowed a maximum of three consecutive hits or touch to return the ball over the net, excluding a block.
5. **Boundaries:** The ball must land within the court boundaries to be in play; touching the boundary lines is also valid.
6. **Faults:** Common faults include lifting or carrying the ball, double hits or stepping over the service line during a serve.
7. **Net play:** Players cannot touch the net and only front-row players may attack or block near the net.

#### Fundamental skills in volleyball

Fundamental skills in volleyball are the core techniques that every player must master to actively and effectively participate and contribute during a game. These skills form the foundation for offensive and defensive strategies, teamwork, and adaptability in various game situations. Examples include serving, passing, setting, spiking, blocking, and digging, which are essential for both individual and team success. Regardless of their position, all players rely on these fundamental skills to perform well in volleyball.

#### Some common types of serves in volleyball

There are several types of serves in volleyball, each with unique characteristics and purposes. The underarm serve is simple and ideal for beginners, offering control but less power. The overarm serve is more advanced, allowing greater power and precision and can include

variations like the floater serve, which moves unpredictably, and the topspin serve, which drops quickly into the opponent's court. Also, the jump serve combines power and speed, making it one of the most aggressive and challenging serves to return.

### How to execute underarm serve

To execute an underarm serve, stand with one foot slightly forward, hold the ball in the non-dominant hand, and swing the dominant hand backward. Step forward as the arm swings forward to strike the ball with the heel of the hand to send it over the net.

### How to perform digging reception

To perform a digging reception, get into a low, stable position with the knees bent and weight balanced on the balls of the feet. Extend the arms forward and clasp the hand together to form a platform and use the forearms to absorb and redirect the ball upward to a teammate. Keep the arms steady to control the ball and avoid swinging the arms to change the path of the ball.

### Purpose and importance of the underarm serve

The underarm serve in volleyball is a simple and controlled way to start a rally, making it ideal for beginners. Its purpose is to send the ball over the net into the opponent's court with accuracy. This serve helps players develop basic serving techniques and build confidence while minimising errors. It is important for introducing new players to the game and ensuring consistent play during matches.



**Figure 15. 1:** Volleyball game



**Figure 15.2:** Physically challenged women volleyball team at the Paralympic Games in Rio, 2016

## Learning Tasks

1. Demonstrate service in volleyball with precision.
2. Receive and direct a served ball with the digging reception with accuracy.
3. Demonstrate how to sustain a rally in volleyball.

## Pedagogical Exemplars

### Activity

#### 1. Starter/warm up - Animal movement relay and shape shift

##### a. Animal movement relay

**Set-up:** Create different animal movement stations with cones or markers and a sign of which animal movement is to be imitated at each station around the court or room (e.g., hopping like a frog, sprinting like a cheetah, flying like a bird, climbing like a monkey and crawling like a lizard, etc.).

**Activity:** Divide the learners into teams and have them race from one station to the next. Each team performing the animal movement at each station before moving to the next station.

**Engagement:** To make it more fun, add points for creativity. If a team can hop like a frog with extra enthusiasm, they get bonus points. This gets learners moving in different ways, using muscles they might not engage in regular exercises. It is creative, fun and promotes coordination and teamwork.

##### b. Shape shift

**Set-up:** Stand in the middle of the room or court with learners around and call out various shapes or movements. For example: 'Make a circle,' 'Form a triangle,' 'Run in place in a square, create a straight line, etc.

**Activity:** Ask learners to immediately form the shape or perform the movement as quickly as possible. For extra challenge, call out shapes with more complex movements, like 'form a zigzag pattern by hopping' or 'make a star by jumping and spreading arms and legs.

**Engagement:** Add a competitive edge by timing how fast learners can form the shapes or how creatively they can do so. Also encourage them to come up with new shapes or movements for others to try. It encourages learners to think quickly, move in varied ways and engage their bodies creatively. This helps improve their spatial awareness and teamwork when working in groups.

**Note:** Teachers have the option to use their own starters and warm up activities.

#### 2. Introduction

Briefly go over the previous lesson with learners, touching on the rules, the skills learnt and how they are executed. Tell learners what they will be engaging in for the days lesson.

#### 3. Main activity

Drills for polishing the underarm serve and digging reception learnt in the previous lesson

### **Serve placement challenge**

The aim of this activity is to improve accuracy, control and strategic thinking when performing the underarm serve.

#### **Set-up:** Court preparation

Divide the opponent's court into several zones using cones, markers, chalk or lines. The zones should vary in size and distance from the serving line. For example, create 3 zones.

Zone 1 (closest to the server)

Zone 2 (middle of the court)

Zone 3 (furthest from the server)

Assign point values to each zone. For example:

Zone 1 (Closest to the server): 1 point

Zone 2 (Middle): 2 points

Zone 3 (Farther): 3 points

#### **Team organisation**

Divide the class into small teams (3-5 learners per team depending on the class size. Adjust the numbers in the team if the class size is large) or have them play individually if there are fewer learners. Each learner will have a set number of turns to serve, for instance 5-10 attempts, depending on the class size and time available.

### **Collaborative and Group Based Learning**

#### **Activity: Serving and scoring**

Each group takes turns serving the ball from behind the service line, aiming to land the ball in the designated zones. After each serve, the learner receives points based on where the ball lands. Encourage learners to experiment with different serves (e.g., short, long and angled serves) to target different zones. Support learners finding it difficult to execute the skill.

**Tracking scores:** Assign someone (perhaps a team member) to keep track of the scores for each round. The scores of the teams can be display on a leaderboard or on paper so that learners can see their progress and the competitiveness within the class as they practice.

#### **Gradually increase difficulty**

After a few rounds, reduce the size of the zones to make the game more challenging. For example, make the zones smaller so it becomes harder to land the serve in the target area. Alternatively, increase the distance between the servers and the zones to challenge their control over the serve. Offer individual feedback to learners based on their performance, focusing on how they can improve their serve accuracy and control. Remind them that consistency is key when learning to serve.

### **Digging accuracy activity**

**Objective:** The goal of this activity is to enhance learners' ball control, precision and consistency in digging the ball toward a specific target area on the court.

1. **Set-up:** Target area
2. Place a small mat or mark a square on the court as the target zone. The mat should be placed or the square marked at a reasonable distance based on the learners' skill level (e.g., 3-5 metres from the starting point).
3. **Ball supply:** Have a few volleyballs ready for continuous play. Improvised balls can be used in addition to the actual volleyballs.

### **Collaborative and Group Based Learning**

Divide learners into groups of 4 to 6. Assign one from each group as the tosser and one as the diggers for a start and the others as observers waiting for their turn. Rotate roles to ensure equal participation. Ask learners to initially toss the balls high and easy to allow the diggers to focus on form. The tossers gently toss the ball to the diggers and the diggers adopt the correct stance to receive the ball and direct it to land at the designated area. Start with larger target zones and encourage learners to start with easy tosses. As they progress, vary the tosses to simulate real-game situations (e.g., lower, faster or angled). Award 1 point for each ball that lands in the target area. Add bonus points for perfect form or creative adjustments (e.g., recovering a difficult toss) and introduce a friendly competition between groups by tallying points for accuracy. Gradually reduce the size of the target or increase the complexity of the toss as learners improve. Incorporate a moving target for advanced learners, where the mat or square is shifted slightly after each successful attempt. Provide constructive feedback after each attempt, focusing on aspects like body position, platform angle and follow through. Rotate roles after 3-5 attempts per digger to ensure everyone practices both tossing and digging.

### **Game Based Learning: Competitive serve and dig tournament**

1. **Objective:** The purpose of this competition is to combine skill building with friendly competition while reinforcing the underarm serve and digging reception techniques.
2. **Set-up:** Learners are grouped into teams to play a mini game focusing on the proper techniques of underarm serve and digging reception. Ensure an even distribution of skill levels in each group to promote fair play. Mark out small courts or zones for each team if the class size allows. Use cones or existing court markings to divide the space into areas where multiple games can occur simultaneously. Provide each court and group with one volleyball. Ensure there are enough balls and space for every group to play actively.
3. **Game rules**  
Each team lines up on opposite sides of their court. One team starts by performing an underarm serve to the opposing team. The receiving team must use a digging reception to return the ball back to the serving team. The rally continues until the ball drops or goes out of bounds. Encourage teams to focus on controlled and accurate serves and digs to keep the rally going as long as possible.

**4. Scoring system**

- a. Award 1 point for every successful serve those lands in the opponent's court.
- b. Award 1 point for every controlled dig that successfully sends the ball back to the opposing side.
- c. Deduct 1 point for errors like a serve out of bounds or an uncontrolled dig.

**5. Rotation**

- a. After each rally, learners rotate positions within their teams to ensure everyone gets a chance to serve and dig.
- b. Rotate teams after a set time (e.g., 5 minutes per game), allowing them to face different opponents. This increases interaction and variety. Between rounds, provide quick feedback on techniques (e.g., 'Try to keep the arms steady when digging or 'focus on aiming the serve into open spaces') and highlight teamwork, effort and improvement rather than just winning. Encourages learners to stay focused, work as a team and apply their skills being reinforced.

**6. Challenge round**

At the end of the rotation, the teams with the highest points face off in a 'Championship round.' Allow the other teams to watch and cheer their colleagues.

**7. Incentives**

Offer small rewards, such as 'Team of the Day' certificates or fun privileges like choosing the next warm-up activity for the class for the champions.

**Key Assessments****Level 2**

1. Describe the key steps involved in adjusting stance and arm swing to serve a ball accurately over the net in volleyball?
2. Explain how to position the arms and body to effectively receive and direct a served volleyball using the digging technique.

**Level 3**

1. Given a scenario where the opponent's serve is fast and unpredictable, describe a strategy a team could use to sustain a rally, focusing on both serving and digging skills.
2. Evaluate a performance in a recent practice session where the underarm serve and digging reception were applied. Identify one strength and one area for improvement and explain how to address the improvement area to sustain a longer rally.

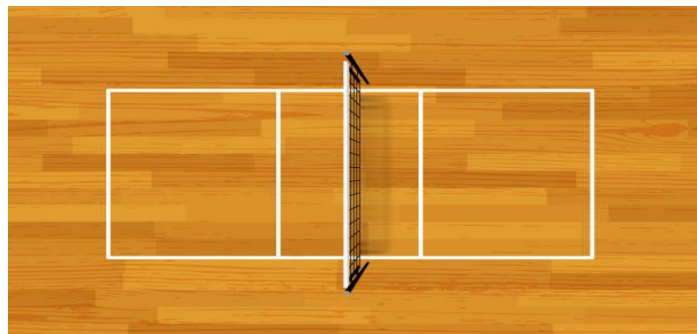
## WEEK 16

**Learning Indicator:** Apply core skills in performing individual and team sports (e.g., volleyball – zones and rotational order on the court in volleyball)

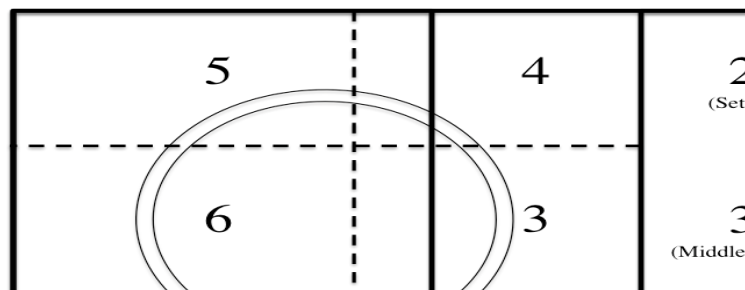
### FOCAL AREA: ZONES AND ROTATIONAL ORDER ON THE COURT IN VOLLEYBALL

#### Understanding The Volleyball Court Layout

A volleyball court is a rectangular area measuring 18 metres in length and 9 metres in width. It is divided into two equal halves by a centreline and a net — see *Figure 16.1*. Each side has service area marked 3 metres away from the centreline, where players initiate serves — see *Figure 16.2*.



**Figure 16.1:** Volleyball court



**Figure 16.2:** Volleyball court showing the service area or zone

#### Positions And Zones on The Court

The volleyball court is divided into six zones. These zones are also called positions. The zones are numbered 1 to 6 and each zone corresponds to a specific area of the court where players will position themselves during the game — see *Figure 16.3*.

Zone 1 is Right Back (RB), Zone 6 is Middle Back (MB), Zone 5 is Left Back (LB), Zone 4 is Left Front (LF), Zone 3 is Middle Front (MF) and Zone 2 is Right Front (RF).

**Zone 1** is the serving position which is in the right-back corner of the court (when serving), the server starts the play there.

**Zone 2** is the right-front corner, which is where the player focuses on blocking or setting up an attack on the right side of the court.

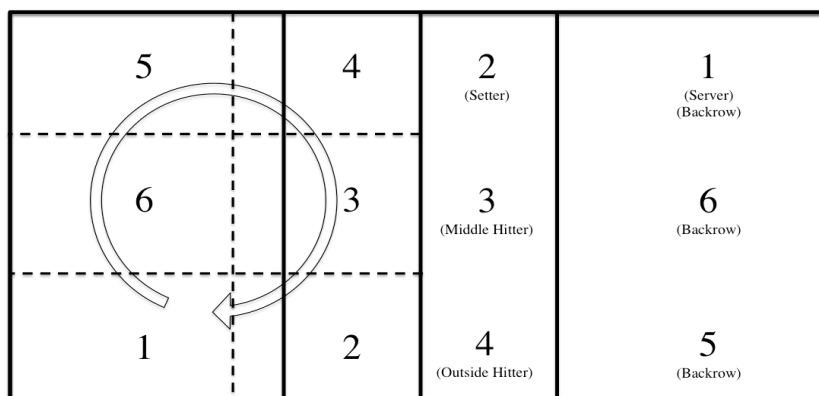
**Zone 3** is positioned at the centre of the front row players in this zone the focus is on receiving serves or setting up attacks.

**Zone 4** is at the left-front corner similar to Zone 2 where players often take positions for blocking and attacking on the left side of the court.

**Zone 5** is located at the left-back corner. This is a defensive position on the back row where players focus on receiving serves and digging attacks.

**Zone 6** is at the middle-back row, players here mainly focus on defence and passing, including receiving serves and setting up plays from the back row. It is also where players move to rotation after serving.

Each zone has specific roles based on where the player is located in relation to the ball, their position, and the strategy.



**Figure 16.3:** Volleyball court with the location of the various zones

## Rotation And Rotational Order in Volleyball

In volleyball, rotation is the organised movement of players around the court in a clockwise direction after winning a side out or the serve. Rotational order refers to the specific sequence in which players must move to their assigned positions on the court during the game. This order ensures that all players rotate through each position on the court and take turns serving. When a team wins a side out or a serve, players rotate one position clockwise. For example, the player in Zone 1 (serving position) rotates to Zone 6 and the player in Zone 6 moves to Zone 5, the player in zone 5 moves to Zone 4, the player in Zone 4 moves to Zone 3, the player in Zone 3 moves to Zone 2 and the player in Zone 2 moves to Zone 1 in that order.

### Rotational Rules

- Starting positions:** At the beginning of the game, each team lines up in their respective starting positions. The front-row players (Zones 2, 3 and 4) are closer to the net, while the back-row players (Zones 1, 5 and 6) are farther from the net.
- Maintaining rotation:** After serving, players must always return to the correct rotational position. A player cannot be in the same zone for consecutive serves.
- Rotation violation:** A rotation violation occurs if players are not in the correct positions when the ball is served. This will result in a loss of the serve and a point for the opposing team.
- Back-row play:** Players in the back row (Zones 1, 5 and 6) cannot attack the ball above the net's height from the front row (Zones 2, 3 and 4) and they cannot block or attempt to block a spike.



**Figure 16.4:** Volleyball game in progress



**Figure 16.5:** Sitting volleyball at the Para Volley Africa Sitting Volleyball Zone Championships, 2024.



**Figure 16.6:** Visually impaired volleyball at the Chugai hands-on Blind Sports Event 2018

## Rotational Fouls

Rotational fouls in volleyball occur when players fail to follow the proper rotation order or position themselves incorrectly during play. These fouls disrupt the fairness and structure of the game.

### Types of Rotational Fouls

1. **Out of rotation (overlap):** This happens when players are not in their designated rotational positions at the moment the ball is served. This is when a back-row player (Zones 1, 6 or 5) is positioned closer to the net than the corresponding front-row player (Zones 2, 3 or 4) during the serve.

**Example:** When a player in Zone 6 (middle-back) is standing closer to the net than the player in zone 3 (middle-front).

2. **Rotational order violation or incorrect sequence during rotation:** This occurs when a team does not follow the pre-determined rotation order submitted at the start of a set. If a player serves out of turn, it results in a rotational fault.

**Example:** After winning a rally, the player in Zone 1 serves instead of the player who rotated into that zone.

## Consequences of Rotational Fouls

1. **Loss of rally:** The opposing team scores a point and gains the serve.
2. **Disruption:** The referee stops the game to identify the fault, correct player positions and ensures players return to the correct positions.

## How to Avoid Fouls

Teams must:

1. ensure accurate rotation tracking with the lineup sheet.
2. communicate effectively on the court and familiarise themselves with the rotation sequence and court positions.
3. understand positional responsibilities and rules thoroughly.

## Responsibilities of Players in Each Zone

In volleyball, each court zone (1 through 6) comes with specific responsibilities based on the player's position and the team's strategy during play. The breakdown of the roles and responsibilities for players in each zone are:

### 1. Back row (Zones 1, 6 and 5)

- a. Zone 1 (right-back/serving position)

**Primary Responsibility:** Serve the ball (when serving) and defend the right-back area.

#### Key Duties

- i. Cover tips and deep attacks to the right side of the court.
- ii. Transition quickly to set up for defensive plays and passing.

- b. Zone 6 (middle-back)

**Primary Responsibility:** Defend the middle of the backcourt and assist in covering attacks.

#### Key Duties

- i. Read opponents' attacks and position for digs.
- ii. Provide accurate passes to the setter after a successful dig.
- iii. Cover blocks or tips falling behind the front row.

- c. Zone 5 (left-back)

**Primary Responsibility:** Defend the left-back area and assist in passing during receptions.

#### Key Duties

- i. Cover tips or attacks aimed at the left side of the court.
- ii. Contribute to defensive coverage and receive serves effectively.

### 2. Front Row (Zones 4, 3 and 2)

- a. Zone 4 (left-front)

**Primary Responsibility:** Serve as the left-side hitter (outside hitter) and participate in blocking.

**Key Duties**

- i. Attack balls set to the left side of the court.
  - ii. Block opponents' right-side attacks with the middle blocker.
  - iii. Cover tips and quick attacks near the left net area.
- b. Zone 3 (middle-front):

**Primary Responsibility:** Act as the middle blocker and middle attacker.

**Key Duties**

- i. Block opponents' attacks, especially quick hits and spikes from their middle hitters.
  - ii. Execute quick offensive plays and spikes from the centre of the court.
  - iii. Provide coverage for the setter in case of miscommunication.
- c. Zone 2 (right-front):

**Primary Responsibility:** Function as the right-side hitter (opposite hitter) and assist in blocking.

**Key Duties**

- i. Attack balls set to the right side of the court.
- ii. Block opponents' left side (outside hitter) attacks.

Understanding these responsibilities helps players align their efforts for both offensive and defensive strategies.

## Importance of Zonal Positioning and Rotation in Volleyball

Zonal positioning and rotation provide a framework that balances fairness, strategy and teamwork. They are important for maintaining the structure of the game, enhancing player skills and enabling a seamless transition between offensive and defensive plays.

Zonal positioning and rotation in volleyball help to:

1. ensure fair play.
  - a. **Equal opportunities:** Rotation ensures that all players experience both offensive (front-row) and defensive (back-row) positions, distributing responsibilities fairly among teammates.
  - b. **Prevents specialisation dominance:** By rotating, no single player can dominate play from a particular position throughout the game.
2. maintain game structure.
  - a. **Set rules and order:** Zonal positioning organises players in a predictable manner, ensuring the game follows proper rules and flow.
  - b. **Avoids confusion:** Clear roles within each zone prevent chaos and overlap during play.
3. facilitate effective team strategy
  - a. **Offensive play:** Players in the front row (Zones 4, 3 and 2) focus on attacking and blocking, while back-row players (Zones 5, 6 and 1) focus on defence and serve reception. This division ensures efficient play.

- b. **Defensive coverage:** Proper zonal positioning helps cover the entire court, reducing gaps that opponents can exploit.
- 4. **promote skill development:** All-round growth: Players rotate through all positions, developing versatile skills in attacking, blocking, serving, and defending.
- 5. **prevent rotational fouls:** Proper adherence to zonal positioning and rotation order minimises the risk of fouls like overlaps or serving out of turn, which can result in point loss.
- 6. enhance team communication
  - a. **Coordination:** Knowing the responsibilities of each zone fosters better communication and collaboration on the court.
  - b. **Fluid transitions:** Proper rotation allows smooth transitions between offensive and defensive plays.
- 7. boost defensive and offensive efficiency
  - a. **Strategic block placement:** Front-row positioning ensures blockers are ready to counter the opposing team's attacks.
  - b. **Backcourt defence:** Back-row players are positioned to dig, receive serves, and defend against spikes.

### Learning Tasks

1. Identify the zones on the volleyball court.
2. Explain rotation and rotational order in volleyball.
3. Demonstrate how to rotate during a game.
4. Play a mini game and rotate correctly.

## Pedagogical Exemplars

### Activity

#### Starter/warm up - Mirror me, stepping stones race and serve and chase relay

##### Mirror me

Pair learners. One learner leads by performing various movements (e.g., jogging in place, jumping jacks, hopping, arm circles, high knees, shoulder rolls, and stretches). The other learner mirrors these actions as closely as possible. After 1-2 minutes, switch roles so that the learner who led also gets a chance to mirror.

##### Serve and chase relay

Improve serving accuracy, footwork and reaction time while energising learners for the lesson.

**Instructions:** Divide the class into two or more teams based on the number of learners. Have each team line up behind the baseline in Zone 1 with a ball placed at the front of each line. The first learner in each line serves the ball over the net or rope, then sprints

under the net to the opposite side to retrieve the ball. After retrieving the ball, the learner runs back to their team, hands the ball to the next person in line and joins the end of the line. The next learner in line serves and the sequence continues. Repeat the sequence two times for each team. Adjust the number of repetitions as needed based on class size.

### **Main activity**

#### **Talk for Learning/Collaborative Learning**

Write numbers 1 to 6 on manila cards or on cardboard and place each card in the corresponding zone on the court. Tape or use markers to secure the cards in place on the court. Move with learners through the zones and help them understand that the numbers represent the volleyball court zones. Explain the numbering system to learners, that the court has six zones, numbered 1 to 6 and describe each zone's location (Zone 1: Right-back, Zone 2: Right-front, Zone 3: Middle-front, Zone 4: Left-front, Zone 5: Left-back and Zone 6: Middle-back). Gather learners at the centre of the court. Call out a zone number (e.g., Zone 4) and have learners walk to that zone. Once they are there, explain its role (e.g., Zone 4 is where the outside hitter plays). Repeat same for all zones. Group learners into small groups and quiz them by calling out zones at random and ask to walk the zone. Emphasise the importance of each player's role within their zone and how the proper positioning ensures both offensive and defensive efficiency.

#### **Collaborative Learning/Group-based Activity - Zone number walk, jog and run through**

This is to help learners familiarise themselves with the six zones on the court and their positions.

**Setup:** Use court markings and cones to visually indicate the zones.

Divide the learners into small groups (3 or 4 learners per group, depending on class size) for a 'zone challenge.' Have all groups stand in one demarcated area around the court as a central starting point for fairness. Place all the cards with the zone numbers about one meter away from where the groups are gathered. Call out a group and a zone number (e.g., group 'A', 'Zone 3') and all learners in that group quickly move to the zone with one of the members picking up the card with the number three on it to the zone with the corresponding card. Upon getting there, they should position themselves based on the typical volleyball play roles for that zone (e.g., if they are asked to go to Zone 3, they should position themselves near the net, as that is the middle-front position. Time how quickly they can get there. Repeat same for all the groups to help learners identify the zones easily and become familiar with how to position themselves in a game situation.

#### **Collaborative Learning/Group based Activity - Zone scavenger hunt and relay races**

The aim of this activity is to combine zone identification with quick thinking, teamwork and fun.

#### **Scavenger hunt**

Place objects like coloured cones, beanbags or cards in different zones on the court, ensuring the objects are visible but scattered. Regroup learners based on their physical and intellectual abilities or maintain the first groupings. Balance groups to ensure fairness taking into consideration learners physical speed and intellectual sharpness. Gather learners around the court and explain the purpose of the drill and review the

numbered zones. Have groups stand behind a starting line. Demonstrate the task by retrieving an object, showing the correct movements to avoid collisions or errors. Call out a combination of a zone number and a specific object (e.g., ‘Zone 4, blue cone’). One learner from each group sprints to the correct zone, retrieves the object and returns it to their starting line. Once the object has been returned to their team, call the next zone and object combination. Continue the drill until all objects have been retrieved. The winning group is the one who has the most objects at the end of the game.

For a variation for intellectual and physical engagement, incorporate learning questions and physical activity.

1. Attach simple trivia or volleyball related questions to each object (e.g., ‘What is Zone 6 used for in defence?’). Learners must answer correctly before returning the object to the starting line. If the one retrieving cannot answer the question, the group can help answer it.
2. Instead of running straight to the zones, require learners to incorporate physical skills like side shuffles, high knees, backpedalling, etc. for a number of times before running back to starting line. Adjust the difficulty levels of the drills based on learners’ physical abilities. Offer a simpler movement path for learners who may have physical limitations. Only one learner per group can move at a time, but they must communicate their plan with their groupmates (e.g., ‘I’m getting the green cone in ‘Zone 5’ or ‘Zone 3’). Allow groups to strategise to maximise their score by deciding which objects to prioritise. This encourages teamwork and effective verbal skills. Monitor learners’ ability to identify zones quickly and accurately and assist with identification if need be. Assess their teamwork, agility and adherence to safety protocols. Assign points to objects based on their heaviness of difficulty level of moving it and how close or further away it is from the starting line (e.g., bigger and heavier objects worth 3 points and smaller objects are worth a point).

### **Relay races**

Group learners into two or more mixed ability teams. Use cones to denote zones. Add visual aids such as zone numbers written on cards for clarity. Each team starts at the sideline in a straight line. Call out a sequence of zone numbers (e.g., ‘1, 5, 3’). One member from each team runs to the zones in the given order and returns to tag the next teammate who continues with the next call-out or round. Repeat until all team members have completed the sequence, ensuring equal turns for everyone. Modify the spacing between zones based on the learners’ physical abilities. For less physically able learners, zones can be closer. Add this mathematical twist to the drill for fun. Instead of calling zones directly, use math problems where the solution corresponds to the zone number (e.g.,  $2 + 3$  for Zone 5,  $1+2$  for zone 3,  $2+4$  for zone 6). Allow teams to plan their approach for executing the task (e.g., deciding the fastest route or which member tackles which sequence).

For learners with limited mobility or vision, create a walking version or any other way they can move to complete the sequence. Ensure inclusivity and support for those who might need extra help. Provide constructive feedback on both their physical performance and teamwork of learners emphasising areas for improvement and celebrating successes to boost learners’ confidence.

### **Collaborative Learning/Group-based Activity - Rotational relay**

The aim is to teach learners how to rotate correctly while reinforcing court positions. This will help them get comfortable with moving to the right zone and understanding the timing of rotations.

Divide learners into two or more teams. And have them line up in their respective starting rotations on both sides of the court. Call out a scenario (e.g., ‘Side out and rotate one position clockwise). Teams move to rotate to their new positions correctly. The first team to rotate properly and stand in the correct zones wins a point. Repeat the process multiple times with increasing speed and complexity.

After each team has had its turn, re-group the learners or maintain the old groupings and set up a mock volleyball game scenario. Begin play with one team serving. After every serve or point, both teams rotate one position clockwise. Pause the game periodically to quiz learners on where they are now on the court and where they will move to from where they are now. Ask questions like: What is your position? Where should you be next? Why do you have to move there? etc.

Emphasise the importance of maintaining rotation order while focusing on ball handling. Award points for correctly rotating teams. Introduce penalties for incorrect rotations to encourage focus. Time each round to see which team rotates the fastest while maintaining accuracy. Award the team with most points with applause or a privilege in the next class.

### **Mini game**

This is to reinforce zone identification and rotational order within a game-like situation, blending competition and teamwork.

Divide the class into two teams of six players each. Assign one learner as the **game referee** and another as the **zone tracker** to oversee zone rotations and positioning. Guide them in officiating and tracking the zones.

### **Game rules**

**Serve and rotate:** The game starts with a serve from Zone 1. After the serve, all players rotate one position clockwise. Each team must correctly maintain their rotational order throughout the game.

### **Phase one**

#### **Zone master challenge**

Before each rally, the referee points to a random player and asks

What zone are you in?

Which zone will you move to next after rotation?

Correct answers earn the team 1 bonus point.

### **Phase two**

#### **Live play with focused movement**

Play continues as in a regular volleyball game. Points are scored through rallies.

After every side-out (when the receiving team wins the rally and gains the serve), the new serving team must rotate to the next position.

#### **Penalty for rotation errors**

If a team rotates incorrectly or fails to identify the current zone, the opposing team earns 1 additional point.

**Zone bonus round**

Randomly during play, the **Zone Tracker** announces a ‘**Bonus Zone**’ (e.g., Zone 4) just before a serve or during active play, challenging players to direct their hits or ball intentionally toward the specified zone. Teams must adjust their ball placement strategy mid-rally while maintaining effective teamwork and ensuring the ball stays in play. If the ball successfully lands in the designated bonus zone, the team earns an additional point, adding an exciting competitive element to the game. This drill also sharpens players’ spatial awareness, decision making under pressure and precision in ball control that mimic real game situations.

**Winning the game**

The first team to reach 15 points wins the game. Bonus points earned from accurate zone identification and successful bonus rounds should be added to determine the overall winner of the game.

**Key Assessment****Level 1**

1. What is the correct order of the zones on a volleyball court?
2. Which position does the player in Zone 3 rotate to next after serving?
3. How many zones are there on a standard volleyball court?
4. In a standard volleyball rotation, where should the player in Zone 4 move after the team wins the rally?

**Level 2**

1. Describe the movement of players after a side-out in volleyball. Where does the player from Zone 1 go next?
2. If the ball is set in Zone 3, which player from the front row should ideally be in position to spike the ball?
3. If a team rotates incorrectly, explain what should happen next and which positions need to be corrected.

**Level 3**

1. During a game, a team wins a point and rotates. However, the player in Zone 1 is incorrectly positioned in Zone 5. Explain the consequences of this mistake and the steps the team should take to correct it.
2. How can a team use the rotation process to set up a successful play when transitioning from defence to offense? Provide a scenario with specific zones and player roles.
3. Given the rotation rules, how should a team adjust their offensive strategy when the ball is served to Zone 5? Discuss how rotation influences the positioning of key offensive players.
4. In a match, the opposing team frequently targets Zone 6 with their serves. How can a team adjust its rotation and positioning to counter this strategy?

## SECTION 7 REVIEW

Section 7 part three. provided a comprehensive understanding of volleyball fundamentals allowing learners to apply the skills learned effectively in real game scenarios. In week 14, the focus was on the underarm service and digging reception where learners practiced the technique of underarm serving, focusing on the correct stance, arm swing and ball contact. They learned to step forward with the opposite foot while swinging the arm in an underhand motion to deliver the ball over the net. Emphasis was placed on consistency and accuracy, aiming for a target zone on the opponent's court. Learners also practiced controlling the speed and direction of the ball to reduce errors during play. They gained confidence in serving from different positions on the court. Learners also focused on using the forearms to pass the ball, ensuring the body was low and balanced. The importance of proper positioning, quick reaction times and soft hands was emphasised to keep the ball in play. Learners learned to receive serves and attacks from different angles, improving their defensive skills. Focus was placed on the arms forming a solid platform to direct the ball accurately to a teammate or setter helping learners to develop the ability to dig the ball with more control and precision.

Week 15 targeted reinforcement of the underarm serve and the digging reception. Learners were taken through drills to reinforce the underarm serve and digging reception. Learners practiced the skill in various game like scenarios, focusing on maintaining consistency and aiming for specific zones on the opponent's side of the court. The repetition of serves helped improve both power and accuracy. Learners also worked on adjusting their technique depending on the position of the receiving team. Through continuous practice, they became more comfortable with the rhythm of the underarm serve which aids in reducing errors in actual game situations.

The reinforcement of digging reception involved repetitive drills to enhance muscle memory and responsiveness to different ball speeds. Learners were tasked with receiving serves and attacks from varied angles, refining their ability to read the ball and position their bodies accordingly. They practiced digging the ball with more confidence and accuracy, ensuring the ball was passed effectively to teammates. The focus was also on improving their reaction time and adjusting their position for successful receptions.

Week 16 covered zones and rotational order. Learners became familiar with the six zones on the volleyball court and understood their respective roles during each rally. They learned to identify their positions in relation to the zones and the rotation order. The rotational order was practiced through structured drills, where learners rotated after each serve to ensure they followed the correct sequence. Learners gained an understanding of how to position themselves for both offensive and defensive plays. This helped reinforce spatial awareness on the court, as learners were able to move confidently between zones and maintain proper order throughout the game.



## APPENDIX E: INDIVIDUAL PROJECT WORK

### *Structure of Individual Project*

1. **Title Page**
  - a. Project title
  - b. Learner's name
  - c. school
  - d. subject
  - e. date and signature
2. **Introduction:** Brief background, purpose, and 2–3 objectives
3. **Methodology:** How the project was done (e.g., surveys, observation, research)
4. **Findings:** Key results or discoveries (charts/tables if needed)
5. **Discussion:** What the results mean in relation to your objectives
6. **Conclusion and Recommendations:** Summary and suggestions for improvement

### *Mode of Administration*

1. Choose a topic (e.g., Exercise and student fitness)
2. Set objectives (What you want to learn or show)
3. Plan and collect data (Use simple methods like surveys)
4. Record and analyse (Note what you found out)
5. Write your report using the structure above
6. Edit and submit (Neat, clear, and complete)

**Task:** You have noticed that during PE sessions and friendly matches, you struggle with netball skills like passing and shooting. The school team trials are coming up, and this is your chance to improve. Over the next 4 weeks, you will track your performance, practice specific skills, and reflect on your growth. This project will help you become a better player and share tips with others who may be struggling.

**Project Title:** My Netball Skills Challenge: Tracking and Improving My Performance in 4 Weeks

**Project Goal:** To identify two key netball skills (e.g., passing and shooting), set measurable goals, follow a practice plan, document progress weekly, and reflect on the learning experience.

### Mode of Administration

Weeks	Activities
1. Skill Identification & Goal Setting	<p>Choose 2 netball skills you want to improve (e.g., chest pass, shoulder pass, shooting accuracy).</p> <p>Assess your current ability (e.g., how many accurate passes/shots out of 10).</p> <p>Set SMART goals (e.g., improve shooting from 4/10 to 8/10).</p> <p>Design a weekly practice plan (e.g., 15 mins daily or 3 sessions a week).</p>
2. Practice & Log Progress	<p>Follow your practice plan.</p> <p>Log each session in a skills journal (note date, skill practiced, time spent, outcome, challenges).</p> <p>Get peer/teacher feedback after at least one session and write down suggestions.</p>
3. Continue Practice & Self-Evaluation	<p>Maintain regular practice.</p> <p>Re-assess your skills and compare to Week 1.</p> <p>Optional: Record yourself practicing and evaluate your posture, technique, or improvement.</p>
4. Final Assessment & Reflection	<p>Do a final test to measure improvement.</p> <p>Write a reflection (What changed? What was hard? What helped?).</p> <p>Create a one-page beginner's guide with tips for other learners.</p>

### Sample Rubric for Scoring Individual Project Work

Criteria	Excellent (4 marks)	Good (3 marks)	Fair (2 marks)	Needs Improvement (1 mark)
Goal Setting (SMART Goals)	<p>Sets 2 SMART goals that are:</p> <ul style="list-style-type: none"> <li>• Specific (e.g., Improve chest pass accuracy from 4/10 to 8/10)</li> <li>• Measurable (quantified progress)</li> <li>• Achievable within 4 weeks</li> <li>• Relevant to netball performance</li> <li>• Time-bound</li> </ul>	<p>Sets 2 relevant goals, but one may lack specificity or measurability (e.g., be better at shooting)</p> <p>Most SMART criteria met</p>	<p>Sets 1 goal or goals are too broad/vague (e.g., "Improve netball")</p> <p>Fails 2+ SMART criteria</p>	<p>No goals provided or goals unrelated to netball (e.g., "run faster")</p>

2. Practice & Effort	<ul style="list-style-type: none"> <li>Practice done 3 times a week or more</li> <li>At least 6 total sessions documented</li> <li>Practice followed original plan (e.g., 15 mins shooting, 15 mins passing)</li> <li>Tried skill-specific drills or varied practice</li> </ul>	<ul style="list-style-type: none"> <li>Practice done at least 2 times a week</li> <li>At least 4–5 sessions documented</li> <li>Minor changes in practice plan</li> <li>Used basic drills</li> </ul>	<ul style="list-style-type: none"> <li>Practice done once a week or irregularly</li> <li>2–3 sessions documented</li> <li>No clear structure to practice</li> </ul>	<ul style="list-style-type: none"> <li>Practice done once or not at all</li> <li>No structure or consistency</li> </ul>
3. Skills Logbook & Use of Feedback	<ul style="list-style-type: none"> <li>Logbook includes date, duration, skill practiced, session result (e.g., 6/10 passes), challenges, adjustments made</li> <li>Peer/teacher feedback recorded once or more, and clearly acted upon</li> </ul>	<ul style="list-style-type: none"> <li>Log includes most required details</li> <li>Feedback included but not applied clearly</li> <li>Sessions logged are short or missing key info</li> </ul>	<ul style="list-style-type: none"> <li>Basic entries: includes date and skill only</li> <li>Feedback missing or not used</li> </ul>	<ul style="list-style-type: none"> <li>Logbook missing, incomplete or contains fewer than 2 entries</li> <li>No feedback mentioned</li> </ul>
4. Skill Improvement Evidence	<ul style="list-style-type: none"> <li>Clear comparison of Week 1 vs Week 4 skill test</li> <li>For example: Chest pass improved from 5/10 to 9/10</li> <li>Shows chart or summary of progress</li> <li>Self-assessment or peer review confirms progress</li> </ul>	<ul style="list-style-type: none"> <li>Moderate improvement shown (e.g., 5/10 to 7/10)</li> <li>Progress mentioned, but limited tracking or no visual summary</li> </ul>	<ul style="list-style-type: none"> <li>Minimal improvement (e.g., 5/10 to 6/10)</li> <li>No comparison chart; unclear how improvement was measured</li> </ul>	<ul style="list-style-type: none"> <li>No measurable improvement or no before/after test done</li> </ul>
5. Final Reflection & Peer Guide	<p>Reflection (150–250 words) is clear, personal, and well-structured:</p> <ul style="list-style-type: none"> <li>Describes struggles, adjustments, and what worked</li> <li>Peer guide includes 3+ clear, accurate beginner tips based on experience</li> </ul>	<p>Reflection (100–150 words) includes experience and challenges</p> <ul style="list-style-type: none"> <li>Peer guide has 2+ tips but may be general or repeated</li> </ul>	<p>Reflection under 100 words or lacks depth</p> <ul style="list-style-type: none"> <li>Tips are vague, obvious (e.g., “Practice a lot”)</li> </ul>	<p>No reflection or copied text</p> <ul style="list-style-type: none"> <li>No tips given or irrelevant content</li> </ul>

**Total score: 20 Marks**

### Tips for Teachers

1. Provide learners with printed copies of the rubric at the start.
2. Encourage them to use it weekly to self-score and track progress.
3. If possible, cross-check skill performance through short skill tests or peer assessments.

## SECTION 8: HEALTH AND WELLNESS – PART THREE

### STRAND: PHYSICAL ACTIVITY AND HEALTH

#### SUB-STRAND: HEALTH AND WELLNESS

**Learning Outcome:** *Explain the concept of first aid*

**Content Standard:** *Demonstrate understanding of health and wellness games*

#### HINT



- Teachers are encouraged to administer the Mid-Semester Examination in Week 18 and document the results for submission to the Student Transcript Portal (STP).
- For additional information on how to effectively administer the mid-semester examination, please, refer to the **Appendix F** at the end of Section 8.

### INTRODUCTION AND SECTION SUMMARY

First aid is the immediate assistance provided to an injured or ill person before professional medical help arrives. It is an important skill that can save lives, reduce the severity of injuries and promote recovery. First aid is not limited to healthcare professionals, anyone with basic training can provide first aid, making it a universal life saving skill. Understanding the principles of first aid equips individuals to respond effectively in emergencies and creating a safer environment for all. The success of first aid application depends on the timely response and the proper use of essential items. A well prepared first aid kit is key for addressing various injuries and emergencies, ranging from minor cuts and bruises to more serious conditions such as fractures or cardiac arrests.

At the end of the lesson on the concept of first aid and the identification of common items needed for successful first aid application, learners will understand the purpose and importance of first aid in emergency situations, recognise the critical role of first aid in preventing complications and saving lives, identify and list common first aid items and their specific uses and demonstrate the proper handling of first aid materials to maintain hygiene and effectiveness. Learners will be shown the importance of being prepared for emergencies by having a well-equipped first aid kit and develop the confidence to provide basic first aid in real-life situations.

**The weeks covered by this section include:**

**Week 17:** Discuss the concept of first and identify the common items needed for a successful first aid application.

**Week 18:** Apply the knowledge of first aid principles to real-life scenarios and adapt responses based on the situation.

## SUMMARY OF PEDAGOGICAL EXEMPLARS

In this section, teachers are encouraged to adopt teaching strategies that enhance learners' comprehension and attainment of the lesson content. This can be achieved by using methods such as digital-based learning, Structured talk for learning, collaborative learning, role play, group-based activities and project-based learning, which actively engage learners in the tasks at hand. Teachers are also advised to use pedagogical practices like mixed-ability and mixed-gender groupings, tailored to the nature of the activity and learners' capabilities. Particular attention should be given to learners with additional needs to ensure inclusive participation. Teachers should foster an environment of mutual respect by encouraging learners to appreciate individual differences in abilities and intellectual capabilities to create a supportive and inclusive atmosphere for effective teaching and learning.

## ASSESSMENT SUMMARY

Measuring learners' comprehension during lesson delivery is essential and relies on effective assessment strategies. Teachers are encouraged to adopt suitable techniques that promote meaningful learning outcomes. Recall-based assessment which involves learners reproducing key concepts or information can be used. This can be done orally or in written form, depending on the needs of the learner group. Using Assessment of Conceptual Understanding Learners demonstrate their understanding by describing or explaining concepts and providing examples, such as the importance of providing basic first aid and the effect this may have on the life of an individual. This method may involve oral or written responses or a combination of both and can include presentations conducted during or after the lesson. When using Assessment Based on Strategic Reasoning, learners are encouraged to think critically, analyse information, and apply their knowledge in real-life situations. For example, learners might use their understanding of first aid to design a poster aimed at raising awareness about specific injuries or emergency situations within their school or community. The recommended mode of assessment for each week covered by this section includes:

**Week 17:** Discussion

**Week 18:** Mid-semester Examination

## WEEK 17

**Learning Indicator:** Discuss the concept of first aid and identify the common items needed for a successful first aid application

### FOCAL AREA: CONCEPT OF FIRST AID

#### Background

The origins of first aid can be traced back to ancient times when people used and relied on natural remedies and improvised methods to treat injuries and illnesses. Early civilisations like the Egyptians, Greeks and Romans recorded practices such as using honey or wine to clean wounds to prevent infection. These practices laid the foundation for what we now call first aid.

The formalisation of first aid began in the Middle Ages with the Knights Hospitaller, a religious and military order that provided care for travellers and soldiers during the Crusades. They established the first organised system of emergency care, focusing on treating injuries sustained in battle. In the 19th century, modern first aid began to take shape with the creation of organisations dedicated to emergency care. The International Committee of the Red Cross, founded in 1863 by Henry Dunant, was instrumental in promoting first aid globally. In 1877, the British Red Cross and St. John Ambulance were established to train the public in providing basic medical assistance during emergencies.

The term 'first aid' was officially introduced in 1878 by Peter Shepherd, a military surgeon who collaborated with St. John Ambulance to teach soldiers and civilians how to administer immediate care before professional medical help arrived. This concept quickly spread across Europe and North America. The World Wars marked a significant expansion of first aid training, with both soldiers and civilians learning vital techniques to address war-related injuries. In the post-war period, these skills were adapted for everyday emergencies, including workplace and household accidents.

Today, first aid is recognised as an important skill worldwide. Standardised training programmes offered by various organisations have made life saving knowledge accessible to the general public. Advances in medical science and technology have further refined first aid techniques, ensuring that even basic interventions can effectively save lives and minimise complications. As first aid continues to evolve with new methods and tools, it remains a cornerstone of public health and safety, equipping individuals to respond confidently in emergencies.

#### The First Aid Sign

The first aid sign is a universally recognised symbol used to indicate the presence of first aid equipment, facilities or personnel.

It often takes the form of:

1. **a green background with a white cross:** This is the most widely used design internationally, as specified by the International Organisation for Standardisation (ISO 7010). The green background represents safety. The white cross symbolises medical aid or assistance.



**Figure 17.1:** *First aid sign: A white cross on a green background*

2. In some countries or contexts, an alternative design of a red cross on a white background is also used. The red cross is a symbol for one of the largest groups in the world, The International Red Cross. The Red Cross stands simply to protect human life, ensure respect between humans and alleviate human suffering and not discriminating between race, nationality, religion, political views and others.

The symbol itself was approved as the group's symbol in 1864 and has remained that way since then and is legally protected by the International Red Cross and Red Crescent Movement. The red cross was chosen as the symbol by using Switzerland's flag and reversing the colours. The Swiss have historically been a neutral country, exactly what the Red Cross was looking to do. The Red Cross symbol is now known worldwide and is generally not used for anything else.



**Figure 17.2:** *First aid sign: a red cross on a white background*

## Meaning of the First Aid Sign

1. **Accessibility:** It indicates where first aid supplies or services are available. (e.g., first aid kits, medical cabinets).
2. **Emergency preparedness:** It helps people quickly locate help during medical emergencies.
3. **Universal understanding:** The design ensures that individuals from different regions and linguistic backgrounds can recognise it instantly.
4. **Safety and health awareness:** It promotes a culture of safety by highlighting the availability of first aid support. The symbol is commonly seen in workplaces, public spaces, schools and vehicles equipped with first aid resources.
5. What is first aid?

First aid is the immediate or initial assistance or care given to an injured person or someone who is suddenly taken ill to stabilise their condition before taking them to the hospital or before

professional medical assistance arrives. It involves simple yet important interventions aimed at preserving life, preventing the condition from worsening and promoting recovery.

## Principles of First Aid

1. **Ensure safety:** Look around for potential hazards and confirm the scene or area of the incident is safe both the rescuer and the injured individual before approaching the injured person. Wear personal protective equipment like gloves and face mask if available to avoid contact with blood or bodily fluids to reduce infection risk.

2. **Assess the casualty's condition or situation**

Check the responsiveness: Gently tap the casualty and ask 'are you okay?' if they respond, assess the nature of their injury or illness and if unresponsive, proceed with further checks. For example, breathing, circulation, etc.

Look for injuries: Identify visible wounds, bleeding or deformities.

3. **Establishing communication:** Ask for their name and use it during the conversation. Encourage them to talk about how they feel or describe what happened. Listen actively without interrupting.

4. **Provide physical comfort:** Help them sit or lie in a comfortable position, depending on their injury. Use clothing or blanket to keep them warm if they feel cold and support the injured limbs or area to reduce discomfort.

5. **Reassure the casualty:** Keep the person calm to prevent shock by speaking in a calm and smooth voice and using positive and reassuring phrases like 'you are going to be fine' or 'help is on the way and will arrive soon', etc.

6. **Stay calm and act quickly:** Maintain composure to make rational decisions and administer effective aid and always follow the 'DRABC' protocol or the 'ABC' rule.

a. **The 'DRABC' protocol**

*Danger:* Check for hazards and be sure the environment is safe.

*Response:* Assess the casualty's responsiveness.

*Airway:* Ensure the airway is open and clear.

*Breathing:* Check if the casualty is breathing.

*Circulation:* Check for any significant blood loss.

b. **The 'ABC' rule**

*Airway:* Ensure the airway is clear.

*Breathing:* Check if the person is breathing and provide rescue breaths if needed.

*Circulation:* Ensure the heart is pumping and blood is in circulation. If the heart is not pumping restore circulation through chest compressions if necessary.

7. **Minimise movement:** Encourage the casualty to stay still to prevent worsening injuries and avoid moving them unless absolutely necessary, such as to prevent further danger.

8. **Reduce stress in the environment:** Keep the surrounding of the casualty calm and free of loud noises or unnecessary distractions. Move bystanders away to give the person space and privacy.

9. **Use available resources:** Utilise materials at hand, such as first aid kits, clothing or improvise for other items to provide temporary relief or stabilisation.
10. **Respect the casualty's dignity and consent:** Ask for consent if the injured person is conscious and capable of responding. Avoid exposure of their nakedness which may cause unnecessary discomfort or embarrassment.
11. **Explain your actions if the person is conscious:** Let them know what you are doing. For example, 'I am applying pressure to stop the bleeding' or 'I am cleaning around the cut or wound to dress it'. This helps them feel informed and in control to reduce hopelessness.
12. **Stay positive and empathetic:** Avoid showing panic, fear or frustration even if the situation is very bad. Be patient and kind even if the casualty is distressed or irritable.
13. **Seek professional help:** Call for emergency medical services (EMS) promptly while providing immediate care.
14. **Do no harm:** Do no harm in first aid means that any actions taken by the first aider should not worsen the condition of the injured or sick person. It emphasises the importance of:
  - a. **Avoiding unnecessary interventions:** Performing only the first aid procedures that a first aider is trained to do and refraining from attempting advanced medical techniques that could cause harm.
  - b. **Ensuring safety:** Using proper techniques and tools to prevent additional injuries to the victim or the first aider.
  - c. **Using clean and sterile materials:** Preventing infections by using appropriate items from the first aid kit. This principle underscores the responsibility of first aiders to act carefully and within their level of competence to protect and support the individual in need.

## Emergency Preparedness

1. Always have a well-stocked first aid kit at home, school, work and in your vehicle.
2. Keep emergency numbers handy.
3. Familiarise yourself with first aid station locations.

## Importance of First Aid

1. **To the injured or sick person**
  - a. **Preserves life:** First aid helps to prevent the condition of the injured or sick person from worsening, ensuring their survival until professional medical help arrives. Immediate actions like CPR or stopping bleeding can make a significant difference to the health condition of the person.
  - b. **Prevents further injury or illness:** Proper first aid prevents further harm by stabilising the person and preventing additional complications. For instance, immobilising a broken bone reduces the risk of aggravating the injury.
  - c. **Reduces pain and discomfort:** Administering first aid helps manage pain and discomfort by addressing the immediate issue. Applying ice to a sprain or giving pain relief assistance make the injured or sick person more comfortable while awaiting medical attention.

- d. **Promotes recovery:** First aid initiates the recovery process by providing basic treatments that support healing, such as cleaning wounds or covering them to prevent infection.
  - e. **Boosts confidence and comfort:** Providing first aid gives reassurance to the injured or sick person that they are being cared for, reducing anxiety and stress, which could otherwise worsen their condition.
  - f. **Prevents infection:** Cleaning wounds and applying proper dressings helps prevent infection, which could lead to more severe health issues if not treated early.
  - g. **Stabilises vital signs:** In situations like shock, first aid helps to stabilise the person's breathing, pulse and other vital signs until professional help arrives, increasing the chances of a better outcome.
  - h. **Helps in mental and emotional support:** In addition to physical care, offering calm reassurance and showing empathy have a significant positive impact on the mental and emotional state of the injured or sick person, which is essential for overall recovery.
2. **To the first aider**
- a. **Empowerment and confidence:** Having first aid knowledge helps a first aider feel more confident and empowered in emergency situations. This can reduce anxiety and stress when responding to an injury or medical emergency.
  - b. **Quick response:** Knowing first aid enables the first aider to provide timely and effective assistance until professional medical help is available, which is key in saving lives or minimising the severity of an injury or health condition.
  - c. **Improved decision-making:** First aid training enhances a person's ability to assess situations quickly and make informed decisions about what actions to take, whether it is administering CPR or stopping bleeding.
  - d. **Prevention of further harm:** First aid skills allow the first aider to prevent the worsening of an injury by stabilising the condition or removing potential hazards from the situation.
  - e. **Job and social responsibility:** In many workplaces or organisations, knowing first aid is a professional requirement. It also allows the first aider to serve as a helpful member of the community by assisting in emergencies outside of work.
  - f. **Skill development:** First aid training helps develop critical thinking, problem-solving and communication skills, which are valuable in both emergency and everyday life situations.
  - g. **Self-satisfaction:** Helping someone in need is personally rewarding. Knowing that one has the potential to save a life or minimise injury gives a sense of fulfilment and purpose.
  - h. **Health and safety awareness:** First aid training also raises awareness of general health and safety practices, which helps the first aiders avoid accidents and promote a safer environment for themselves and others. First aid knowledge benefits the first aiders by equipping them with life-saving skills, confidence and a sense of responsibility.

## Characteristics of a Good First Aider

First aiders possess several important characteristics that enable them to respond appropriately and efficiently in emergencies. A good first aider must be someone who is:

1. **Calmness under pressure:** An effective first aider remains calm, composed and focused, even in stressful situations. This helps reduce panic and ensures they can think clearly and make sound decisions.

2. **Quick in thinking and making decisions:** First aid situations often require rapid decision-making. An effective first aider is able to assess the situation quickly, prioritise actions and choose the most appropriate response on the spot.
3. **A good observer:** Being able to observe and assess the condition of an injured or ill person is essential. An effective first aider notices change in the person's appearance, breathing, consciousness level and other signs that can guide their actions and prompt actions.
4. **A good communicator:** Effective communication is crucial, both for relaying important information to emergency services and for giving instructions to the injured person or others around them. A first aider must also be able to listen carefully to any details the victim or witnesses provide and convey them clearly and accurately to the professionals who may need them to help with treatment. A first aider must be able to communicate clearly with bystanders to seek help or delegate tasks while waiting for medical assistance or transport to transfer the person to hospital.
5. **Empathetic and compassionate:** A good first aider shows care and concern for the person in need. They provide comfort and reassurance, helping to reduce the emotional distress of the injured or sick person.
6. **Good at paying attention to detail:** First aid involves following protocols carefully. A detail oriented first aider ensures that they provide the correct treatment in the correct sequence and do not overlook important signs or symptoms.
7. **Physically fit:** First aid sometimes requires physical tasks, such as moving an injured person, performing CPR or managing heavy bleeding. A physically fit first aider is more capable of handling these tasks effectively. Therefore, first aider must be physically fit to be able to effectively undertake all tasks effectively.
8. **Knowledgeable:** An effective first aider is well trained and knowledgeable about first aid techniques and procedures. They are familiar with emergency response protocols, CPR, wound care and other essential skills.
9. **Patient:** Some situations may require extended periods of care, such as monitoring the injured or sick person until a medical professionals arrive. A good first aider will exercise patience and stays focused on providing care for as long as it takes for the needed help to arrive.
10. **Confidence:** Confidence in the ability to help is key for a first aider. A confident first aider is more likely to take the necessary steps promptly and effectively, rather than hesitating out of uncertainty and risky the life of the victim.
11. **Good at judging situations accurately:** An effective first aider exercises sound judgment in every situation. They know when to take action and when it is necessary to seek professional medical help.
12. **A good team player and collaborator:** While a first aider may be the first to respond to an emergency situation, they often work as part of a team. Being able to work well with others, such as fellow responders or emergency medical services, is an important characteristic in saving lives.
13. **Adaptability:** First aid situations can vary greatly and a good first aider must be able to adjust their approach depending on the circumstances, environment or the condition of the injured or sick person.

These are some of the qualities that enable a first aider to provide effective and appropriate care in emergency situations and ultimately improving very good results for those who are injured or ill.

### **Firs Aid Kit**

A first aid kit is a collection of medical supplies and equipment used to provide initial care for injuries or illnesses before taking the victim to hospital or a professional medical team arrives. The main purpose of a first aid kit is to provide essential medical supplies and equipment to treat injuries or illnesses until professional medical help is available. The kits include items for treating common injuries as well as supplies for basic medical procedures like cleaning wounds and administering CPR. First aid kits are very important in various environments such as homes, schools, workplaces and vehicles to ensure a quick and effective response to emergencies.

### **Cardiopulmonary Resuscitation (CPR)**

Cardiopulmonary Resuscitation is an emergency lifesaving procedure used when someone's breathing or heartbeat has stopped. It involves a combination of chest compressions and rescue breaths to restore circulation and oxygen to the brain and other vital organs to increase the chances of survival until professional medical assistance is available or the person is transported to hospital.



**Figure 17.3:** *Performing chest compressions during CPR*



**Figure 17.4:** *Performing the rescue breath during CPR*

### **First Aid Essentials (Items)**

First aid items are variety of supplies that are used to manage common injuries and medical emergencies.

## List of items for a basic first aid kit

1. **Sterile gauze pads and dressings:** For covering cuts and wounds to absorb blood or fluid from injuries.
2. **Adhesive tape (Plasters):** For covering small cuts, blisters and abrasions and for securing gauze, bandages or dressings in place.
3. **Antiseptic wipes or solution:** For cleaning wounds to prevent infection.
4. **Cotton wool or cotton balls:** For cleaning wounds or applying medication.
5. **Alcohol pads or methylated spirit:** For disinfecting tools or skin in preparation for medical procedures.
6. **Scissors:** For cutting tape, gauze or clothing in an emergency.
7. **Tweezers:** For removing splinters, stingers or foreign objects from cuts and wounds.
8. **Bandage (e.g., Ace bandage):** For wrapping sprains or strains or to apply pressure to control bleeding.
9. **Instant cold packs:** For reducing swelling, inflammation and pain from sprains, strains or other injuries.
10. **Heat pack or hot water bottle:** For soothing muscle pain or cramps.
11. **CPR face shield or mask:** For protecting both the first aider and the injured or sick person during resuscitation.
12. **Burn gel or cream:** For soothing and protect minor burns.
13. **Disposable gloves:** For protecting the first aider from bodily fluids while assisting an injured or sick person.
14. **First aid manual:** For quick reference in case of emergencies or uncertainty about how to treat certain injuries.
15. **Eye wash or eye irrigation solution:** For flushing out foreign objects or chemicals from the eyes.
16. **Splints:** For immobilising injured limbs or joints in the case of fractures.
17. **First aid instructions and emergency numbers:** A printed sheet with instructions on handling common emergencies and contact numbers for local emergency services.



**Figure 17.5:** Adhesive tape (Plasters)



**Figure 17.6:** *Sterile gauze pads and dressings*



**Figure 17.7:** *Bandages*



**Figure 17.8:** *Cotton wool*



**Figure 17.9:** *Wooden splints*



**Figure 17.10:** Disposable gloves



**Figure 17.11:** Tweezers



**Figure 17.12:** Scissors



**B**

**Figure 17.13:** Heat pack or hot water bottle

## Learning Tasks

1. Define first aid.
2. Identify items commonly found in a first aid kit.
3. Outline the key characteristics of first aiders.
4. Discuss how first aid contributes to saving lives.
5. Explain the core principles of first aid.
6. Explain why it is important for everyone to acquire basic first aid skills.

## Pedagogical Exemplars

### Activity

#### 1. Starter Activity

Start by presenting a real-life scenario and ask learners how they would respond. This will activate learners' prior knowledge and get them thinking about what they will be learning, while highlighting the importance of having accurate first aid knowledge.

**Scenario 1:** You are playing with your friends during break time in the school park when you witness one of them trip and fall while running. Your friend seems to have twisted their ankle and is in pain. What would you do in this situation?

**Scenario 2:** During a school sports event, one of your classmates collapses on the field. She is conscious but appears to be struggling to breathe. How would you assist her?

Encourage learners to share their thoughts and then explain how these scenarios relate to the key concepts of first aid they will learn.

#### 2. Digital-Based Learning and Collaborative Learning

Divide learners into mixed groups with each group consisting of 3 to 5 learners depending on class size. Go over the topic for the day and explain to learners that the activity will involve exploring the history of first aid, the definition of first aid, its core principles, the importance of first aid to an injured or sick person and the qualities that make someone a good first aider.

With the aid of their ICT tools. Assign each group a specific area to search and a time frame to work within. For instance;

**Group 1:** History and definition of first aid.

**Group 2:** Basic principles of first aid.

**Group 3:** The importance of first aid for the injured or sick person.

**Group 4:** Characteristics of a good first aider.

Allow the groups time to research their topic using reliable online sources or educational websites. Encourage learners to focus on understanding what they are searching for, rather than just gathering information, so they can explain it to others clearly during the sharing phase. Move round the groups and provide assistance to groups that may need help in searching for information on the internet or using the ICT tools. Once the groups have completed their search, each group should elect or appoint one member to present their findings to other groups. This will encourage learners to synthesise the information and practice communicating key ideas. The designated group member moves to a different group (preferably one with a different research focus) and shares their findings. After listening to the sharing, the receiving group adds any new information to their list that they did not previously have.

The original group member returns to their group, and the process continues with each learner visiting a new group to share their research. After all groups have shared their findings, learners return to their original groups to discuss what they learned from the other groups. They should update their lists with any new or additional insights they gathered

from the other groups. For example: A group that researched the ‘importance of first aid’ might now include new information about ‘characteristics of a good first aider’ or the ‘basic principles of first aid’ that they didn’t have before.

After all groups have compiled their comprehensive list of findings, ask each group to present their updated findings to the class. As each group presents, encourage the rest of the class to ask questions, clarify terms or add any additional knowledge they might have. Facilitate a class wide discussion on the definition of first aid, the principles of first aid, the importance of first aid, the role of the first aider and first aid items and their uses. Pose reflective questions to learners to deepen their understanding of the concept. Sample questions many include, ‘Why is it important for everyone to have basic first aid knowledge?’ ‘What qualities make someone a good first aider?’ ‘How can these qualities impact the outcome of an emergency?’ ‘How does knowing the basic principles of first aid help in real life situations?’, etc.

Wrap up the activity by asking learners to reflect on what they learned during the process. Encourage them to think about how the shared information can be applied in real life situations. Clear any misconceptions learners may have during the summary session.

### 3. **Problem-based learning and Talk for Learning**

Explain the importance of first aid kits in emergency situations and teach learners to understand how having the right tools can make a difference in providing immediate help before professional medical assistance arrives or before the casualty is taken to the hospital.

Display the common items in a first aid kit (or show a picture chart or video that displays common items in a first aid kit). Ensure the visuals are clear and easy to interpret for learners with various abilities (e.g., use simple images, labelled items or captions them in the videos).

Give learners a moment to independently look at the items/images and reflect on what they think each item is used for. Encourage learners to describe what they see and handle them if available to make it more tangible. Learners write down their guesses or share their ideas in pairs.

Give learners a worksheet to match each item with its intended function or use. Ask learners to share their guesses on the items and their functions with the class. For each item, ask them to think about, what they think the item does and why they think it is important in first aid.

Encourage groups to discuss and compare their answers. For struggling learners, provide additional guidance by simplifying the descriptions or giving them clues (e.g., This item helps stop bleeding, that item helps in immobilising broken bones, etc.). For advanced learners, challenge them to think about specific scenarios where each item would be needed (e.g., In what situation would plaster be used rather than a bandage? etc).

Once each item has been identified and discussed, give a detailed explanation of the purpose and importance of each item in a first aid kit, for example, ‘A bandage is used to cover and protect a wound to prevent infection. It is important because it helps keep the injury clean and allows the healing process to begin.’ Explain and relate the item to real-life situations. For example, ‘Imagine you are climbing a gentle hill with your siblings and one of them sprains their ankle. A bandage can be used to help stabilise the area before getting them to the hospital’.

Use interactive questioning to ensure understanding. For example:

- Why do you think it is important to have gloves in a first aid kit?
- What can happen if a first aider does not have antiseptic to clean a wound?

Learners orally answer the questions. Summarise the lesson by going over the key points.

## Key Assessment

### Level 1

1. What is first aid?
2. State three items commonly found in a first aid kit.
3. Identify four characteristics of a good first aider.
4. List three of the core principles of first aid.
5. Identify two reasons why first aid is essential in an emergency situation.

### Level 2

1. Briefly describe the functions of three items found in a first aid kit.
2. Describe four roles of a first aider in an emergency situation.
3. Describe two ways first aid skills can be useful in everyday life.
4. Explain why the principle of 'Ensure Safety' is key when providing first aid.
5. Describe how first aid contributes to stabilising the condition of an injured or sick person.
6. Why is being calm and composed an important characteristic of a good first aider?
7. Describe how three first aid essentials are used in emergencies.

### Level 3

1. Explain how first aid training can empower individuals to manage emergencies more confidently. Provide examples.
2. How does ensuring the first aid kit is stocked with essentials contribute to the effectiveness of emergency response?
3. Discuss how the principles of first aid, such as prioritising treatment and ensuring safety, work together to provide effective care.

### Level 4

1. Create a checklist of essential items for a customised first aid kit tailored for a hiking group and explain your choices.
2. Propose a community initiative to educate people on the importance of first aid. Include strategies for promoting awareness and participation.
3. Evaluate the role of first aid in disaster situations. How do the principles and characteristics of good first aiders make a difference in large scale emergencies?

## WEEK 18

**Learning Indicator:** Apply the knowledge of first aid principles to real life scenarios and adapt responses based on the situation

### FOCAL AREA: APPLYING THE KNOWLEDGE OF FIRST AID

#### Storage and Accessibility of First Aid Kits

Proper storage and accessibility of first aid kits are key to ensure they are ready for use during emergencies.

##### 1. Storage guidelines

- a. **Keep in a designated location:** Store first aid kits in clearly marked and easily identifiable locations, such as in wall cabinets, labelled drawers or specific shelves.
- b. **Avoid extreme conditions:** The kit should be kept in a cool dry place to prevent damage to its contents, especially medications or adhesive items.
- c. **Protect items from contamination:** Waterproof and dustproof containers should be used to keep items sterile and clean.
- d. **Regular maintenance:** Periodically inspect the kit to check for expired items, depleted supplies or damaged equipment and replenish as needed.

##### 2. Accessibility requirements

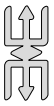
- a. **Easily reachable:** First aid kits should be placed where they can be quickly accessed by all, such as in common areas near exits or in frequently used rooms.
- b. **Labelling or visible markings:** Intentionally label or use recognisable symbols (e.g., a white cross on a green or red background) to indicate the location of first aid kits for easy accessibility.
- c. **Multiple locations:** For large spaces like schools, workplaces or big organisations, first aid kits should be distributed across various strategic locations to reduce response time.
- d. **Portable options:** Portable first aid kits should be kept in vehicles, outdoor areas or during field activities to cover situations away from fixed storage points.

##### 3. Special considerations

- a. **Customised kits:** Tailor the contents of first aid kits based on the environment (e.g., workplace hazards, home use and outdoor activities).
- b. **Training awareness:** Everyone should know where first aid kits are stored and how to access them during emergencies.
- c. **Emergency plans:** First aid kit locations in emergency response plans should have maps or guides if necessary for easy location identification and for access. By prioritising proper storage and accessibility, first aid kits remain effective tools for mitigating injuries and responding promptly in emergencies.

## Emergency numbers to use to access help during emergencies

1. Police – 191
2. Fire service – 192
3. Ambulance service – 193
4. National emergency coordination: National Disaster Management Organisation (NADMO) – 0302772836
5. General emergency hotline – 112

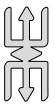


### Note

General emergency hotline can connect to police, fire or ambulance services in many areas in the country.

## Common injuries and emergencies with their first aid procedures

Proper first aid procedures are important for effectively managing common injuries and minimising complications. Here are first aid guidelines for some frequently encountered injuries and emergency situations.



### Note

For all the following the casualty must not be approached if your own safety is at risk. The area or situation should be assessed and confirmed safe before approaching the casualty.

## Cuts and wounds

Cuts and wounds are injuries that involve damage to the skin and underlying tissues such as muscles, tendons or blood vessels which are often caused by trauma, falls, or sharp objects like knives, broken bottles or glass or metal. Cuts and wounds can range from minor to severe and may be open, exposing tissues beneath the skin or closed where the skin remains intact but underlying structures are damaged.

## Types of Cuts and Wounds

1. **Open cuts and wounds**
  - a. **Abrasion:** A surface level or superficial damage caused by scraping where the skin is rubbed off.
  - b. **Incision:** A clean and straight cut from sharp object like knife or glass.
  - c. **Laceration:** A deep jagged or irregular tear of the skin and underlying tissues.
  - d. **Puncture wound:** A small, deep wound caused by pointed objects like nail or gun shot.
  - e. **Avulsion:** A more severe wound caused by a forceful tearing away of the skin or tissue often exposing muscles or bone.
  - f. **Amputation:** A complete or partial cutting away of a body part.



**Figure 18.1:** *Abrasion an open wound*

## 2. Closed wounds

- g. **Bruise and contusion:** Damage to blood vessels under the skin that causes discolouration to the affected part.
- h. **Hematoma:** A large collection of blood trapped under the skin or tissues.



**Figure 18.2:** *Bruise and contusion a closed wound*

## First Aid Procedure for Open Cuts and Wounds

### 1. Control bleeding

- a. **Ensure safety:** Ensure the environment is safe before approaching the injured person and wear gloves to avoid contact with blood to reduce infection risk
- b. **Reassure the casualty:** Keep the person calm and in a comfortable position to prevent shock.

### 2. Clean the wound

- a. For minor cuts or wounds, rinse it under clean running water to remove dirt or debris.
- b. If dirt or debris still remain, use tweezers sterilised with alcohol or methylated spirit to remove them.
- c. Apply firm but gentle pressure using a clean cloth or sterile gauze or bandage to stop bleeding.
- d. Rinse or elevate the wound above the heart level if the injury is on the limb.
- e. Cover the cut or wound with a sterile dressing or adhesive bandage.
- f. If the first dressing becomes soaked, add more on top. Do not remove the original one to avoid disrupting clotting.

- 3. **Call for medical assistance:** Call for medical help or take the victim to the hospital immediately.

## First Aid Procedure for Closed Wounds

Using the RICE Method: Rest, Ice, Compression and Elevation.

1. **Rest:** Rest the affected area and avoid putting strain or weight on the part. Rest support other first aid measures like icing and compression by maintaining stability and reducing stress on the area.
2. **Apply ice:** Apply an ice pack wrapped in a cloth on the affected part for 15 to 20 minutes to reduce swelling and inflammation. Ice causes blood vessels to contract and narrow which reduces blood flow to the affected area. This limits the amount of fluid and inflammation at the injury site. Cold numbs the nerve endings in the injury site, reducing pain signals sent to the brain. Avoid the use of ice on open wounds unless advised by a medical professional.
3. **Apply compression:** Apply direct pressure to affected area or damaged blood vessels (not too tight) to help reduce or stop bleeding by aiding the natural blood clotting process. This can be applied to other injuries too. However, avoid applying compression to fractures properly before immobilising the bone. Also, avoid compressing open wounds unless it is to control bleeding with sterile dressing.
4. **Elevation:** Raise the injured part or area to reduce blood flow to the area to prevent excessive swelling and minimise pain and discomfort. Elevate only if it does not cause further pain or injury. Use a pillow or other suitable item to raise the affected part.

## Burns and scalds

### First aid procedure

1. Ensure safety by removing the person from the source of burn (e.g., fire, hot oil, liquid, vapour or steam). Turn off the power supply if it is an electrical burn before touching the person.
2. Assess the situation to know the type of burn that has occurred.

#### Types of burns

- a. **First degree burns:** Red painful skin burn that affects the outer layer.
  - b. **Second degree burns:** Blistering, swelling and intense pain that affects deeper layers.
  - c. **Third degree burns:** A severe white or burnt skin that comes with numbness and affects all layers.
3. **Cool the burn**
    - a. Cool or place the affected area under cool running (not cold) water for at least 10 to 20 minutes.
    - b. If running water is not available, use a clean cool damp cloth to cool the affected area.
    - c. Avoid applying ice.
  4. **Protect the burn**
    - a. Carefully remove jewellery, clothing or belt near the burn before swelling starts.
    - b. If clothing is stuck to the burn, leave it in place to avoid further injury.
    - c. Cover the location of the burn with a sterile non-stick dressing, clean cloth or cling film.
    - d. Avoid fluffy materials like cotton wool which may stick to the wound.

5. **Reassure the person** by keeping them calm and comfortable as possible.
6. **Seek immediate medical help if the burn is:**
  - a. Larger than the person's palm
  - b. Severe and affects the face, hands, feet, groin or major joints.
  - c. A third-degree burn.
  - d. Caused by chemicals or electricity.
7. **What not to do**
  - a. Do not break blisters: This will increase the risk of infection.
  - b. Do not apply ointments or butter: These traps heat and may worsen the burn.
  - c. Do not use cream without medical advice especially on serious burns.



**Figure 18.3:** *First degree burns*



**Figure 18.4:** *Second degree burn*



**Figure 18.5:** *Third degree burns*

### 3. Fractures (Broken Bones)

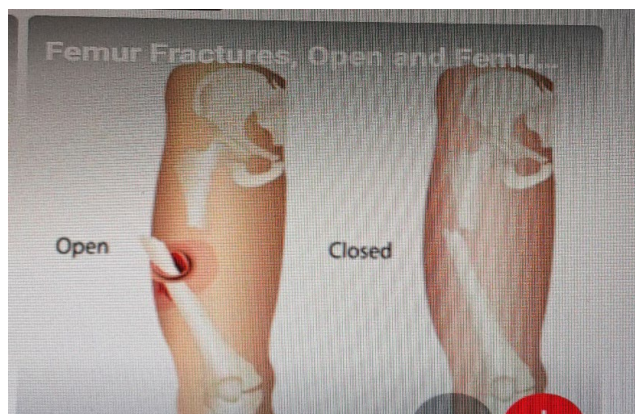
#### First aid procedure

- a. Ensure the area the incident occurred is safe before approaching the injured person.
- b. Assess the situation for a fracture or fractures.

#### Signs of a fracture

- i. Pain and swelling of the affected part.
  - ii. Deformity or an unusual angle of a limb or part.
  - iii. Difficulty or inability to move the affected area.
  - iv. Bruising or open wounds (in case of open fractures).
- c. **Call for help:** Call emergency services immediately if:
- i. The fracture is open (the bone(s) is/are protruding through the skin).
  - ii. The person is in severe pain or shows signs of shock (e.g., pale, cold and sweaty skin, breathing shallow and irregular, the heart beats faster but with reduced force, the person is confused, restless or anxious, drowsy or unconscious).
  - iii. The fracture involves the head, neck, spine or pelvis.
- d. **Immobilise the injury**
- i. Avoid moving the person unless necessary for safety.
  - ii. For closed fractures immobilise the injured area with a splint or by keeping it in its current position. A splint can be made from rigid materials such as wood, cardboard or rolled up clothing.
  - iii. Secure the splint above and below the fracture using bandages, cloth or any other material that hold the splint in place.
  - iv. Do not attempt to realign or push a bone back into place.
  - v. Place a cold pack wrapped in a cloth over the area to reduce swelling if the fracture is closed.
- e. **For open fractures, stop any bleeding**
- i. Apply gentle pressure around the wound (not directly on the exposed bone) with sterile bandage or clean cloth.
  - ii. Cover the wound with a sterile dressing without pressing on the bone.
- f. **Prevent shock**
- i. Help the person to lie down.
  - ii. Cover them with a blanket or cloth to keep them warm.
  - iii. Reassure them of help and recovery to keep them calm.
- g. **Monitor while waiting for help or a vehicle to transport them to the hospital**
- i. Check for circulation (look for signs of numbness, tingling or discolouration below the fracture).
  - ii. Do not allow the person to eat or drink anything especially if surgery might be needed.

**h. Seek immediate medical attention or transport the victim to a nearby hospital.**



**Figure 18.6:** *Open and closed fracture*

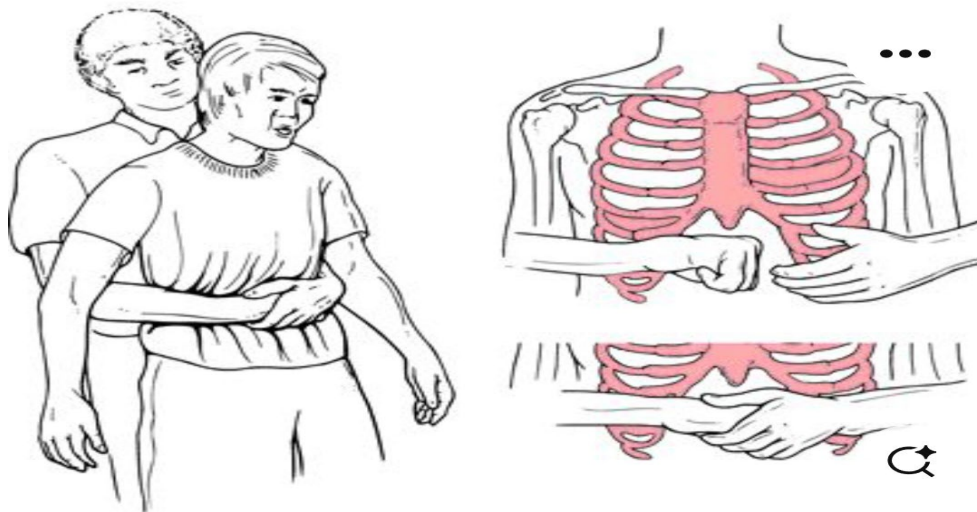


**Figure 18.7:** *Immobilising a fracture using locally made splints*

#### 4. Choking

##### **First Aid Procedure for Adults and Children (over 1 year)**

- a. **Assess the situation:** Ask the person, are you choking? If the person can speak, cough or breathe partially, encourage the person to cough hard or forcefully to clear the blockage.
- b. **Call for help:** Call for emergency medical help or take the person to the hospital immediately if the person cannot breathe, cough or speak.
- c. Perform the Heimlich manoeuvre (abdominal thrusts)
  - i. Stand behind the person and wrap the arms around their mid-section.
  - ii. Place a fist just above the navel and below the ribcage with thumb inward.
  - iii. Perform the thrusts by grasping your fist with the other hand and give a quick inward and upward thrust. Repeat until the object is expelled or the person starts breathing again.
  - iv. If the person becomes unconscious, gently lower them to the ground and perform CPR, starting with chest compressions. Regularly check the mouth for obstruction between compressions.



**Figure 18.8:** *The right way of making the fist, holding the standing and placing it to perform the Heimlich manoeuvre or the abdominal thrusts*

### First Aid for Infants (under 1 year)

- a. **Assess the situation:** If the child is coughing or crying, encourage them to keep coughing. Do not interfere. If they are silent or turning blue, take action immediately.
- b. **Call for help:** Shout for help and call emergency services or rush them to a nearby hospital emergency unit.
- c. **Perform back blows or slaps dislodge the object:** Hold the baby face down along the forearm, supporting their head and jaw with the hand. Give five (5) firm back blows or slaps between the shoulder blades using the heel of the hand.
- d. **Perform chest thrusts:** Flip the baby and turn them face up while supporting their head with the hand. Use the two index fingers to press on the breastbone (just below the nipple line) 5 times.
- e. **Repeat the back blows or slaps and the chest thrusts:** Alternate between 5 back blows or slaps and 5 chest thrusts until the object is removed or the baby starts breathing.
- f. **If baby becomes unconscious, perform CPR, starting with chest compressions and checking the mouth for obstruction between compression.**
- g. **Call for medical help.**



**Figure 18.9:** *How to perform back blows or slaps and chest thrusts on a baby*

## 5. Nosebleeds

### First Aid Procedure

- a. Keep the person calm and assure them of a speedy recovery to prevent further increase in blood pressure which can worsen the bleeding.
- b. Help the person to sit upright and lean forward slightly without tilting the head back to prevent blood from running down the throat which could cause choking or stomach irritation.
- c. Pinch the nostrils with the thumb and index finger. Pinch the soft part of the nose (just below the bony bridge). Maintain firm pressure or hold the nostrils together for 5 to 10 minutes without releasing to allow the blood to clot.
- d. Ask the person to breathe through the mouth while applying the pressure.
- e. Apply a cold pack to the bridge of the nose to contract blood vessels and slow down the bleeding.
- f. Monitor and repeat the procedure. After 15 minutes, check if bleeding has stopped. If not reapply pressure for another 10 minutes.
- g. Seek medical assistance if bleeding lasts longer than 20 minutes or is profuse and if the person is feeling dizzy, weak or has difficulty breathing.
- h. Aftercare: Advise the person to avoid blowing their nose or engaging in strenuous activities for several hours to prevent rebleeding.

### How to stop a nosebleed



**Figure 18.10:** *How to stop nosebleeds*

## 6. Poisoning

### First aid procedure

First aid procedure for poisoning depends on the type of poison and the method of exposure (for example, ingestion, inhalation, skin contact or injection).

### General Steps or Procedure

- a. **Assess the situation**
  - i. Identify the poison and the time of exposure if possible.
  - ii. Remove self and victim from any source of danger (e.g., gas, fumes or spills of poison).
  - iii. Move the person to fresh air if poisoning occurred from fumes.
  - iv. Avoid direct contact with the poison.

**b. Check the victim's condition**

- i. Look for symptoms of nausea, vomiting, difficulty breathing, unconsciousness, seizures or burns around the mouth or body.
- ii. If they are unresponsive, check for breathing and pulse.

**c. Call for emergency help**

- i. Contact emergency services or a poison control centre immediately or rush the person to a nearby hospital.
- ii. Provide details of the poison at the hospital if known (e.g., substance, amount, and time of exposure).

**Specific First Aid Procedure Based on Exposure****a. Ingested poison (e.g., cleaning agents, medications)**

- i. Do not induce vomiting unless directed by a healthcare provider.
- ii. If the victim is conscious, rinse their mouth with water and provide small sips of water or milk if the poison is not corrosive.
- iii. Call for help.
- iv. Collect the container or sample of the substance for identification.

**b. Inhaled poison (e.g., carbon monoxide or fumes)**

- i. Move the victim to fresh air immediately.
- ii. Loosen tight clothing to aid breathing.
- iii. Monitor breathing and be ready to perform CPR if necessary.
- iv. Call for help.

**c. Poison on skin (e.g., pesticides or chemicals)**

- i. Remove contaminated clothing.
- ii. Rinse the affected skin with running water for 15 to 20 minutes.
- iii. Avoid scrubbing the area.

**d. Poison in the eyes**

- i. Flush the eyes with clean lukewarm water for at least 15 to 20 minutes.
- ii. Avoid letting the water flow into the unaffected eyes.
- iii. Call for help.

**e. While waiting for help**

- i. Stay calm and keep the victim comfortable by giving them assurance.
- ii. Turn them onto their side if they are vomiting to prevent choking.
- iii. If unconscious but breathing, place them in the recovery position (on their side).



**Figure 18.11:** Recovery position

## 7. Fainting

### First aid procedure

- a. Gently lower the person to the ground to prevent injury if falling.
- b. Lay the person flat on their back.
- c. Elevate the legs about 12 inches (30 cm) above heart level to improve blood flow to the brain.
- d. Loosen any tight clothing such as belts or collars and ensure fresh air circulation.
- e. If unresponsive or not breathing for more than a minute, begin CPR and call for emergency medical assistance.
- f. If they regain consciousness within a minute, reassure them and help them stay lying down until they feel better.
- g. Open windows or use a fan to improve air circulation.
- h. If dehydration is suspected, offer small sips of water once they are fully alert.
- i. Call for medical assistance or rush the person to hospital.

### What not to do

Do not:

- a. slap or shake the person.
- b. burn pepper around them.
- c. play loud music or hurt them with the intention to wake them up or revive them.
- d. pour hot ointment or anything pepperish into their nostrils.
- e. give them food or drinks until they are fully conscious.
- f. attempt to raise them to a sitting or standing position too quickly.



**Figure 18.12:** Lay flat on the back and legs elevated to improve blood flow to the brain during fainting

## 8. Dislocation

Dislocation occurs when a bone is forced out of its normal position in a joint. Commonly affected joints include shoulders, fingers, elbows, knees and hips.

### First aid procedure

- a. Assess the situation
  - i. **Observe the signs:** Dislocations are often painful and accompanied by swelling, bruising and sometimes an abnormal looking joint.
  - ii. **Confirm immobility:** The joint may look visibly deformed or out of place and be difficult or impossible to move.
  - iii. **Do not attempt to realign the joint:** Aligning the bone may cause further damage to surrounding tissues, nerves or blood vessels.
- b. Immobilise the joint
  - i. **Keep the joint in the position found:** Do not try to move or straighten the joint.
  - ii. **Support the area:** Use a sling for a shoulder or elbow dislocation. Place rolled-up towels or cushions around the joint to keep it stable. For lower body dislocations (e.g., knee or hip), encourage the person to remain still.
- c. Apply a cold compress
  - i. **Purpose:** Reduces swelling and pain.
  - ii. How to apply
    - Wrap an ice pack or a bag of frozen vegetables in a cloth (do not apply ice directly to the skin).
    - Hold the compress gently over the injured area for 15–20 minutes every hour.
- d. Manage pain and shock
  - i. **Monitor for shock:** Symptoms of shock include cold, clammy skin, rapid breathing, or fainting. If these occur, lay the person down with their feet elevated (if it does not worsen their pain).
  - ii. Keep them warm and calm.
- e. **Seek medical help immediately:** Call emergency services or arrange transport to the hospital.
- f. Avoid these actions
  - i. **Do not force the joint back into place:** This can damage blood vessels, nerves or ligaments.
  - ii. **Do not give food or drink:** If surgery or sedation is required, the stomach should be empty.
  - iii. **Do not move the person unnecessarily:** This can worsen the injury.

### Special Considerations

- a. Shoulder dislocation
  - i. **Arm position:** Keep the arm close to the body using a sling or by resting it on a pillow.

- ii. **Support:** A triangular bandage can stabilise the arm.
- b. Finger dislocation
 

**Splinting:** Tape the dislocated finger to the adjacent finger for temporary support. Avoid bending or pulling the finger.
- c. Hip dislocation
 

**Minimal movement:** Do not allow the person to sit or walk. Keep them lying flat on their back with cushioning under the affected leg.

### Learning Tasks

1. Identify the storage guidelines and accessibility requirements for first aid kits.
2. Identify injuries and situations that require first aid treatment.
3. Describe how to manage minor injuries and emergency situations effectively.
4. Demonstrate how to manage minor injuries and emergency situations effectively.

## Pedagogical Exemplars

### Activity

#### 1. Starter activity – Mystery box

Prepare a closed box or bag filled with items like bandages, safety pins, gloves, cotton wool, plasters, gauze, etc. Have learners settle down and pass the box or bag around the class, letting learners touch an item without looking. Ask learners to close their eyes before dipping their hands into the box or bag. Each learner describes what they think the item they touched is and guesses how it is used. Correct learners if they are unable to identify the items or wrongly guess their use.

#### 2. Introductory activity - Word association

Write “FIRST AID” in capital letters in the middle of the markerboard or blackboard and ask learners to call out words or phrases that come to mind when they think of term first aid (bleeding control, wound, cuts, burns, helping, health survival, safety measures, immediate assistance, lifesaving methods, etc.) write their responses around the central term ‘first aid’. Summarise their responses and introduce the lesson for the day, emphasising that first aid involves many aspects and they will be exploring the procedures of administering first aid for some common injuries and emergencies situation.

#### 3. Main Activity – Injuries and Actions

##### Digital Based Learning and Collaborative Learning

- a. Begin with a brief discussion on why first aid is important in everyday life. Show images or videos illustrating common injuries (e.g., cuts, sprains, nosebleeds, etc.) to capture learners’ attention. Explain the goal of the activity to learners by letting them know the activity is to help them gain knowledge on first aid and help them learn how to respond effectively to these injuries and situations.

- b. Divide learners into small mixed ability groups of 5 members or as per class size. Assign each group a category of injury and a specific injury type to focus on. For example:

**Group 1:** Sports injuries (e.g., sprain and strain).

**Group 2:** Workplace injuries (e.g., fracture and dislocation).

**Group 3:** Home related injuries (e.g., burn and cut).

**Group 4:** School or playground injuries (e.g., nosebleeds and choking).

- c. Provide each group with reference materials such as printed handouts, first-aid guides if available or guide them to access digital resources to gather information. Each group uses their digital devices and other research materials to investigate their assigned category, answering the following:

i. What are the common types of injuries in this category?

ii. What activities or situations lead to these injuries?

iii. What are the treatments or first-aid measures for these injuries?

iv. What is the nature of the injury (e.g., what causes cuts or sprains)?

v. What is the step-by-step first-aid treatment to apply?

vi. What materials or equipment are needed for treating them? (e.g., bandages, ice packs).

- d. Give groups time to search and organise their findings into simple presentation format (e.g., slides, posters, or short verbal presentations). Allow groups to decide which format to use. Encourage learners to include visuals like charts, images or infographics to enhance their presentation. Each group presents their findings to the class. After each presentation, invite other learners to ask questions or share additional insights. Facilitate a whole class discussion to enhance deeper understanding.

### **Practical Based Learning and Role Play**

- a. Guide groups to act out scenarios where they ‘treat’ a classmate using safe, simulated techniques (e.g., fake bandages, ice packs, splints, improvised slings, etc). Each group prepares a brief demonstration of the first-aid treatment. Assign roles to each group. For example:

**Group 1:** Shows how to clean and bandage a minor cut.

**Group 2:** Demonstrates the R.I.C.E (Rest, Ice, Compression, Elevation) method for sprains.

**Group 3:** Simulates how to stop a nosebleed using the pinch-and-tilt method.

**Group 4:** Displays how to protect and immobilise a fracture before seeking help.

Each group should be provided with a checklist to assess the first aid treatment provided during the role play.

- b. Assist learners to assign roles to members within their groups. Roles within the groups may include:

**Injured person(s):** A learner(s) acts out the role of someone injured. They are to realistically portray symptoms and responses (e.g., groaning in pain, showing where it hurts, etc).

**First responders:** Two or three learners provide first aid. They are to offer appropriate first-aid treatment based on the scenario.

**Observers:** The rest of the learners in each group evaluate the group's performance and provide feedback, using a checklist to evaluate the accuracy and effectiveness of the first-aid treatment, focusing on:

- i. correct assessment of the injury.
  - ii. proper use of first-aid materials.
  - iii. clear communication and teamwork.
  - iv. overall effectiveness of the response.
- c. Engage the observers to share their feedback with the various groups after the role play, highlighting the strengths and suggesting improvements. After sharing the feedback, facilitate a discussion, asking these and any other questions for better understanding of what has been done by the learners.
- i. What went well?
  - ii. What was challenging? etc.

Summarise key lessons from the scenarios, reinforcing correct first-aid techniques and strategies. Address any mistakes observed during the activity and emphasise the importance of practice and preparation in handling real-life emergencies.

## Key Assessment

### Level 1

1. Define the term first aid kit.
2. List three common injuries that require first aid treatment.
3. State where first aid kits should be stored in a home.
4. Identify two situations where immediate first aid treatment is necessary.
5. Identify three essential items found in a basic first aid kit (in addition to the items identified in the previous lesson).

### Level 2

1. Describe two accessibility features that make first aid kits usable in emergencies.
2. Explain why first aid kits should be stored in easily accessible locations.
3. Match the following injuries with the correct first aid treatment:

Choking →

Sprain →

Minor burn →

**Level 3**

1. Explain step-by-step how to manage a nosebleed in a child who is frightened.
2. Assess the importance of regularly checking and restocking a first aid kit

**Level 4**

1. Propose a plan to ensure first aid kits are accessible during a community event.
2. Design a checklist for maintaining the storage and accessibility of first aid kits in a school.
3. Write a reflective essay on how proper first aid management can prevent further complications in emergency situations.

**SECTION 8 REVIEW**

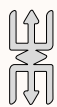
Section 8, part three provided learners with a comprehensive knowledge and understanding of first aid. By the end of the section, learners should have a foundational grasp of the concept of first aid, its core principles and basic procedures for administering first aid. In Week 17, learners explored the core concepts of first aid. This included, the history of first aid, the definition of first aid, first aid kits, first aid essentials (items) and their uses, core principles of first aid, the importance of first aid to an injured or sick person and the qualities of a good first aider. In Week 18, learners had the opportunity to explore storage guidelines and accessibility requirements of first aid kits, emergency numbers to use to access help during emergencies and some common injuries and emergency situations and how to apply first aid to them. The expected outcomes for these weeks are for learners to successfully demonstrate understanding of first aid, its principles and how to apply basic first aid procedures in emergency situations.



## APPENDIX F: MID-SEMESTER EXAMINATION

### Sample Table of Test Specifications

Weeks	Focal Area	Type of questions	DoK Levels				Total
			1	2	3	4	
13	African cloth parachute	Multiple choice	2	2	1	-	5
14	Underarm serve and digging reception in volleyball	Multiple choice	1	1	1	-	3
15	Reinforcement of underarm serve and digging reception in volleyball (Skill polishing)	Multiple choice	1	2	1	-	4
16	Zones and rotational order on the court in volleyball	Multiple choice	1	1	1	-	3
17	Concept of First Aid	Multiple choice	1	2	2	-	5
	Total		6	8	6	-	20



#### Note

Strictly set 30% DoK level 1, 40% DoK level 2, and 30% DoK level 3 and 4

## SECTION 9: TEAM SPORTS – PART FOUR

### STRAND: PHYSICAL ACTIVITY AND HEALTH

#### SUB-STRAND: SPORTS PARTICIPATION

**Learning Outcome:** *Demonstrate the ability to use core skills in performing individual and team sports (e.g., table tennis, netball, volleyball, hockey, etc.)*

**Content Standard:** *Demonstrate the ability to apply core skills in performing individual and team sports (e.g., Table tennis, netball, volleyball, hockey, etc.)*

#### HINT



- Learners' score on **individual project** and **mid semester examination** should be ready for submission to the STP.
- Remind learners about their **individual portfolio** and ensure that they are poised to get the portfolios ready by Week 23.

### INTRODUCTION AND SECTION SUMMARY

Field hockey (simply known as hockey in our part of the world) is a team sport. The game is played on a rectangular field using a flat side of stick with a curved head to play a solid plastic ball. The field measures 91.4m in length and 55m in width with a 23m line dividing the defensive and attacking areas.

The game involves two teams of 11 players, including a goalkeeper competing to score goals by using specially designed sticks to hit the ball into the opposing team's net. The stick is made of wood, carbon fibre, fibreglass and carbon, or a combination of carbon fibre and fibreglass in different quantities. The stick has two sides; one rounded and one flat; only the flat face of the stick is allowed to progress the ball. A player's hand is considered part of the stick if holding the stick. If the ball is "played" with the rounded part of the stick (i.e., deliberately stopped or hit), it will result in a penalty (accidental touches are not an offence if they do not materially affect play). Goalkeepers often have a different design of stick; they also cannot play the ball with the round side of their stick. During play, goalkeepers are the only players allowed to touch the ball with any part of their body.

Played on grass, artificial turf or indoor courts, the sport has a rich history dating back to ancient Egypt, Greece, and Persia. Modern field hockey, however, emerged in England during the 19th century and has since grown into a widely recognised sport, featured prominently in the Olympic Games and governed by the Fédération Internationale de Hockey (FIH). The game is characterised by its emphasis on speed, precision, and strategy.

Players work together to outwit their opponents while adhering to strict rules that ensure fair play. With its combination of physical intensity, technical skill, and tactical decision-making, field hockey offers players a unique platform for personal growth and team collaboration. Field

hockey also promotes key life skills such as resilience, discipline, and teamwork, making it a valuable sport for players of all ages and backgrounds.

This section will focus on rules of the game and some core skills such as grip technique, basic stance, pushing, dribbling and hitting which are needed to play the game as beginners.

**The weeks covered by this section are:**

**Week 19:** Apply core skills in performing individual and team sports (grip and pushing in hockey).

**Week 20:** Identify the core skills in hockey and apply them in a game (dribbling in hockey).

**Week 21:** Identify the core skills in hockey and apply them in a game (hitting in hockey).

## SUMMARY OF PEDAGOGICAL EXEMPLARS

Pedagogical exemplars for this section should focus on structured, engaging and progressive methods that build students' skills, understanding and confidence in the game. The approaches should integrate technical, tactical and physical elements of hockey with strategies for fostering teamwork, sportsmanship and critical thinking. Some of these approaches are Talk for Learning, Game-Based Learning and Collaborative Team Exercises. By combining these pedagogical exemplars and others a holistic learning environment that not only teaches the technical and tactical aspects of hockey can be created which will also instil values such as teamwork, discipline and perseverance in learners.

## ASSESSMENT SUMMARY

Assign tasks to cover the grip and hand positioning techniques, basic rules of hockey and core skills taught (pushing, dribbling and hitting). Tailour these tasks to align with learners' ability levels and the complexity of the concepts learnt. Employ structured talk-for-learning strategies, encourage collaboration and incorporate game-based approaches that engage mixed-ability and mixed-gender groups where possible. Allow learners to respond in diverse ways, such as oral descriptions, demonstrations or full performances. Create rubrics to evaluate their oral descriptions, practical demonstrations and overall skill execution, ensuring a fair and comprehensive assessment of their progress.

**Week 19:** Peer assessment

**Week 20:** Pop quiz

**Week 21:** Critiquing

## WEEK 19

**Learning Indicator:** Apply core skills in performing individual and team sports (e.g., grip and pushing in hockey)

### FOCAL AREA: RULES, GRIP AND PUSHING IN HOCKEY

#### Background

##### History of Hockey in the World

Hockey is one of the oldest known sports with its origins tracing back to ancient civilisations. Early forms of the game date as far back as 2000 BCE in Egypt, where carvings show people playing with sticks and a ball. Similar stick and ball games were also played in ancient Greece, Persia and China. The modern form of field hockey or simply hockey as is known today, began to take shape in England during the 19th century. British soldiers and settlers introduced the game to various parts of the world. The first formalised hockey club, the Blackheath Hockey Club, was established in London in 1861. Rules were standardised in 1875, leading to the game's widespread popularity.

In 1908, hockey made its debut as an Olympic sport for men at the London Games, with women's hockey joining much later in 1980. The Fédération Internationale de Hockey (FIH), the sport's global governing body, was established in 1924, paving the way for the organisation of international competitions, including the Hockey World Cup and the Champions Trophy. Today, countries like India, Pakistan, the Netherlands, Australia, Germany and Argentina dominate the global hockey scene.

##### History of Hockey in Africa

Hockey was introduced to Africa during the colonial period, as European settlers and colonial administrators brought the sport to the continent. Countries like South Africa, Kenya and Egypt were among the first to adopt the game, mainly in schools and colonial sports clubs. South Africa played a significant role in hockey development in Africa and has historically been one of the continent's strongest hockey nations. Kenya gained prominence in the mid-20th century, participating in international tournaments such as the Olympics during the 1950s -70s, where they showcased their talent against global hockey powerhouses. Egypt has also maintained a strong hockey presence in North Africa, particularly through local leagues and national competitions.

The African Hockey Federation (AfHF) was established in 1970 to oversee the growth and governance of hockey on the continent. African nations now compete in continental tournaments such as the African Hockey Cup of Nations, which serves as a qualifying event for global competitions. Despite limited resources and infrastructure in many parts of Africa, the sport continues to grow, with increasing efforts to develop grassroots hockey programmes and improve participation among youth and women.

##### History of Hockey in Ghana

Hockey in Ghana was introduced during the colonial era by the British, who used the sport to engage with their communities and schools. The game quickly gained popularity, particularly in major cities such as Accra and Cape Coast. In 1961, the Ghana Hockey Association (GHA)

was established to promote and manage the sport in the country. Hockey became a formalised sport within Ghana's educational system and clubs, leading to its steady growth.

Key milestones in Ghana's hockey history include:

**1968:** Ghana participated in the Olympics for the first time, marking a major achievement for the nation's hockey profile.

**2009:** Ghana hosted the African Hockey Cup of Nations in Accra, which helped showcase the country's commitment to developing the sport and improving facilities, including the construction of the National Hockey Stadium.

Over the years, Ghanaian hockey teams, including men's, women's and youth sides, have participated in regional and continental competitions. Hockey remains one of Ghana's notable sports, particularly in schools and among security services like the police and armed forces, which maintain strong hockey teams. Efforts to promote hockey among women and youth continue, with initiatives to improve coaching, infrastructure and player development.

Hockey has a rich history globally, rooted in ancient traditions and modernised in England. Africa embraced the sport during colonial times, with nations like South Africa, Kenya, and Egypt leading its development. In Ghana, the sport has grown progressively since its introduction, achieving regional success and fostering a strong hockey culture across schools and communities.

## The Basic Rules of Hockey

### 1. Teams

- a. **Number of Players:** Each team consists of 11 players on the field, including a goalkeeper.
- b. Substitutions are allowed during the game.

2. **Match duration:** A match is played in four quarters, each lasting 15 minutes. There are breaks between quarters, including a 10-minute halftime interval.

### 3. Starting and restarting play

- a. **Starting the game:** The game begins with a centre pass from the halfway line. The ball must be passed to a teammate, and the opposing team must stay at least 5m away.
- b. **Restarts:** After a goal, play restarts with another centre pass. For sideline balls, free hits or penalty corners, the ball must be stationary before being played.

4. **Scoring goals:** A goal is scored when the ball is played into the opposing team's goal, crossing the goal line completely. The ball must be struck or touched by an attacker within the shooting circle (or D).

5. **Ball in play:** The ball remains in play as long as it stays within the field boundaries. If it goes out, play restarts with one of the following:

- a. **Sideline hit:** Awarded to the opposing team when the ball crosses the sidelines.
- b. **Long corner:** Awarded to the attacking team if the ball is unintentionally played over the backline by a defender.
- c. **16-yard hit:** Awarded to the defending team when the attacking team causes the ball to go out over the backline.

### 6. Fouls and violations

**Players must not:**

- a. **Use the back of the stick:** Only the flat side of the stick can be used to hit the ball.
- b. **Raise the stick dangerously:** High swings or dangerous stick usage are prohibited.
- c. **Obstruct play:** Blocking opponents from reaching the ball with the body, stick or any other means is not allowed.
- d. **Play the ball above the shoulder:** Except when attempting to stop or deflect a midair ball.
- e. **Shield the ball:** Players cannot use their body to shield the ball from opponents.
- f. **Commit physical contact:** Pushing, tripping, or intentionally interfering with an opponent is a foul.

**7. Penalty situations**

- a. **Free hit:** Awarded for minor fouls outside the shooting circle. The ball must travel 5m before entering the circle.
- b. **Penalty corner:** Awarded for defensive fouls within the shooting circle or deliberate offences in the defensive 23m area.
  - i. The attacking team places the ball on the backline, 10m from the goal.
  - ii. Defenders are positioned behind the goal line, with only the goalkeeper guarding the goal.

8. **Penalty stroke:** Awarded for serious fouls preventing a certain goal. The attacker takes a direct shot at goal from the penalty spot with only the goalkeeper defending.

9. **Offside rule:** Hockey no longer has an offside rule. Players can position themselves anywhere on the field, encouraging attacking play.

10. **Substitution:** Substitutions are rolling and can occur at any time, except during a penalty corner. Players entering must do so from the substitution area.

**11. Umpiring and discipline**

Two umpires control the game, ensuring rules are followed. They may penalise players for:

- a. **Green card:** A warning, resulting in a 2-minute suspension.
- b. **Yellow card:** Temporary suspension for 5–10 minutes.
- c. **Red card:** Permanent suspension for severe violations, leaving the team with one less player.

**The Hockey Stick**

Used to control, pass and hit the ball, the hockey stick is the most essential piece of equipment in field hockey. It is normally made from wood, fibreglass, carbon fibre or a combination of these materials to provide durable, strong and flexible sticks.



**Figure 19.1:** Hockey stick

## Structure and Features of the Stick

Choosing the right stick is important for enhancing a player's comfort, skill execution and overall performance on the field. The stick has two main parts namely the handle and head:

1. **Handle:** The handle is the long and straight upper part of the stick.
2. **Head:** The head is the curved lower end that is used to play the ball with a flat side (used for hitting and controlling the ball) and a rounded back. The flat side of the stick is the only part used by both field players and goalkeepers to play the ball.

**Shape and size:** Hockey sticks come in various lengths and weights to suit players' height, position and playing style. The standard length of hockey sticks ranges from 28 to 38.5 inches.

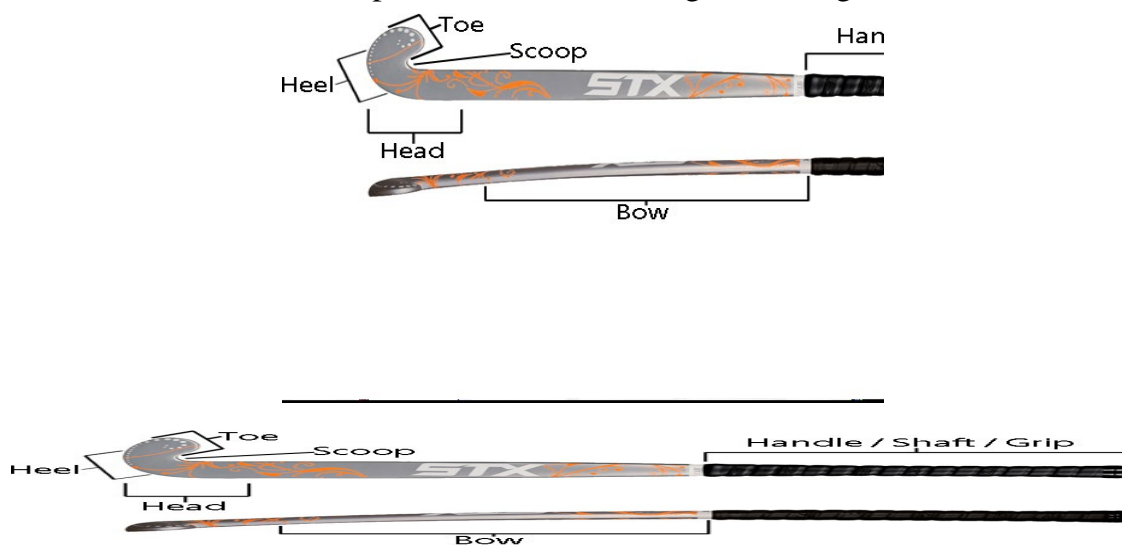
**Toe:** The toe is the part of the head that makes contact with the ball. The toes are shaped or designed differently for different playing styles.

**Bow:** The bow is the slight curve along the stick's length that helps with ball control, lifts and for drag flicks.

**Heel:** The heel of the hockey stick is the rounded section where the shaft (handle) meets the head.

It is located at the back of the flat side of the head which acts as a pivot point when the stick moves between different angles for hitting, dribbling or tackling.

**Scoop:** The scoop of the hockey stick is the slightly concave curve or the indentation along the playing surface on the head or shaft on the stick. This designed part is to improve ball control, precision and the execution of specific skills like lifting or flicking the ball.



**Figure 19.2:** Parts of the hockey stick

## The Hockey Ball

The hockey ball is a small, hard and durable sphere used in field hockey. It is designed to roll smoothly on various playing surfaces, including grass, turf and artificial pitches.

**Material:** The ball is normally made of hard plastic with a hollow or solid core which ensures durable and consistent performance.

### Size and weight

1. The circumference of the ball is around 224-235 mm.
2. The weight of the ball ranges between 156-163 grams.

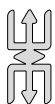
**Surface:** The surface of the ball has a dimpled texture to reduce friction and improve control on wet or artificial surfaces.

**Colour:** Traditionally the colour of the ball is white, but other colours like orange or yellow are also used for better visibility in different playing conditions.

The hockey ball's design ensures speed, accuracy and consistency which makes it suitable for high-paced and skilful gameplay.



**Figure 19.3:** *Different colours of hockey balls*



### Note

Although hockey is not played in some schools due to the lack of hockey sticks and balls due to the high prices of stick, ball and the goalies' attire, teachers are encouraged to assist learners to improvise. Teachers are to provide learners with the necessary dimensions and measurements to guide them create or develop the sticks and the balls from the many bamboos and strong trees in learners' communities and campuses. Show learners pictures and videos of what hockey sticks and ball looks like to give them a clear understanding of the equipment and assign them the task to craft one for themselves. Teachers will be amazed by the near perfect hockey sticks and balls they will come up with. Give it a try.

## Core Skills in Hockey

Core skills in hockey are the fundamental techniques that enable players to perform successfully and excel in the game. These skills form the building blocks for both individual performance and team success. From grip and hand positioning to more advanced techniques like dribbling, passing, hitting and tackling. Mastering these abilities ensures better control, precision, and decision-making on the field. Developing core skills not only enhances technical proficiency but also improves players' confidence, tactical awareness and overall gameplay. Whether playing in attack, midfield, defence or as a goalkeeper, understanding and applying these essential skills is key to excelling in hockey.

## The Grip and Hand Position

In field hockey, the grip refers to how a player holds the hockey stick to control the ball, pass or hit the ball effectively. Proper grip is fundamental to mastering key techniques, as it provides stability, control and flexibility during play. There are different types of grips in field hockey and each serves a specific purpose depending on the skill or situation.

### Types of Grips in Hockey

#### Basic grip

The basic grip which is also known as the standard or the double 'V' grip is the most common and the fundamental way to hold the stick used for dribbling, pushing, passing, hitting, slapping or shooting.

**Hand position:** The hand position for this basic grip is holding the stick with the left hand placed at the top of the stick firmly with the knuckles pointing forward (creating a 'V-shape' between the thumb and the index finger or forefinger which align with the flat face of the stick). This hand mainly controls the direction of the stick. While the right hand is placed lower down on the stick, slightly looser (roughly halfway) the stick.

**Purpose:** The purpose of this grip or hold is to provide stability, accuracy, flexible movement, better ball control, quick transitions between skills and greater power when executing hits or shots



Figure 19. 4: Basic grip, standard grip or the double 'V' grip

#### Reverse Grip

This is a technique where the stick is held in a non-standard way with the hands positioned in reverse compared to the usual grip or hold. This grip is used when players need to control, pass, or stop a ball or puck a ball while using the back of the stick.

**Hand position:** The left hand remains at the top of the stick and grips it firmly. The wrist rotates so the flat side of the stick faces outwards, enabling the player to use the reverse side with the knuckles of the left hand facing upwards and the thumb and forefinger creating a secure 'V-shape' along the handle. The right hand is placed lower on the stick, just above the middle or closer to the head, depending on the required precision. The right hand lightly guides the stick while allowing enough flexibility to manoeuvre the ball. The palm of the right hand faces downwards with fingers wrapped loosely around the handle to facilitate control.



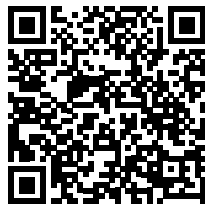
**Figure 19.5:** *The reverse grip*

**Frying pan grip:** In this grip, the stick is held in two hands with the flat side facing upwards. This grip is used for reverse stick sweep, reverse stick flat hit.

**Hand position:** Both hands together at the top of the stick. The ‘V’ formed by the thumb and index fingers of both hands are in line with the flat side of the stick

Watch the following video on types of grips used in hockey:

[Hockey Drills Grips Coaching Skills Hockey Coach | Sportplan](#)



## Basic Stance

The basic stance in hockey is the ready position that allows players to maintain balance, react quickly and execute skills effectively. A proper stance ensures stability, control and the ability to transition smoothly during play.

## Key Components of The Basic Stance in Hockey

### 1. Body position

- a. **Feet:** Feet are positioned shoulder-width apart to create a stable base of support. This stance helps players maintain balance and prevents tipping over when moving or engaging in physical challenges. Feet should point slightly forward to allow easy pivoting and directional changes.
- b. **Knees:** Knees are bent at a comfortable angle to ensure flexibility and reduce strain on the lower body. Bent knees lower the centre of gravity which increases stability and allows for quicker reactions to sudden changes during play.
- c. **Hips:** Hips are slightly pushed backward with the body leaning forward slightly. This posture ensures readiness to lunge or sprint in any direction.
- d. **Weight distribution:** The body weight is balanced evenly on both feet with weight shifted slightly forward onto the balls of the feet to enable quick directional changes. This positioning keeps players light on their feet, allowing for swift movements and explosive bursts of speed when necessary.

## 2. Stick position

The stick is held using the basic grip with the left hand firmly at the top of the stick and the right hand placed lower to guide its movement. The flat side faces down and is positioned in front of the body close to the ground, angled towards the ground for quick engagement with the ball. The basic grip ensures flexibility and control allowing players to quickly engage with the ball. The stick angle should be low enough to intercept passes or tackle opponents effectively while still enabling the player to move freely without overstretching the arms.

## 3. Upper body

- a. **Back:** The back is straight but slightly leaning forward. This position avoids strain on the lower back while providing a strong posture for quick movements. A rounded back can hinder agility and lead to muscle fatigue.
- b. **Head:** The head should be kept up to maintain spatial awareness. Looking forward allows players to scan for teammates, opponents and potential plays. Constantly looking down at the ball limits situational awareness and delays decision-making during the game.
- c. **Hands:** The hands hold the stick firmly but not rigidly. A relaxed grip allows for smoother transitions. Gripping too tightly can restrict movement and exhaust the hands over time.
- d. **Arms:** The elbows are bent slightly, keeping the arms flexible and ready for action. Stiff or overly extended arms can reduce control and reaction speed. This positioning allows for better manipulation of the stick, especially when performing precise actions such as quick passes, tackles or subtle dribbles. Arms are held close to the body to maintain control and reduce openness to challenges from opponents.

## Purpose of The Basic Stance

The main aim of the basic stance is to:

1. **improve mobility:** Maintaining a semi-crouched position with weight on the balls of the feet allows players to move quickly in any direction, whether forward to attack, backward to defend or sideways to intercept.
2. **provide better balance:** Good balance gives a wide, stable base which helps prevent players from losing their footing during play.
3. **get players ready:** The basic stance ensures players are always prepared to respond to game situations. This help players to be in position to intercept, defend or attack.
4. **enhance control:** A good stance allows players to maintain better control of their stick and the ball. This ensures players are prepared to handle the ball or make quick decisions under pressure, accurately passing to teammates or executing skilful tackles without committing fouls.

## Common Mistakes to Avoid

1. **Standing too upright:** Players who stand straight with locked knees are slower to react and struggle with balance leading to reduced speed and agility. An upright stance reduces the ability to lunge for tackles or respond quickly to opponents' movements.

2. **Weight on heels:** Placing weight on the heels limits quick movements and makes it harder to shift direction making it harder to react quickly. Players with weight distributed incorrectly are more likely to be outpaced or lose balance when attempting tackles or sprints.
3. **Stick too far from the body:** Holding the stick away from the body reduces control and precision. A distant stick makes it harder to intercept passes or dribble effectively, increasing the likelihood of losing possession.
4. **Looking down too often:** Constantly watching the ball instead of scanning the field limits spatial awareness which cause players to miss opportunities to pass, intercept or position themselves effectively when they do not keep their heads up.

## Passing in Hockey

Passing in hockey is the act of transferring the ball from one player to another during a game. It is a skill used to maintain possession, create scoring opportunities and advance the ball strategically across the field. Effective passing is important for teamwork, coordination and tactical play, as it allows players to outwit opponents and maintain control of the game.

## Types of Passes

Different passes are used based on the game situation and distance between players. The types of passes are:

1. **Push pass:** This is a short, accurate pass where the ball remains in contact with the stick throughout the motion. It is mostly used in close quarters play or penalty corner injections.
2. **Hit pass:** This a more powerful pass, where the ball is struck with a swinging motion of the stick. It is suitable for long-distance passes or clearing the ball from the defensive area.
3. **Slap pass:** This a pass that involves a shorter backswing than a hit, providing moderate power and better control. It is often used for medium distance passes and when aiming for precision.
4. **Flick pass:** This a lofted pass that lifts the ball off the ground, often used to bypass opponents. It requires good technique to control the lift and direction.
5. **Aerial pass:** A high, long-distance pass that sends the ball over the heads of players. It is useful for switching play or escaping heavy pressure in crowded areas.
6. **Bunt pass:** This is a technique used to pass the ball to a teammate while maintaining control and precision. It involves using the flat side of the stick to gently tap or bunt the ball rather than hitting it with force.

## Elements of a Good Pass

1. **Accuracy:** This is sending the ball to reach the intended teammate or target without interception or deviation. Aim for the stick or an area where the teammate can easily receive the ball.
2. **Power:** This is the force applied to the ball to match the situation. A strong hit is necessary for long passes, while a light push suitable for close-range play.
3. **Timing:** This is passing the ball at the right time to maximise its effectiveness. Delayed passes can lead to missed opportunities or interceptions.
4. **Direction:** This is delivery a guided pass to teammates towards advantageous positions, such as open spaces or attacking zones for possible shooting.

## Common Mistakes in Passing

1. **Inaccuracy:** Poorly aimed passes that results in turnovers.
2. **Weak power:** Insufficient force that makes the ball easy to intercept. Use appropriate power based on distance.
3. **Telegraphing the pass:** Indicating the intentions to pass too early, allowing the opponents to anticipate and intercept. Use deceptive body movements to disguise passes.
4. **Lack of communication:** Failing to communicate with teammates leads to missed opportunities or misinterpretations.

## Push pass

The push pass in hockey is a short, controlled and precise pass that involves a smooth motion where the ball being pushed stays in contact with the stick, allowing for better accuracy and control. The push is ideal for short, quick and accurate passes to teammates during fast-paced game. It is often used in tight spaces where other techniques like hitting or slapping may not be suitable. It is commonly used to inject the ball during penalty corners as it provides the precision needed to set up scoring opportunities.



Figure 19. 6: *Pushing in Hockey*

## Executing The Push Pass in Hockey

### Starting Position

1. **Grip:** Hold the stick using the basic grip with the left hand placed at the top of the stick firmly the right hand placed just above the middle closer to the head with the flat side of the facing down and positioned in front of the body.
2. **Body position:** Take the basic stance by standing with feet shoulder-width apart, knees slightly bent, hip slightly pushed backward with the body leaning forward slightly and the body weight evenly balanced on both feet.
3. **Ball placement:** Place the ball slightly in front of the body to ensure a full and effective motion while keeping control of the ball. Avoid placing the ball too far forward or close to the body, as this limits the stick's range of motion and reduces the power and accuracy of the push.
4. **Stick position:** Position the stick in front of body but close enough to remain in control during the forward motion. Hold the stick at a slight angle to keep it close to the ground, ensuring the ball remains on the grass throughout the push. Keep the flat side of the stick in full contact with the ball at all times during the motion. This helps maintain control and improves accuracy. Correct stick handling ensures effective contact and control over the ball.



**Figure 19. 7:** *Correct stance, stick and ball placement*

## The push motion

1. The actual movement of the push involves coordinated actions between the upper body, lower body and stick.
2. **Weight transfer:** Shift the weight of the body from the back foot to the front foot as the ball is pushed forward. This transfer of weight adds power to the push while maintaining balance. The shift should be smooth and controlled, avoiding sudden movements that may affect accuracy.
3. **Arm and wrist action:** The controlled forward movement of the arms and the stick should be used to guide the ball forward. The engaged wrists should maintain constant contact between the stick and the ball to ensure smooth motion. Avoid jerking or snapping the wrists, as this can lead to inconsistent push or passes.
4. **Ball contact:** The ball should remain in contact with the stick throughout the push. This ensures better control and allows for more precise passes. Avoid ‘tapping’ the ball, as this can disrupt the smoothness of the push and reduce accuracy.
5. **Follow through:** A proper follow-through completes the motion and ensures accuracy and direction.
6. **Arm extension:** Extend the arms fully in the direction of the push, following the path of the ball. Ensure the stick remains low and close to the ground to keep the ball on the ground or grass.
7. **Body alignment:** The body should naturally follow the motion of the push with the weight shifted onto the front foot.

## Tips for Effective Pushing

1. **Maintain control:** Keep the ball close to the stick throughout the motion to avoid losing possession. This is especially important in tight spaces or during high-pressure gameplay.
2. **Engage the entire body:** Use legs, hips, shoulders and arms to generate power and precision. The pushing technique relies on coordinated body movement not just arm strength.
3. **Practice accuracy:** Aim for specific targets during training to improve precision. Practicing over time will enhance the ability to deliver accurate passes during matches.
4. **Adjust power as needed:** Use more force for longer passes but maintain control. For short passes focus on precision over power.

## Common Mistakes to Avoid

1. **Lifting the ball:** This happens when the stick angle is too steep, or the motion is jerky. Always keep the stick low to the ground and to maintain a smooth motion. Lifting the ball unnecessarily can disrupt play or lead to fouls.
2. **Weak push:** A weak push occurs when there is insufficient weight transfer or wrist engagement. All the time focus on using the entire body to generate power.
3. **Poor ball placement:** Starting with the ball too far forward or too close to the body restricts the range of motion, reducing power and accuracy. Correct placement allows for an optimal push.
4. **Abrupt movements:** Jerking the stick forward or stopping the motion too soon affects accuracy and reduces the smoothness of the push. Always complete the motion with a proper follow-through.



Figure 19.8: Pushing in hockey

### Learning Tasks

1. Describe the basic stance and grip in hockey.
2. Demonstrate the basic stance and grip in hockey.
3. Demonstrate the push pass in hockey.

## Pedagogical Exemplars

### Activity

#### 1. Starter/warm up – Traffic jam

The objective of this activity is to improve awareness, quick decision making and reaction time.

#### Setup

Use cones or markers to create a road map with clear paths, intersections and curves. Include parking zones or rest stops marked with by cones where specific tasks will be performed.

### Commands and actions

**Green light:** Jog around the designated paths.

**Yellow light:** Walk slowly.

**Red light:** Freeze in place.

**Roundabout:** Spin in place.

**U-turn:** Reverse direction and go back the way they came.

**Speed rump:** Perform 3 jumping jacks before continuing.

**Flat tyre:** Hop on one leg for five steps.

**Car wash:** Pretend to scrub their cars with exaggerated arm movements while jogging in place.

**Traffic jam:** Gather in a group and jog on the spot together.

**Out of fuel:** Sit down and perform 5 bicycle kicks before resuming movement.

**Roadblock:** Learners form a line and sidestep together for 10 steps.

### Instructions

**Start simple:** Begin with the very simple commands to get learners familiar with the concept.

**Increase complexity:** Gradually introduce advanced commands and speed up instructions.

**Add intersections:** Create intersection with cones where learners must decide their direction (e.g., turn left or turn right).

**Obstacle course:** Place cones or other small objects that learners must avoid, jump over or move around while following commands.

**Time:** Decide how long learners must engage in the activity.

## 2. Introductory activity

After the warm-up briefly take learners through the history of hockey.

## 3. Main Activity

### Talk for Learning

Arrange hockey equipment (sticks, balls, goalpost, etc.) at various stations around the class or field and label each station with brief information. For example:

**Station 1:** Hockey stick – this is used to hit the ball. Take note of its shape and handle.

**Station 2:** Hockey ball – this is what players aim to move into the goal.

**Station 3:** Goalpost – teams try to score here.

**Station 4:** Safety rules – keep sticks low, no rough play and always stay aware. Lead and guide the whole class from station to station. At each station, explain and ask questions.

### Sample questions to ask at each station:

**Station 1:** How do you think the shape of the stick helps in playing the game?

**Station 2:** Why is the ball small and hard? How should we handle it safely?

**Station 3:** Why do you think scoring is an essential part of the game?

**Station 4:** What are some safety rules we can come up with as a class during a practical session for hockey.

Encourage learners to ask questions after the explanations at each stage or share what they know about the game of hockey. After visiting all the stations, lead learners through a quick discussion about the basic rules on starting and restarting the game, scoring, ball and stick rules, fouls and penalties. Allow learners to ask questions and clarify any misunderstandings and let them know the skill they will be learning.

### **Talk for Learning and Collaborative Learning**

#### **Stationary push**

Organise learners into small mixed-ability groups and provide a clear demonstration of the correct grip (hands spaced appropriately on the stick), body posture (low stance with knees bent) and the smooth pushing motion. Ensure learners observe these techniques attentively. Arrange the groups in lines behind a starting line facing the same direction, each group equipped with a ball and hockey sticks. Learners take turns pushing the ball within their groups, focusing on accuracy and technique. Begin with slow and deliberate movements to ensure a proper understanding of the basic mechanics of the push. Instruct learners to push the ball into open space without a fixed distance or specific target. Under the teacher's command, the first learners in each group push simultaneously, followed by the next learners in line, who retrieve the balls and also push. All pushers rejoin their lines at the back. This sequence of pushing and retrieving continues, minimising the risk of accidental contact with the ball. Emphasise keeping the ball close to the stick throughout the push and encourage learners to follow through in the desired direction of the ball. Move round the groups and correct and assist learners where necessary.

#### **Push through cones**

Arrange cones in a straight line spaced 1 metre apart. Adjust the spacing based on the abilities of learners. Pair learners and assign each pair a ball and hockey sticks and have them stand 5 meters apart. Position one learner of each pair at the starting end of the cone line and the other at the opposite end. The learner at the starting point pushes the ball, aiming to pass it through the gaps between the cones. The receiving partner stops the ball using proper stopping techniques and pushes it back through the same gaps.

Learners take turns pushing and receiving for 5 minutes per session. Increase the cone gap for easier movement of balls for struggling learners and allow them to take their time to focus on accuracy without rushing. Provide one on one guidance or additional demonstrations to reinforce the technique for them.

For advanced learners, narrow the cone gaps to challenge their precision and introduce a time limit for completing a set number of pushes. Encourage them to increase the force of their pushes while maintaining accuracy. Increase the distance between the pairs to 6 and 8 metres for added difficulty.

Have learners take one step forward after each push, following the ball through the cones before retreating to their original positions. Challenge pairs to complete a set number of accurate pushes within a given time and award points for successful pushes through the cones without touching them to improve learners' performance.

Encourage learners to keep their eyes on the target and focus on controlled force to maintain accuracy. Ensure learners know the importance of a low body stance for better balance and power generation. Reinforce smooth wrist action and proper follow through to guide the ball accurately.

Provide constructive feedback during the drill to boost confidence and improve performance. Make sure learners maintain a safe distance from one another to avoid accidental contact with sticks or balls and emphasise the need for proper ball control to prevent wild swings or high pushes.

### **Push accuracy knockdown**

Use small and stable items like cones, skittles or plastic bottles as targets 5 metres away from a starting line. Divide learners into small groups based on their skill levels. Provide each group with a designated target area to minimise congestion. Ensure the targets are spaced at least 1 metre apart to avoid interference between groups.

Groups stand at the starting line with a clear view of their target. One at a time, learners take turns pushing the ball to knock down their assigned target. After each attempt, the learner retrieves the ball and joins the back of the line. Once all group members have taken a turn, learners rotate to a new position for a different angle.

Encourage teammates to support one another during attempts. Teach learners to visualise their target before pushing and follow through in the target's direction.

Introduce cones or markers between the starting line and the target to simulate obstacles and ask learners to manoeuvre the ball around the obstacles before attempting the target. Observe and correct any improper techniques such as raising the stick too high or improper grip. Stress the need to control the force apply to prevent balls from rolling beyond the target area. Have learners retrieve balls safely to avoid injury.

### **Mini-Game: Push and score**

This is to improve learners' pushing technique, accuracy and teamwork in a fun but competitive environment.

Mark out two lanes, each about 10 metres long and 2 metres wide using cones or markers. At the end of each lane, place a target zone consisting of small cones, skittles or bottles to be knocked down. At least three targets of different sizes per team in their target zone, arranged at different intervals. Mark a start line at the opposite end of the lane. Divide learners into two or more equal teams of players. Line up teams behind the start line. Designate safe zones for learners waiting their turn to stand clear of the action.

### **Game rules**

*Each team takes turns:* The first learner pushes the ball along the lane, aiming to knock down a target in the target zone.

*After the push.*

If a target is knocked down, the team scores 1 point and if no target is hit, no points are scored and the learner retrieves the ball and runs back to the line and the next learner repeats the process. The game continues until every team member has had two turns.

**Scoring system**

1 point for each target knocked down.

**Bonus points:** Bonus of 2 points is awarded for hitting the smallest or farthest target in the zone.

**Penalty rules:** 1 point is deducted for any learner who lifts the ball instead of keeping it grounded during the push and a point is deducted if learners cross the boundaries of the lane with the ball.

**Winning the game:** The team with the highest score at the end of the game wins.

**For less skilled learners**

1. use larger targets or place them closer to the start line.
2. allow learners to take multiple attempts without penalty to knock down a target.
3. give verbal cues and guided feedback during their turn.

**Key Assessment****Level 1**

1. Which part of the stick is mainly used to execute a push pass in hockey?
2. Identify two key advantages of using a push pass hockey.

**Level 2**

1. Describe the hand positioning and grip technique in hockey.
2. Describe the steps involved in executing the pushing technique in hockey.

**Level 3**

1. Identify two common mistakes players make when executing a push pass and explain how to correct them.
2. Demonstrate the hand positioning, grip and push-pass techniques in hockey.

## WEEK 20

**Learning Indicator:** Identify the core skills in hockey and apply them in a game (e.g., dribbling in hockey)

### FOCAL AREA: DRIBBLING IN HOCKEY

#### Dribbling in Hockey

Dribbling in hockey is the skill of moving the ball along the field or ground using small and controlled taps or pushes with the stick to advance the ball across the field. It is a skill that enables players to dodge and avoid opponents to maintain possession and to create scoring opportunities. Dribbling is important when navigating tight spaces, bypassing defenders or when there is no immediate passing option. It also allows players to create openings for their teammates.



**Figure 20.1:** *Dribbling in hockey*

#### Types of dribbling in hockey

- **Straight dribbling:** This type of dribbling involves keeping the ball close to the stick and moving it in a straight line using quick but gently tapping and small touches while moving forward. It is normally used in open spaces while advancing with the ball without interference. It is effective for maintaining control while advancing quickly.
- **Indian dribbling:** This dribbling technique contains rapidly shifting the ball from one side of the stick to the other or moving the ball from left to right using the flat and rounded sides of the stick. It is mainly useful for avoiding and confusing defenders and creating space.
- **V-dribbling:** In this dribbling skill, the ball is pushed forward and then pulled back diagonally to the opposite side, creating a V-shape. This is effective for changing direction quickly to avoid tackles.
- **Pull-back dribbling:** This dribbling technique involves pulling the ball backward to avoid an opponent's tackle followed by a quick direction change to retain possession.
- **One-handed dribbling:** This is the type of dribbling where either the left or right hand alone is used to hold the hockey stick to control and move the ball forward. This technique is used when a player needs to extend their reach or maintain speed while dodging opponents. It is very useful in situations where the player needs to stretch to keep possession of the ball or perform quick evasive moves.



*Video on the types of dribbling in hockey*

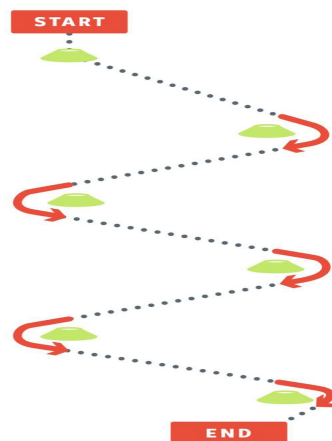
## Importance of dribbling

Dribbling helps players to

1. Maintain control and possession of the ball.
2. Bypass opponents with the ball.
3. Set up opportunities for passes or shots on goal.

## Techniques for effective dribbling include:

- **Proper grip on the stick:** Players should use a firm but flexible grip with the left hand at the top of the stick for control and the right hand lower for easy movement of the ball.
- **Body posture and balance:** Players should adopt a low stance with knees slightly bent and weight distributed evenly for stability.
- **Eye coordination:** Maintaining a balance between watching the ball and scanning the field is important for effective decision-making. That is having good eye coordination helps to see teammates to pass to, an opponent to dodge or a chance to take a shot at a goal.
- **Stick positioning:** The stick should remain close to the ball with smooth movements to guide the ball rather than hitting it forcefully.



**Figure 20.2:** *Dribbling through cones*

## Common Mistakes in Dribbling

1. **Poor ball control:** Hitting the ball too hard or failing to keep it close to the stick, can lead to loss of possession.

2. **Looking down:** Constantly watching the ball instead of both the ball and the field, reduces awareness of opponents and teammates making them vulnerable to tackles or missing passing opportunities.
3. **Overusing dribbling:** Excessive dribbling instead of passing, slows down play or may cause missed opportunities.
4. **Ineffective grip on the stick:** Holding the stick too tightly or incorrectly reduces movement.
5. **Lack of directional control:** Struggling to change direction smoothly while dribbling.
6. **Poor posture and balance:** Standing upright or off-balance, makes it harder to control the ball and react to opponents.
7. **Inconsistent speed control:** Dribbling too slowly or losing control of the ball at high speeds.



**Figure 20.3:** *Practising dribbling*

## Using Dribbling in Game Situations

In a game situation, dribbling is used for:

1. **Dodging opponents:** Dribbling allows players to move around defenders effectively especially in one-on-one situations.
2. **Transitioning:** Dribbling in switching between dribbling and passing, such as when advancing the ball and then finding an open teammate to pass to.
3. **Strategic play:** Dribbling is used to draw defenders out of position to create space for teammates to exploit.

### Learning Tasks

1. What is dribbling in hockey?
2. Identify four (4) types of dribbling in hockey.
3. Why dribbling in hockey is important?
4. Describe how to perform the straight and the Indian dribbling techniques.
5. Demonstrate how to execute the straight and the Indian dribbling techniques.

## Pedagogical Exemplars

### Activity

#### Started/Warm up - Shape sprint challenge

Mark out a large rectangular area using cones or markers and assign a specific shape or movement to each side. Use visual aids to help learners remember each action.

**Side 1 (Circle):** Jog in a circular motion.

**Side 2 (Triangle):** Sprint, changing direction sharply at three points.

**Side 3 (Square):** Side-step while facing the rectangle.

**Side 4 (Zig-zag):** Weave through small cones.

Place a visual guide near the area to remind learners of the assigned shapes and movements. Alternatively, write these on a portable board or large sheet for easy reference.

Begin by explaining the warm-up to the learners. Emphasise that each side of the rectangle corresponds to a shape and its associated movement. When a shape is called out, learners must quickly move to that side and perform the specified action. Have learners jog around the rectangle at a moderate pace for about a minute to get comfortable with the layout. Call out one shape at a time. For example, call 'circle' and learners move to Side 1 to jog in a circular motion. Call 'Triangle' and they sprint to Side 2, changing direction sharply at each point.

**Combine shapes:** Call out two shapes in succession. Example, 'circle', then 'square'. Learners move to **Side 1**, complete the action before transitioning to **Side 3**. Occasionally, ask learners to recall the shapes they just completed before moving to the next one.

**Team dynamics:** Divide learners into groups. Each group moves together, working to stay coordinated while performing the actions. Gradually shorten the time between shape calls to challenge learners' agility and focus. Keep the energy high by cheering learners on and encouraging teamwork. As the warm-up ends, slow the pace by reducing the calls and transitioning into light jogging or walking. Bring the group together for simple stretches, such as toe touches, side bends, and arm circles, to help them relax and prepare for the main activity.

#### Main activity

##### Group Based and Collaborative Learning

##### Straight line dribbling

Divide the learners into mixed-ability groups and demonstrate the technique for dribbling in a straight line. Encourage learners to closely observe the demonstration and then practise what they have seen within their groups for five minutes. After this initial practice, set up a line of cones or markers spaced 5 to 10 metres apart in straight lines. Each group begins at one end of the line, dribbling the ball through the cones while maintaining control and staying within the designated path.

Emphasise the importance of keeping the ball close to the stick and using both the inside and outside edges of the stick to guide the ball well. Encourage learners to dribble at a steady and controlled pace and to keep their heads up to remain aware of their surroundings.

For learners who find the dribbling challenging, use fewer cones with wider spacing and allow them to move at a slower pace to focus on control the ball rather than speed. Provide additional support by guiding their hands on the stick and helping them move the ball through the cones to reinforce the correct technique.

### **Straight dribble and stop**

Set up a small target or mini goalpost at the end of the dribbling path. In their groups, learners dribble the ball straight towards the target. On hearing a whistle or command, they bring the ball to a complete stop, ensuring control by using the flat side of the stick with gentle pressure to prevent the ball from bouncing away. They change direction by dragging the ball to the opposite side of the path and dribble back to their starting point.

Emphasise maintaining control throughout and encourage learners to reduce the number of touches on the ball to improve speed and efficiency. For less skilled learners, allow additional touches and a slower pace to focus on mastering the change of direction before increasing speed.

### **Indian dribble - ball control practice**

Set up a straight line of cones spaced 10 to 15 metres apart to create a controlled practice area. Learners start at one end, using the flat side of the stick to push the ball gently to the left, then to the right, replicating the Indian dribbling technique. Learners continue switching the ball back and forth between the left and right sides of the stick as they dribble along the line.

Learners who find the skill challenging should be encouraged to focus on slow, deliberate ball movements, using large, controlled touches. Emphasise keeping the ball close to the stick and utilising the inside edges of the stick for better control.

### **Combining both dribbling techniques – straight and Indian dribble**

Using the same setup as for the Indian dribble, learners alternate between straight and Indian dribbling in a relay format. Pair groups with one group lining up at the starting point and the other at the ending point. A learner from the starting group begins by dribbling the ball using the straight dribble to the other end. Upon reaching the end, they pass the ball to the first person in the line at the ending point. These learners then dribble the ball back to the starting point using the Indian dribble. The next learner at the starting point takes over and dribbles back to the ending point using the straight dribble. The process continues, alternating between straight and Indian dribbling until all group members have had a turn at using each dribbling technique.

### **Game-Based and Collaborative Learning**

Mark out a small-sided hockey pitch with clear boundaries on the main pitch. Regroup learners into teams with 8 players per team to play mini game. Teams engage in a mini match, aiming to apply the dribbling and passing techniques learned in previous lessons. Learners are to use the skills learned in this and in the previous lesson.

Learners dribble and pass the ball to within their team. Successfully dribbling and passing the ball to at least three teammates consecutively without interception by an opponent earns the team three points. Performing four successful combinations of any dribbling technique (e.g., straight dribble, Indian dribble, a push and pull-back dribbling) earns an additional goal point for the team.

Encourage learners to use appropriate body positioning, maintain control and communicate with their teammates effectively. Pause the game periodically to highlight excellent execution of skills or to address common challenges. For example, reinforce maintaining stick control during dribbling or correct body positioning for effective passes. Emphasise fair play and teamwork throughout the activity. Observe learners' application of skills and decision making during the game. Provide individual and team feedback after the activity.

**Mini game - dribble dash**

Create a rectangular playing area using cones and mark three parallel lanes within the area.

**Lane 1:** For straight dribbling - beginner friendly or less skilled lane.

**Lane 2:** For Indian dribbling with fewer obstacles – intermediate learners.

**Lane 3:** For Indian dribbling with more obstacles - advanced learners.

Use cones or markers spaced apart in lanes 2 and 3 to simulate real-game situations for the Indian dribble. Group learners according to their proficiency levels, less skilled, intermediate and advanced. Allow them to choose or rotate between lanes to challenge themselves. Teams start at one end of their assigned lane.

On a signal, they dribble their ball to the other end using the designated dribbling technique.

**Lane 1:** Perform straight dribbling in a straight line.

**Lane 2:** Use Indian dribbling, weaving through obstacles.

**Lane 3:** Execute Indian dribbling with tighter turns and closer obstacles.

At the end of the lane, learners turn and dribble back to the start. Encourage learners to switch lanes if they want to try a different level of difficulty.

**Scoring system****Accuracy points**

Award **2** points for completing the lane without losing control of the ball.

Deduct **1** point if a learner touches an obstacle or loses control.

**Speed points**

Award **1** point for finishing within the allotted time (e.g., 30 seconds).

Add an extra **1** point for finishing in the top 3 fastest times in their lane.

**Bonus points:** Add **2** points if a learner tries a more challenging lane than their usual level and completes it successfully.

**Key Assessment****Level 1**

1. Identify four types of dribbling in hockey.
2. State two reasons why dribbling is important in hockey.

**Level 2:** Describe the techniques for effective dribbling.

**Level 3**

1. Identify two common mistakes players make when executing dribbling in hockey.
2. Describe how to perform the straight and Indian dribbling techniques.

**Level 4:** Demonstrate how to execute the straight and the Indian dribbling techniques.

## WEEK 21

**Learning Indicator:** Identify the core skills in hockey and apply them in a game (e.g., hitting in hockey)

### FOCAL AREA: HITTING IN HOCKEY

#### Fundamentals of Hitting

Hitting in hockey is a skill used to strike the ball powerfully over a long distance or with force towards a specific target using the flat side of the stick. It is primarily used for long distance passes, clearing the ball from the defensive zone, shooting at goal and executing penalty corners. It is an effective skill that can change the momentum of the game, allowing for quick counter-attacks or precise goal attempts. Hitting is often used to switch play from one side of the pitch to another or when aiming to bypass multiple opponents with a single powerful stroke.



**Figure 21.1:** *Hitting in hockey*

#### Types of Hits in Hockey

##### 1. Drive Hit

A drive hit in hockey is a powerful and controlled strike used to send the ball over a longer distance.

It involves a full backswing and follows through to generate maximum power and is normally used for long passes or shooting at goal. Its execution needs a stable stance and excellent timing to ensure accuracy.

##### How to Execute the Drive Hit

To perform the drive hit in hockey, the body is positioned side-on to the ball with feet shoulder-width apart, and the stick gripped firmly with the left hand at the top and the right-hand lower down. The stick is pulled back in a wide arc for a backswing, followed by a rotation of the shoulders and hips as it is swung downward to strike the ball in front of the body, with weight shifting from the back foot to the front. The flat face of the stick contacts the ball just above the ground, driving it forward with speed and precision. A natural follow-through is maintained towards the target. Smooth, controlled movements and precise timing enhance power and accuracy.



**Figure 21.2:** *Drive hit in hockey*

## 2. Push Hit

This is a controlled hit where the ball is pushed along the ground without a backswing. It is useful for short and precise passes with minimal risk of losing possessions, especially in crowded areas where a full swing is not practical.

### How to Perform the Push Hit

To execute a push hit, the ball is positioned slightly ahead of the front foot, with the stick held firmly leaning over the ball, keeping the stick low to the ground. The back foot remains planted while the front foot shifts toward the ball, allowing for a stable base. The stick is held with both hands, and the ball is pushed gently with the flat part of the stick in a smooth, fluid motion. This technique is commonly used for short-range passes or precise shots.



**Figure 21.3:** *Push hit*

## 3. Scoop Hit

A scoop hit in hockey is a technique used to lift the ball off the ground in a controlled manner, typically for passing or clearing. The stick is held with both hands, and the ball is positioned slightly in front of the body.

### How to Execute the Scoop Hit

The scoop is performed by using the back of the stick's blade to roll the ball upward in a lifting motion, with the body leaning slightly forward to provide control. The motion is smooth and quick, ensuring the ball is elevated without losing too much speed or accuracy. This technique is especially useful for getting the ball over an opponent's stick or quickly moving the ball across the field.

#### 4. **Flick Hit**

A flick hit is a technique used to lift the ball gently off the ground with precision and control. It is commonly used for midair passes, penalty strokes, free hits, avoiding or lobbing the ball over defenders.

##### **How to Execute the Flick Hit**

To execute a flick, the stick is positioned low behind the ball, with the face of the stick angled slightly upwards. The bottom hand controls the movement, while the top hand guides the flick. The stick is then flicked forward and upwards with a quick, sharp motion, causing the ball to lift into the air and travel towards the target. This technique is often used for passing over opponents' sticks or for taking a shot at goal from a short distance.



**Figure 21.4:** *Scoop or flick hit*

#### 5. **Sweep Hit**

A sweep hit is a technique used in moving the ball across the field or to execute a powerful pass or shot. It is particularly effective on uneven surfaces or when attempting long distance passes at ground level.

##### **How to Perform the Sweep Hit**

The execution of this skill involves sweeping the stick along the ground in a semi-circular motion to make contact with the ball. The sweep involves a low, sweeping motion with the stick, starting from the back and swinging in a wide arc towards the ball. The stick is held with both hands, and the ball is struck with the flat face of the stick, naturally on the side of the body. Unlike the slap hit, the sweep generates power through a smooth, controlled arc rather than a sharp impact. The follow-through extends the stick in the direction of the target for accuracy and distance.

#### 6. **Slap Hit**

A slap hit is a method used to strike the ball with power and accuracy for long passes or shots on goal. It is a quick hit with a short backswing, often used for fast, medium range passes or during penalty corners. This skill is quicker than a drive with good power and accuracy.

## How to Perform the Slap Hit

The hit is executed by swinging the stick in a wide arc, making contact with the ball while it remains on the ground, using the flat face of the stick. This technique generates significant speed and power, making it effective for fast and forceful ball movement. The slap hit is commonly used in situations where a controlled, powerful strike is needed, such as clearing the ball from the defensive zone or taking a hard shot at the goal.



*Get low Body position Follow through*



**Figure 21.5:** Steps in performing the slap or sweep hit

## 7. Reverse Hit (Tomahawk)

Tomahawk is a field hockey shot that uses the reverse side of the stick to hit the ball. It is used to score goals and, occasionally, to give a pass.

### How to Perform the Slap Hit

Hold the stick in a frying-pan grip. Position your body sideways to the direction you want the hit to travel. (Right foot leading). Bring your elbow back and the stick up towards your ears. Create a 'C' and follow through by making contact with the ball with your stick parallel to the ground. Hit the middle of the ball with the flat edge of the stick.

## Rules and Safety Considerations During Hitting

Hitting is only allowed when the stick remains below shoulder height during the swing and follow through. A high stick hit is considered dangerous and penalised. Teammates are to be aware of the hit's direction and opponents are to maintain a safe distance to avoid injuries.

## Common Mistakes and Corrections

1. **Incorrect grip:** Holding the stick too tightly or incorrectly. This reduces control. The placement of the hand on the stick should be adjusted for comfort and effectiveness.

2. **Poor body positioning:** Leaning back or standing too upright. This position diminishes power. The stance and body position should be low and balanced.
3. **Over swinging:** Excessive backswing. swinging backwards too much may lead to fouls or missed hits. Controlled and compact swings should be the focus during practice and gameplay.

## Strategic Use of Hitting in Games

1. **Long distance passes:** Use hitting to quickly transfer the ball across the field, bypassing opponents and creating space for attacking opportunities.
2. **Shooting at goal:** Hits are ideal for powerful and direct shots on goal, especially during penalty corners.
3. **Clearing the ball:** In defensive situations, hitting effectively clears the ball from the danger zone, reducing the pressure on defenders.
4. **Setting up plays:** Accurate hits set up teammates for scoring opportunities by quickly delivering the ball into the attacking circle.

### Learning Tasks

1. Identify four (4) types of hitting in hockey.
2. Describe how to perform the types of hitting.
3. Demonstrate how to execute the types of hitting.

## Pedagogical Exemplars

### Activity

#### 1. Started/Warm up

##### a. Jogging with variations

Guide learners to form lines and jog around the field or a designated area. Intermittently, call out instructions to vary the jog by incorporating movements such as high knees, butt kicks, side shuffles or skips.

##### b. Dynamic stretches

Lead learners to perform stretches targeting key muscles used in hockey. For example, forward and sideways leg swings, arm circles, hip rotations and lunges combined with a twist, etc.

#### 2. Introduction: Stick and ball relay

Arrange learners in small groups, each with a hockey stick and ball. Set up a short zigzag course using cones. Learners dribble the ball around the cones and pass it to the next team member in line.

#### Target passing challenge

Arrange small targets, such as cones or mini goals at different or varying distances. Ask learners to work on pushing the ball to strike the targets, engaging their muscles while enhancing their precision in pushing.

## **Rats and rabbits**

Designate a few learners as ‘rats’(defenders) and the rest as ‘rabbits’(attackers). The rabbits (attackers) dribble the balls across the field while the ‘rats’ (defenders) try or attempt to steal, intercept or knock the balls away using their sticks.

### **3. Main Activity**

#### **Talk for Learning, Collaborative and Group-Based Learning**

##### **Stationary hitting practice**

Arrange cones or markers 10 to 15 meters away from learners to create straightforward target zones. Introduce, explain and demonstrate hitting techniques in hockey to learners. Show learners the correct stance (feet shoulder width apart, body sideways to the target and knees slightly bent. Demonstrate the proper grip, backswing and the follow through.

Each learner places a ball on the ground in front of them and practises stationary hits, aiming to send the ball towards the cones. Remind learners to use the flat side of the stick and to complete the follow-through towards the target. Gradually increase the challenge by introducing smaller target zones as learners improve their skills. Move round to offer assistance to those finding it difficult to connect accurately or generate the desired power to reach the target.

##### **Hit the target practice**

Set up small targets within the goal or across the field at varying distances. Assign point values to each target depending on its size or distance from the starting point. Show learners to focus on a chosen target to maintain accuracy during the hit. In groups, learners take turns aiming for their selected target, attempting to send the ball through it. Rotate groups regularly to ensure everyone gets equal practice. Track group scores and introduce friendly competition.

##### **Hit and receive practice**

Organise groups into pairs based on ability levels and position them at distances of 10, 15, and 20 metres. Demonstrate the technique for controlled hitting and trapping the ball by placing the stick flat on the ground. One individual from each pair strikes the ball towards their partner in the opposite group, who traps it, returns the hit and then moves to the back of their line. Stress the importance of smooth, coordinated movements and precise hits. As learners’ capability improves and everyone has had a turn, gradually increase the distance between groups.

##### **Through the gate practice**

Set up gates using two cones spaced 1 metre apart. Set up multiple gates at varying distances. Explain to learners that the objective is to strike the ball accurately through the gates. Learners in each group takes turns aiming and hitting the ball through the designated openings. Emphasise careful targeting and adjusting the force of the hit based on the distance to the gate. Gradually make the gates narrower or extend their distances as proficiency increases.

##### **Game based hitting practice**

Divide the class into two or four small teams depending on the class size and set up a mini field with goals at each end. Demonstrate how to pass the ball to teammates during gameplay. The match starts with a push or hit-off. Learners pass and hit the ball to one another, working collaboratively to score in the opposing team’s goal.

Pause the game at intervals to provide feedback on hitting technique. Emphasise teamwork, correct hitting and passing technique throughout the activity.

### **Distance hit challenge**

Mark distances on the field at 10m, 20m and 30, and designate a start line. Group learners and have the groups take turns lining up at the various start lines and hitting the ball with the goal of achieving maximum distance. After each attempt, measure the distance the ball travels and provide constructive feedback on their technique and power.

#### **Note**

- Begin each activity with a demonstration to ensure clarity.
- Cover different hitting techniques appropriate to the situation.
- Provide individual feedback during the activities to refine technique.

#### **4. Mini game: Goal zone challenge**

Mark a small rectangular field with cones (e.g., 20m x 10m). At each end of the field and set up a goal zone (2m x 5m) in front of the goals. Use portable goals if available or cones spaced about 2m apart to serve as the goals. Divide learners into equal teams of 6 players or more depending the class size.

#### **Game instructions**

**Starting the game:** Begin the game with a push pass from the centre of the field by one team. Decide which team starts using a coin toss or teacher's choice. After the ball is in play, learners must use push passes and hitting to move the ball toward the opponent's goal.

**Movement rules:** Learners can only use push passes or hitting, no dribbling or lifting the ball is allowed. The attacking team can enter the goal zone to attempt a goal, but the defending team must stay outside the goal zone. This will help prevent crowding and will encourages strategic defence.

**Scoring:** A goal can only be scored if the attacking player is within the goal zone.  
Reward

accurate passes and good teamwork (see scoring system below).

**Defending rules:** Defenders can block the ball and intercept passes but cannot step into the goal zone. Defenders can only challenge the ball by staying on their feet no sliding or aggressive stick play.

**Restarting play:** After a goal is scored, the defending team gets possession and restarts the game from the centre of the field. If the ball goes out of bounds, the opposing team restarts with a push pass from the sideline.

**Scoring System:** Goal points: 2 points for scoring a goal from inside the goal zone.

Bonus points for team play

- a. **1 point:** For completing five consecutive passes among teammates without the opposing team intercepting.
- b. **1 point:** For executing a successful push pass into the goal zone to set up a scoring opportunity.

- c. **Fair play points:** 1 point awarded to the team demonstrating exceptional sportsmanship and adherence to the game rules.
- d. **Penalty points:** 1 point is deducted for any team that lifts the ball or violates safety rules (e.g., crowding in the goal zone or aggressive stick play).
- e. **Game duration:** 5 minutes per round. Rotate teams if there are more than two.
- f. **Tips for success:** Encourage players to communicate and work together to move the ball effectively. Reinforce the importance of accurate push passes and hits and staying in position to receive the ball. Provide feedback between rounds to address common mistakes and improve performance.
- g. **Winning the game:** The team with highest points wins.

## Key Assessment

### Level 1

1. Identify two common mistakes to avoid when hitting the ball.
2. Identify the part of the stick used to execute a slap hit.
3. Name two common hits used in hockey to pass the ball to a teammate.
4. State the primary purpose of the flick hit in hockey.
5. Match each hit type (drive, push, slap, flick) with its typical use in a game.

### Level 2

1. Describe how to hit a ball in hockey.
2. Explain the difference between a sweep hit and a push hit in terms of technique.

### Level 3

1. What is the difference between a push and a hit in hockey?
2. Demonstrate how to hit a ball in hockey using any of the hitting types.

### Level 4

1. Analyse the importance of hitting in hockey.
2. Analyse why a player might choose a sweep hit instead of a slap hit during a defensive play.

## SECTION 9 REVIEW

Section 9, part four offers learners an in-depth introduction to hockey. By the end of the weeks, learners will have a foundational understanding of the sport, including its essential rules and the basic techniques required to perform key hockey skills.

In week 19, learners explored various aspects of hockey, including its history, rules, grip, and pushing techniques. The class examined the history of hockey globally, in Africa, and specifically in Ghana. They covered basic hockey rules, the hockey stick's structure and features, the hockey ball, and core hockey skills. Topics included grip and hand positioning, types of grips, the basic stance, key components and purpose of the stance, and common mistakes to avoid. With a focus on the push pass, learners discussed passing in hockey, the elements of a good pass, and errors to avoid. They practised skills such as grip, stance, and basic pushing techniques. Teaching methods included “talk for learning” and collaborative learning approaches.

In Week 20, the focus was on dribbling techniques. Learners learned how to dribble effectively, with emphasis on the straight dribble and Indian dribbling techniques. Learners practised these techniques, working on accurate execution. Group-based and collaborative learning methods were used throughout the week.

In the final week, Week 21, the focus was on basic hitting and hitting techniques. Learners participated in various drills, including stationary hitting, target practise, hit and receive and through-the-gate practise, game-based hitting practise, and a distance-hit challenge. Teaching methods included, talk for learning, collaborative learning, and group-based learning. To cater to different skill levels, learners practised at their own pace and received additional support when needed. Advanced learners were given more challenging tasks to enhance their skills. This approach encouraged collaboration and created an inclusive learning environment.

## SECTION 10: HEALTH AND WELLNESS – PART FOUR

### STRAND: PHYSICAL ACTIVITY AND HEALTH

#### SUB-STRAND: HEALTH AND WELLNESS

**Learning Outcome:** *Explain the concept of stress and its effects on health and well-being*

**Content Standard:** *Demonstrate understanding of health and wellness*

#### HINT



Remember to collect the **individual portfolio** by week 23 for scoring and subsequent submission to the STP.

### INTRODUCTION AND SECTION SUMMARY

Stress is an inevitable part of human life, arising from individuals' interactions with the demands of daily living. Defined as the body's physiological and psychological response to perceived challenges or threats, stress can be triggered by a variety of factors such as work pressures, personal relationships, financial concerns or health issues. While stress is a natural response designed to help individuals adapt to changing circumstances, prolonged or excessive stress can have significant repercussions on health and well-being. Understanding the concept of stress, its triggers and its effects is critical for promoting a balanced and healthy lifestyle.

This section provides an overview of the concept of stress and its impact on health and well-being of an individual. Learners will be exposed to the meaning of stress, types of stress, its effects and ways to prevent or manage it. In addition, the section will highlight when to seek professional help if stress becomes overwhelming. This section underscores the importance of recognising stress and adopting proactive measures to manage it for improved health and well-being. By understanding its mechanisms and effects, individuals can cultivate resilience and enhance their quality of life.

**The weeks covered by this section are:**

**Week 22:** Explain stress and its common sources.

**Week 23:** Explain how to prevent and manage stress.

### SUMMARY OF PEDAGOGICAL EXEMPLARS

In this section, the teacher should use pedagogies such as initiating talk for learning, structuring talk for learning, collaborative learning and project-based learning. These teaching techniques should be used in mixed-ability and mixed-gender groupings where appropriate, in pairs and individual learning. Where projects for learners cannot be carried out in class, learners should be given enough time to carry out the project at home and present the outcome at an agreed time in class. This allows learners ample time to explore the internet and other useful sources about the content.

## ASSESSMENT SUMMARY

Assign tasks to cover the meaning of stress, types of stress, common causes/sources of stress, signs and symptom of stress, prevention and management techniques of stress and professional help for stress. This should be done through group discussions, presentations, homework, class exercises and project-based work. Accept varying responses from learners on a given tasks such as oral, written role, etc. Rubrics should be developed to score group presentations and assignments. The following modes of assessment are recommended for each week:

**Week 22:** Research

**Week 23:** Presentation

## WEEK 22

**Learning Indicator:** Explain stress and its common sources

### FOCAL AREA: STRESS AND ITS COMMON SOURCES

#### What is stress?

Stress is the body's natural response to any demand, pressure or threat that disrupts its balance or equilibrium. Stress also refers to circumstances that disturbs the body's normal state and to which the body tries to adapt or adjust. It is both a physiological and psychological reaction designed to help individuals adapt to challenging or changing situations. Simply put, stress describes the many demands and pressures that all people experience each day. The perception of stress varies from person to person based on individual resilience and coping abilities. Stress can disrupt emotional balance and lead to burnout, social withdrawal or a reduced quality of life. It affects relationships, productivity, academic progress and overall satisfaction with life. Adopting effective strategies can lessen the harmful effects of stress.



**Figure 22.1:** A stressed person

#### Types of Stress

Stress is categorised into two types, namely good stress (Eustress) and bad stress (Distress).

1. **Good stress (Eustress):** Good stress is a positive form of stress which have a beneficial effect on health because it comes with excitement and good feelings. Good stress motivates and improves performance. Examples of good stress are writing and passing exams, being promoted to a higher level at school or work, going on a vacation, graduating from school, having or starting a job after graduating from school, getting married, a first pregnancy after marriage or having a child, buying a home or building a house. These events can be stressful, but they also bring excitement. This is because, while participating in them, the body releases feel-good chemicals called endorphins, which make the experience enjoyable despite the stress involved.
2. **Bad stress (Distress):** Bad stress or distress is stress characterised by anxiety, unpleasant feelings which decreases ability or performance. Negative stress is perceived within one's coping abilities. When an individual thinks a situation or a task is beyond their abilities and capabilities, this can cause bad stress. Examples of situations that can cause distress include not getting admission, failing an exam, not understanding skills or concepts taught at school, unemployment, getting involved in legal issues, procrastinating about things that can done easily, divorce of parents and death of a loved one.

## Stressors

Stress is caused by stressors. Stressors are situations, events or conditions that cause or trigger stress or physical and emotional reactions. Stressors can be external or internal, acute or chronic.

### 1. External stressors

External stressors refer to pressures or challenges that arise from factors outside an individual, they often stem from their environment or interactions with others. Examples include:

- a. **Work and academic pressures:** This occurs when a person is trying to meet work demands such as meeting deadlines, workload or performance.
- b. **Financial challenges:** This happens when individuals are struggling with financial support, income, debt and budgeting.
- c. **Social relationships:** This arises when there are relationship conflicts or strained relationships, lack of family and social support.
- d. **Environmental factors:** This occurs from excessive noise, pollutions, unsafe living conditions, changing weather conditions (heat, rain fall patterns, etc).
- e. **Major life changes:** This is when people move from home to live on their own for the first time, losing a loved one, or falling ill.
- f. **Societal issues:** This occurs when there is discrimination against people, political instability and community crises.

### 2. Internal Stressors

Internal stressors are stresses that originates from within an individual. They normally stem from an individuals' thoughts, feelings or physical condition. They can affect the person's emotions and physical wellbeing. Common examples include:

- a. **Personal expectations:** This is when people set unrealistic goals and they are unable to achieve them or are struggling to achieve them or are afraid they might fail what they intend to attain. This can create pressure and self-criticism.
- b. **Negative self-talk:** This happens when people engage in harsh or pessimistic internal dialogues that lead them to feeling inadequate in performing a task or attaining a particular goal in life.
- c. **Fears and worries:** This occurs when individuals have concerns about failure, being rejected by others or peers or the unknown which triggers internal stress.
- d. **Physical health issues:** This happens when people are experiencing chronic pain as a result of illness and hormonal imbalance which serves as internal stressors (sickle cell, etc.).
- e. **Emotional struggles:** This arises when people are experiencing feelings of anger, guilt, sadness or frustration, all of which can lead to stress.
- f. **Cognitive overload:** This is trying to process too much information or multitask which can overwhelm the mind.
- g. **Lack of confidence:** Doubting about one's abilities or decisions can increase stress.
- h. **Unresolved past experiences:** Lingering emotional trauma or regret from past events can manifest as stress.

- i. **Lifestyle choices:** Poor nutrition, lack of sleep and insufficient exercise can contribute to stress internally.
- j. **Personal values and conflicts:** Inner conflict between one's values, beliefs can lead to stress.

While occasional stress can be beneficial for growth and adaptation, ongoing exposure to stress (chronic stress) can lead to physical and mental health issues such as heart disease, depression, or weakened immunity. Managing stress through healthy coping strategies is important for maintaining overall wellbeing.

## Acute Stress

Acute stress is a brief and immediate reaction to a specific threat, challenge, or demand. It triggers the body's 'Fight-or-flight' response, resulting in temporary physical and psychological changes such as a rapid heartbeat, increased alertness, and a surge of energy. Unlike chronic stress, acute stress subsides once the triggering event or situation is resolved or no longer present.

## The Body's Response System - Fight or Flight Response

The Fight or flight response is the body's automatic, involuntary or natural reaction to stressors, threat or danger. This survival ability prepares or readies an individual to either stand and Fight the threat or flee from it or avoid it. To Fight or flee the stressor is driven or triggered by the sympathetic nervous system, which results in the release of stress hormones known as adrenaline and cortisol. These hormones cause several physiological changes in the body by increasing the heart rate, rapid breathing and heightened alertness, all geared towards immediate action in response to danger or stress.

## Examples of Threats or Stressors at School

Stressors and responses may include learners facing academic challenges

1. **Exam stress:** A learner is about to take an end of semester exam and feels anxious about the possibility of failing.

### Responses to threats or stressors - Fight or flight response

- a. **Fight response:** The learner may try to "Fight" the stress by preparing harder, cramming, or taking on a more aggressive approach to studying, focusing all energy on trying to control the outcome.
- b. **Flight response:** The learner may choose to avoid the situation altogether by procrastinating, skipping the exam or feeling the urge to flee from the pressure by engaging in distraction or avoidance behaviours, such as leaving the study environment or avoiding the exam entirely by pretending to be sick or panicking to the point of freezing and being unable to perform.

2. **Quiz stress:** A learner is given a surprise pop quiz or class test and is unprepared.

### Responses to threats or stressors - Fight or flight response

- a. **Fight response:** The learner might remain calm and attempt to do their best on the quiz or test by using any knowledge they have and focusing intently to overcome the challenge.
- b. **Flight response:** The learner could feel alarmed, shocked and panic leading to feelings of fear or blanking out during the quiz and might not pass the quiz or test.

3. **Class presentation:** A learner has to give a presentation in front of the class and is nervous about speaking publicly.

**Responses to threats or stressors - Fight or flight response**

- a. **Fight response:** The learner might face their fear and take a deep breath and give the presentation confidently, relying on preparation and self-assurance.
- b. **Flight response:** The learner could feel the urge to avoid speaking and might try to find ways to delay the presentation or even skip class altogether that day.

4. **Sports competition**

- a. A learner athlete is facing a tough competitor in an individual sport like tennis or javelin.

**Responses to threats or stressors - Fight or flight response**

- i. **Fight response:** The athlete sees the opponent as a challenge, using the situation to push themselves beyond their limits, increasing their focus and intensity to win.
- ii. **Flight response:** The athlete gets intimidated by the opponent's skill and experience, leading to self-doubt and anxiety, which results in a poor performance or inability to cope with the pressure.
- b. Learner athletes preparing for super zonal or national competition that could determine their future in the sport.

**Responses to threats or stressors - Fight or flight response**

- i. **Fight response:** The athlete tries to channel their nerves into heightened performance, pushing through fatigue, giving their best effort at training and focusing on their goals with determination.
- ii. **Flight response:** The athlete felt nervous about the pressure and starts second-guessing their abilities and potential leading to inability to think right and take informed decisions during critical moments of the competition.
- c. A learner athlete in a time pressured situation (e.g., Final exam week combined with a championship game).

**Responses to threats or stressors - Fight or flight response**

- i. **Fight response:** The learner athlete tackles both tasks by balancing studying for the final exams and preparing for the championship game in their sport by managing their time effectively, staying organised and using discipline to perform well academically and athletically.
- ii. **Flight response:** The learner athlete feels overburdened by the pressure from studying and preparing for the competition. They procrastinate, feel burned out or struggle to prioritise leading to lower performance in both areas due to stress and exhaustion.

## Examples of Threats at Home

Stressors and responses may include:

### 1. Physical threats or stressor

- a. Hearing sudden loud noise at night, like breaking glass, suggesting a possible intruder (a thief or an armed robber).
- b. Smelling smoke, which may indicate a fire outbreak in the house.

#### Responses to threats or stressors – Fight or flight response

- a. **Fight response:** Investigating the noise or confronting the intruder directly, grabbing a defensive tool or calling out to alert others.
- b. **Flight response:** Hiding in a secure room, escaping through a window or a back door or calling for help (e.g., police or neighbours).

### 2. Physical threats or stressor

Someone walking alone at night hears footsteps behind them and feels threatened or unsafe by the presence of another person.

#### Responses to threats or stressors - Fight or flight response

- a. **Fight response:** The individual may prepare to defend themselves either by confronting the person directly or finding a way to protect themselves (e.g., using self-defence skills, gathering anything around to use in their defence).
- b. **Flight response:** The person may choose or decide to run away from the scene by increasing their speed to get to a safer area or find a safer area to hide.

### 3. Emotional or Social Threats

Stressors and responses may include:

- a. Heated arguments or conflicts with family members or friends.
- b. The pressure of managing household chores.

#### Responses to threats or stressors - Fight or flight response

- a. **Fight response:** Arguing back, becoming defensive or trying to take control over the situation.
- b. **Flight response:** Leaving the room, avoiding confrontation or withdrawing from communication.

### 4. Health-related threats

Stressors and responses may include:

- a. A sudden illness or injury to a family member.
- b. Discovering a pest infestation, like rodents or insects (bed bugs, cockroaches, termites, ants, weevils, locust, fleas, etc).

#### Responses to threats or stressors - Fight or flight response

- a. **Fight response:** Taking immediate action, such as administering first aid, rushing the person to the nearest health post, addressing the pest issue or resolving the problem head-on.

- b. **Flight response:** Feeling overwhelmed, ignoring the issue or relying on someone else to handle it.

## Examples of threats on the farm or in the bush

Stressors and responses may include:

### 1. Wildlife encounters

- a. Spotting a dangerous animal, such as a snake, wild elephant, lion, leopard, wild monkeys, crocodile, sea turtles, sharks or large predator.
- b. Being attacked by insects like bees or wasps.

#### Responses to threats or stressors - Fight or flight response

- a. **Fight response:** Attempting to kill, scare away the animal, using a tool or weapon to defend oneself, or making loud noises to assert dominance.
- b. **Flight response:** Quietly retreating, climbing a tree, running to a safe distance or freezing to avoid detection.

### 2. Environmental hazards

- a. Sudden changes in weather, like an approaching storm.
- b. Hearing the sound of falling trees or landslides around the house or in the bush.

#### Responses to threats or stressors - Fight or flight response

- a. **Fight response:** Taking measures to secure oneself or the surroundings, such as seeking shelter, clearing debris or preparing for the storm.
- b. **Flight response:** Fleeing the area to avoid danger or moving to a safer location.

## Work-Related Threats

Stressors and responses may include:

- 1. Malfunctioning equipment that could cause injury (treadmills, playground equipment such as broken swings, slides, climbing frames, etc, faulty brakes in cars, trucks, motors or bicycles, airbags, seatbelts, faulty refrigerators, microwaves, gas stoves, water heaters, etc.
- 2. Discovering crop damage caused by pests or diseases, leading to financial stress.

#### Responses to Threats or Stressors - Fight or Flight Response

- a. **Fight response:** Trying to fix the malfunctioning equipment immediately or taking steps to stop or lessen crop damage.
- b. **Flight response:** Stopping work altogether, leaving the task unfinished or seeking assistance rather than addressing the issue alone.

In both contexts, the response depends on the individual's perception of their ability to handle the threat. Fight responses involve direct action, while flight responses focus on avoidance or escape.

## Examples of Acute Stress Among Learners

- 1. **Examination pressure:** Feeling nervous or overwhelmed when preparing for or writing an exam.
- 2. **Classroom presentations:** Anxiety or stress experienced when presenting a topic in front of peers in class.

3. **Missed deadlines:** Panic when a project or assignment deadline is unexpectedly forgotten or overlooked.
4. **Unexpected questions:** Stress when called upon by a teacher to answer a question without preparation.
5. **Conflict with peers:** Immediate stress from a heated argument or misunderstanding with a classmate.

### Examples of Acute Stress Among Teachers

1. **Unexpected classroom disruptions:** Stress caused by a sudden conflict or disruptive behaviour among learners during a lesson.
2. **Observation by administrators:** Anxiety experienced when being observed or evaluated by school administrators or inspectors without prior notice.
3. **Last-minute schedule changes:** Stress from being informed at short notice about changes in the teaching schedule or an additional responsibility, such as covering for an absent colleague.
4. **Technical failures:** Frustration when technology (e.g., projectors, smartboards or computers) malfunctions during an important presentation or a lesson.
5. **Parent complaints or confrontations:** Immediate stress from handling an unexpected complaint or confrontation from a parent.
6. **Tight grading deadlines:** Pressure to mark a large volume of assignments or exams within a short timeframe.
7. **Managing emergencies:** Stress from having to respond quickly to learner injuries, illnesses or other emergencies in the classroom, play ground or sports field.
8. **Delivering difficult news:** Anxiety when needing to inform a learner or parent about poor academic performance or disciplinary issues.

### Examples of Acute Stress Among Other People

1. **Workplace deadlines:** Stress from rushing to complete an urgent task or project on a tight deadline.
2. **Job interviews:** Anxiety before or during a high stakes interview for a desired job.
3. **Child's emergency:** Panic when a child gets injured or sick suddenly.
4. **Traffic incidents:** Stress caused by a near-accident or road anger from another driver.

Acute stress is a natural and often helpful response that enables people to react or think quickly in urgent situations which can be draining but normally subsides once the issue is resolved. However, repeated exposure to acute stress can contribute to chronic stress if not managed effectively.

### Chronic Stress

Chronic stress is a long-term state of emotional or physical strain caused by ongoing challenges or pressures that feel overwhelming. This type of stress negatively affects a person's physical, mental and emotional well-being. It occurs when an individual faces continuous pressure without adequate relief or recovery periods. Over time, chronic stress may lead to serious health problems such as anxiety, depression, cardiovascular diseases and a weakened immune system.

## Examples of Chronic Stress Among Learners

1. **Academic pressure:** Constant worry about exams, grades or meeting expectations from parents and teachers.
2. **Social challenges:** Struggles with bullying, peer pressure or maintaining friendships.
3. **Time management:** Balancing school, extracurricular activities and personal life.
4. **Future uncertainty:** Fear of not being able to secure a job or get into a preferred university after graduating from senior high school.

## Examples of Chronic Stress Among Teachers

1. **Workload:** Managing large class sizes, grading, lesson planning and administrative tasks.
2. **Learner behaviour:** Dealing with disruptive or unmotivated learners.
3. **Job security:** Anxiety about contract renewals or performance evaluations.
4. **Work-life balance:** Struggling to maintain a balance between professional responsibilities and personal life.

## Examples of Chronic Stress Among Other People

1. **Workplace stress:** Long hours, unrealistic deadlines, or dealing with difficult colleagues or bosses.
2. **Financial strain:** Ongoing concerns about paying bills, debts, or providing for the family.
3. **Health issues:** Coping with chronic illness or caring for a sick family member.
4. **Relationship problems:** Enduring toxic relationships or constant conflicts within the family or with a partner.

Chronic stress, regardless of its source, highlights the importance of developing coping abilities when necessary.

## Common Sources of Stress

Common sources of stress, or stressors, can vary greatly depending on an individual's circumstances, their coping abilities and how the individual perceives the situation. They can be grouped into several categories which include:

1. **Personal life and relationships**
  - a. **Family conflicts:** Disputes with family members or strained relationships.
  - b. **Romantic relationships:** Breakups, divorce or unresolved issues with a partner.
  - c. **Friendship issues:** Misunderstandings or lack of support from friends.
  - d. **Parenting:** Challenges related to raising children.
2. **Work and education**
  - a. **Job stress:** Heavy workload, tight deadlines or difficult colleagues.
  - b. **Job insecurity:** Fear of losing employment or financial instability.
  - c. **Education:** Academic pressures, exams or balancing studies with other responsibilities.
  - d. **Lack of work-life balance:** Overworking or inability to manage personal and professional demands.

### 3. Health related

- a. **Chronic illness:** Personal health conditions or those of a loved one.
- b. **Injuries:** Physical limitations or pain caused by accidents or injuries.
- c. **Mental health issues:** Anxiety, depression or other psychological challenges.

### 4. Financial problems

- a. **Debt:** Loans, impulse buying, excessive spending on non-essential goods, living beyond means, failure to budget effectively, inadequate savings for future needs and emergencies, spending on gambling, drugs, and alcohol.
- b. **Unemployment:** Loss of income or difficulty finding a job.
- c. **Unexpected expenses:** Medical bills, home repairs or emergencies.

### 5. Major life changes

- a. **Relocation:** Early adulthood and school years that are associated with moving out of the family home, moving to a new home, city or country.
- b. **Loss of a loved one:** Grieving a death or dealing with terminal illness.
- c. **Marriage or divorce:** Adjusting to a new marital status.
- d. **Retirement:** Transitioning out of the workforce.

### 6. Social and environmental factors

- a. **Peer pressure:** Feeling compelled to meet societal or cultural expectations.
- b. **Discrimination or harassment:** Based on ethnic group, gender, religion, social status, etc.
- c. **Noise or crowding:** Living in noisy, overcrowded or unsafe environments or neighbourhoods.

### 7. Daily hassles

- a. **Traffic or commuting form home to school or work:** Long or frustrating travel times.
- b. **Technology problems:** Slow internet, device failures or information overload.
- c. **Household responsibilities:** Cooking, cleaning, washing or other chores piling up.
- d. **Misplacing valuable items:** Losing a key to house or wallet with money.

### 8. Personal expectations

- a. **Perfectionism:** Setting unattainable goals or being overly self-critical.
- b. **Time management:** Struggling to prioritise, meet deadlines or work within time frames.
- c. **Fear of failure:** Worrying about not meeting personal or professional goals.

## Impact of Stress on Health and Wellbeing

The impact of stress on health and well-being describes how stress affects a person's physical, mental and emotional health. It includes both the harmful effects of stress and in some situations, its ability to inspire positive outcomes when effectively managed.

### 1. Physical Health Impacts

- a. **Cardiovascular problems:** Stress increases heart rate and blood pressure, leading to a higher risk of hypertension, heart attack and stroke.

- b. **Weakened immune system:** Chronic stress suppresses immune function, making individuals more prone to illnesses like colds, flu and infections.
  - c. **Digestive issues:** Stress can cause stomach aches, nausea, diarrhoea, constipation or conditions like irritable bowel syndrome (IBS) if left unattended to.
  - d. **Muscle tension and pain:** Prolonged stress often leads to muscle stiffness, backaches, headaches or migraines.
  - e. **Sleep disturbances:** Stress disturbs sleep and sleep patterns, leading to insomnia or poor-quality sleep which worsens tiredness and reduces overall health.
  - f. **Weight changes:** Stress can lead to overeating (comfort eating) or undereating causing weight gain or loss.
  - g. **Chronic conditions:** Long-term stress increases the risk of developing chronic diseases like diabetes, obesity and gastrointestinal disorders.
2. **Mental and Emotional Health Impacts**  
Stress can be a major contributor to the development of anxiety disorders and depression.
- a. **Emotional instability:** Individuals under stress may experience mood swings, irritability, anger and frustration.
  - b. **Cognitive decline:** Stress can impair memory, focus and decision-making abilities, reducing productivity and learning capacity.
  - c. **Burnout:** Prolonged stress may lead to feelings of exhaustion, disinterest and reduced performance commonly known as burnout.
3. **Behavioural Impacts**  
Stress can impact or cause a change in our behaviour. This includes:
- a. **Unhealthy coping ability:** Stress may lead to reliance on alcohol, smoking, drugs or overeating as ways to cope which worsen health issues.
  - b. **Reduced physical activity:** Stress often leads to exhaustion or reduced motivation for physical exercise, impacting overall fitness.
  - c. **Social withdrawal:** Individuals under stress may isolate themselves, which can lead to loneliness and further emotional distress.

## Long-Term Consequences

1. **Chronic disease development:** Prolonged exposure to stress hormones (like cortisol) contributes to serious health problems, including cardiovascular disease and metabolic syndrome.
2. **Shortened lifespan:** Chronic stress can accelerate aging and increase the risk of premature death.

Understanding these impacts highlights the importance of stress management techniques to maintain physical and mental well-being.

### Learning Tasks

1. Define stress.
2. Identify common sources of stress.

3. Differentiate between the fight and flight response to stress.
4. Describe the effects of stress on health and well-being.
5. Explain the types of stress.
6. Explain stressors with examples.

## Pedagogical Exemplars

### Activity

#### Starter Activity - Stress picture gallery

1. Start the lesson by displaying a range of images (either printed or displayed on a screen) that represent various stressors. Images may include, a busy street, people arguing, a learner appearing tired from completing assignments, someone overburdened with household chores or office work, a messy desk, an angry individual, a clock showing time running out, a person looking tired and confused and a learner running late for school. These images will serve as a visual tool to help learners explore the concept of stress.
2. Ask learners the following questions to activate their prior knowledge and encourage reflection and flash backs. Have you ever heard the word stress? How do you imagine stress? What images or scenes come to mind when you think of stress? etc. Write learners responses on the board to capture their thoughts. Provide a simple definition of stress, explaining that it can manifest in various ways and is often triggered by different situations. Let learners understand that individuals experience stress differently.
3. Display the images to the class and ask each learner to select one that relates with how they experience stress or represents a situation that causes them stress. Facilitate a discussion by having learners share their chosen image and explain their reasoning. Encourage thoughtful conversations using prompts such as, why did you choose that particular image? Do you think stress looks different for different people? etc.
4. Conclude the discussion by summarising the key points and transitioning to the next part of the lesson. Explain that having explored the concept of stress, the class will now examine its definition, different types, common sources, how individuals respond to it, and its effects on health and well-being.

#### Main Activity

Brainstorming, think, pair and share/Think in and share and, Structured Talk for Learning

1. Write the word 'Stress' in the centre of the whiteboard or chart paper and invite learners to share words or phrases they associate with stress. Examples may include: worry, nervousness, confusion, panic, pressure, tiredness, headache, fear, sadness, frustration, anger or phrases like 'I can't handle this,' or 'Everything feels out of control', etc.

**Note:** Encourage learners to contribute in their local language if they are more comfortable and are finding it difficult to express themselves in the English language. This is so they can relate well with the concept. Provide English translations for better understanding.

2. Ask learners to think about a moment when they felt under pressure and say or write a brief description of their experience. Pair learners to share their experiences with a partner. Randomly call on pairs to share what they have discussed with the whole class. Guide a discussion on how their shared experiences reflect the elements of stress.
3. Present relatable scenarios such as, preparing for an exam, playing in a competitive sports match, running late for school, meeting a snake or any other reptile or, balancing homework and household chores. Ask learners to share how they would feel in these situations and what their reactions might be. Use their responses to reinforce the meaning of stress. Discuss with the class how the physical, emotional and behavioural responses shared by the learners combine to create the experience of stress. Emphasise that everyone experiences stress differently and that recognising it is the first step in managing it.

### **Collaborative learning, Talk for Learning and Group-Based Learning**

1. Show a short video or share a story that illustrates various stress situations to capture learners' attention and provide relatable context for further understanding stress. Prepare scenario cards depict different types of stress (e.g., acute, chronic, eustress and distress). Include text or pictures to illustrate each scenario like,

**Acute Stress:** Preparing for a test tomorrow.

Chronic Stress: Living in a high conflict household.

Eustress: The excitement before a big game or athletics event.

Distress: Struggling with the loss of a loved one.

2. Divide learners into small groups and provide each group with a set of scenario cards and instruct them to sort the scenarios or pictures into the appropriate stress categories. After the groups have completed the sorting activity, ask representatives from each group to share their reasoning behind their categorisation. Engage the whole class in a discussion and address any misconceptions and clarify the definitions or explanation of each type of stress as,

**Eustress:** Positive stress that motivates and inspires performance.

Distress: Negative stress that discourages and inhibits progress.

Acute stress: Short-term stress caused by immediate challenges and resolves as soon as a solution is found.

Chronic stress: Long-term stress resulting from ongoing issues and remains as long as the situation persist.

Let learners understand that how stress can have both positive and negative effects. Use real life examples to explain how stress can:

**Motivate:** Push someone to achieve a goal or complete a task.

Overwhelm: Impede progress, hinder achieving a goal and well-being.

3. Guide learners to identify examples of external stressors (e.g., exams, relationships) and internal stressors (e.g., self-doubt, perfectionism) in their everyday life and how they respond to them. Explain the concept of the *fight or flight* response to stress and encourage learners to share real-life situations where they have experienced these responses.

### Digital Based Learning

Maintain the previous groupings or regroup learners. Ensure each group includes at least one member with good IT skills. Assist learners to use their IT devices to research common sources of stress and their effects on our health and general wellbeing. Instruct learners to categorise their findings into the following groups, personal and relationship related stressors, work and education related stressors, health related stressors, major life changes and social and environmental stressors. After each group presentation, provide immediate feedback, supplementing learners' explanations with additional insights, using real life examples to enhance understanding and to reinforce learning.

## Key Assessment

### Level 1

1. Define stress in simple terms.
2. Identify three common sources of stress among learners.
3. Match the following stressors with their types (e.g., time pressure, noise, arguments, leaving for senior high school).
4. State one difference between acute stress and chronic stress.

### Level 2

1. Classify the following examples as eustress or distress: preparing for an exam, winning a competition, losing a loved one, passing exam and misplacing a wallet.
2. Describe the type of stress that is likely to be experienced in the following situations: being late for school, facing an argument, starting a new job.
3. Explain the difference between eustress and distress.
4. Explain the relationship between stress and health problems such as headaches or tiredness.

**Level 3:** Differentiate between internal and external stressors using real-life examples.

**Homework:** Group learners and assign each group a specific stressor to focus on and create a visually engaging poster that explains the stressor and its impact on health and well-being.

## WEEK 23

**Learning Indicator:** Explain how to prevent and manage stress

### FOCAL AREA: PREVENTION AND MANAGEMENT OF STRESS

#### Signs and Symptoms of Stress

**Signs and symptoms of stress refer** to the physical, emotional, cognitive and behavioural changes that occur in a person in response to stress. They indicate how the body and mind react to challenging or threatening situations.

**Signs:** Signs of stress are the external and observable indicators that reveal a person is experiencing threats or challenges. These can manifest as noticeable changes in behaviour or appearance, such as trembling, sweating, weight gain or loss or persistent tiredness.

**Symptoms:** Symptoms of stress are internal and subjective experiences reported by the individual. These are sensations or feelings that only the person experiencing the stress can describe, such as nervousness, irritability, headaches, muscle pain or tension.

Both signs and symptoms act as important cues, signalling that someone might be under stress and may require support or intervention.

#### Physical Signs and Symptoms of Stress

1. Headaches or migraines
2. Muscle tension or pain (e.g., neck, shoulders)
3. Fatigue or low energy
4. Sweating
5. Clammy hands
6. Trembling body or hands
7. Rapid heartbeat or palpitations
8. Shallow or rapid breathing
9. Upset stomach and feeling sickness
10. Frequent colds or illnesses due to a weakened immune system
11. Weight loss or gain
12. Insomnia or difficulty sleeping

Shaking Hands Rejection In SSB Medicals And Its Treatments



**Figure 23.1:** Physical sign stress, shaking hands



**Figure 23.2:** *Physical sign of stress, insomnia or difficulty sleeping.*

## Emotional signs and symptoms of stress

1. Irritability or mood swings
2. Anxiety or nervousness
3. Feeling overwhelmed or helpless
4. Sadness or frequent crying
5. Anger or frustration
6. Difficulty relaxing
7. Low self-esteem or feelings worthless

## Cognitive signs and symptoms of stress

1. Difficulty concentrating or focusing
2. Forgetfulness
3. Racing thoughts
4. Negative thinking patterns
5. Poor judgment or decision-making
6. Constant worry or overthinking
7. Difficulty processing information

## Behavioural signs and symptoms of stress

1. Changes in appetite (overeating or undereating)
2. Increased use of alcohol, tobacco or other psychoactive drugs
3. Social withdrawal or isolation
4. Nail-biting
5. Pacing
6. Fidgeting
7. Procrastinating tasks
8. Neglecting responsibilities
9. Frequent outbursts or arguments
10. Avoiding situations or tasks that cause stress

## Long-term signs and symptoms of stress (if stress persists)

1. Chronic pain or frequent health issues.
2. Hypertension or high blood pressure.
3. Development of mental health conditions such as depression or anxiety disorders.
4. Burnout or complete exhaustion.
5. Decreased productivity at work or school.

Identifying these signs and symptoms early is key for managing stress effectively and preventing long-term health consequences.

## Stress Prevention and Management Techniques

### 1. Healthy lifestyle practices

**Regular exercise:** Physical activity helps release endorphins which improve mood and reduces stress. Endorphins are chemicals produced naturally by the body. They are released by the brain and nervous system in response to stimuli like exercise or excitement. Endorphins are often referred to as the body's 'feel-good' chemicals because they create feelings of happiness that reduces stress and lessen pain.

**Example:** A 30-minute daily walk or any other physical activity session can help prevent build-up of stress.

### 2. Balanced diet

Eating nutritious meals stabilises energy and mood. A balanced diet helps prevent stress by supporting the body's physical and mental wellbeing. Proper nutrition ensures that the brain and body function well which enhances the body's ability to cope with challenges and reduces the likelihood of stress related problems.

**Balance diet regulates blood sugar levels:** Eating a balanced diet with whole grains, fruits, vegetables and lean proteins stabilises blood sugar levels, preventing mood swings, tiredness and irritability caused by spikes and drops in energy.

**Example:** Eating a breakfast with oatmeal, nuts and any other whole grain like millet, maize, sorghum, wheat, brown rice and fruits provides sustained energy throughout the morning.

Skipping meals or consuming high sugar snacks can lead to energy crashes and increasing feelings of stress. Consume more fruits, vegetables and whole grains instead of sugary snacks.

### 3. Sleep as stress reducer

Proper rest and adequate sleep help rejuvenate the mind and body to prevent stress. Sleep is important for the body to recover, regulate hormones and process emotions. All of these are important for effectively preventing, managing and reducing the build-up of stress.

- a. **Sleep reduces stress hormones:** During sleep, the body decreases the production of cortisol, a primary stress hormone while chronic lack of sleep cause increases in the cortisol levels increasing stress.

**Example:** An individual who gets 7-8 hours of sleep before an exam, an interview or any other work feels calmer and more focused than one who stays up all night studying, planning or doing any other thing.

- b. **Sleep enhances emotional regulation:** Adequate sleep improves emotional control and helps individuals respond more calmly to stressful situations. Sleep deprivation leads to heightened emotional reactions and irritability.

**Example:** After a good night's sleep, a person is more likely to handle workplace challenges calmly instead of reacting impulsively.

- c. **Sleep improves cognitive function:** Sleep allows the brain to rest and recharge, enhancing memory, problem solving skills and decision-making. These cognitive benefits make it easier to manage stressful situations effectively.

**Example:** A well-rested individual can organise tasks efficiently, reducing feelings of being overwhelmed.

- d. **Sleep promotes physical recovery:** Sleep is essential for repairing tissues, strengthening the immune system and maintaining energy levels. Poor physical health due to lack of sleep can exacerbate stress.

**Example:** Athletes who sleep adequately recover faster and feel less stressed before competitions.

- e. **Sleep balances hormones:** Adequate sleep helps regulate hormones like serotonin and dopamine, which are critical for mood stability and stress reduction.

**Example:** Consistent sleep patterns contribute to a positive mood and reduced anxiety, making it easier to face daily challenges.

- f. **Sleep boosts resilience to stress:** Sleep strengthens resilience by giving the mind and body the energy to cope with stressors. A sleep deprived person is more likely to feel overwhelmed by minor issues.

**Example:** Parents who get enough sleep can manage the challenges of raising children more effectively than those who are constantly sleep deprived.

- g. **Sleep encourages relaxation and recovery:** The sleep cycle includes periods of deep sleep and REM (Rapid Eye Movement) sleep, during which the brain processes emotions and resets stress levels.

**Example:** Dreams during REM sleep help process unresolved emotions, reducing anxiety.

### Practical Tips for Adequate Sleep

- a. **Establish a sleep routine:** Go to bed and wake up at the same time every day.
- b. **Create a relaxing environment:** Use dim lights, comfortable bedding and reduce noise.
- c. **Avoid stimulants before bedtime:** Limit caffeine, alcohol and screen time in the evening.
- d. **Engage in relaxation techniques:** Practise meditation or light reading before bed.

## 4. Time Management

**Prioritising tasks:** Focus on urgent and important tasks first. Prioritising tasks helps prevent stress by allowing individuals to focus on what is most important first, manage time

effectively, and avoid feeling overburdened. It creates a clear path to accomplish goals without unnecessary pressure or confusion.

**a. Reduces feeling overburdened**

By breaking down a large workload into smaller, manageable tasks, prioritising prevents feelings of being busy. It helps focus on completing one thing at a time rather than worrying about everything at once.

**Example:** A learner with multiple assignments can list tasks in order of their deadlines, completing the most urgent first to reduce last-minute panic. Also, they can use a to do list or planner to organise daily activities. Again, a learner preparing for exams or a quiz can prioritise studying key subjects over spending excessive time on extracurricular activities.

**b. Avoiding procrastination**

This helps prevent stress by promoting timely action, reducing last-minute pressure, and ensuring that tasks are completed efficiently and effectively. When procrastination is avoided, individuals maintain control over their responsibilities, leaving room for relaxation and better mental well-being.

**c. Reduces last-minute pressure**

Procrastination often results in rushing to meet deadlines, leading to anxiety and stress. Tackling tasks early eliminates the stress associated with time constraints.

**Example:** A learner who starts preparing for exams weeks in advance avoids the sleepless nights and stress of cramming.

**Example:** Completing one section of an assignment each day instead of rushing the night before.

**d. Improves time management**

Taking action immediately ensures that tasks are completed on time, allowing for better organisation and planning.

**Example:** An office worker who answers emails daily avoids the stress of dealing with an overflowing inbox before an important presentation.

**e. Enhances focus**

Avoiding procrastination allows individuals to concentrate on one task at a time, reducing the chaos of juggling multiple unfinished tasks.

**Example:** A chef who prepares ingredients ahead of time can focus entirely on cooking during service hours, reducing the stress of multitasking.

**f. Prevents task accumulation**

Procrastination can cause tasks to pile up, creating an overwhelming workload. Completing tasks as they come prevents this buildup, making workloads manageable.

**Example:** A teacher who grades assignments weekly avoids the stress of grading an entire term's worth of work at once.

**g. Builds confidence and motivation**

Completing tasks promptly provides a sense of accomplishment, boosting self-confidence and motivating individuals to continue being productive.

**Example:** A writer who drafts chapters daily feels motivated by progress rather than discouraged by an approaching deadline.

#### h. **Improves quality of work**

Avoiding procrastination allows more time for reviewing and improving work, resulting in better outcomes and less stress about errors or low quality.

**Example:** A graphic designer who starts early on a project has time to revise their work, reducing stress about client feedback.

#### i. **Creates time for relaxation**

Completing tasks ahead of time frees up hours for self-care, hobbies, and relaxation, which are crucial for stress management.

**Example:** A learner who finishes an essay early can spend the weekend engaging in leisure activities instead of stressing over the deadline.

### **Practical Tools for Prioritising Tasks**

#### a. **To-do lists**

Write down tasks in order of importance. This can be done by categorising tasks using labels like ‘urgent’, ‘important’ and ‘low priority.’ *Or*

#### b. **Divide tasks into four quadrants**

**Urgent and important:** Do immediately.

**Important but not urgent:** Schedule it for later date.

**Urgent but not important:** Delegate, ask someone to do it or handle it.

**Neither urgent nor important:** Eliminate, take it out of the list of things to be done. *Or*

#### c. **Use a time blocking technique:** Allocate specific blocks of time to perform each task. Allotting more time to high priority tasks and starting with them first.

### 5. **Positive Thinking**

Positive thinking helps prevent stress by fostering a more optimistic outlook, improving coping mechanisms, and enhancing overall emotional well-being. It helps individuals approach challenges with confidence and resilience, reducing the likelihood of becoming overwhelmed. Practising optimism helps individuals reframe challenges.

**Example:** Instead of thinking, I cannot do this, say, I will try my best and learn from the experience.

#### a. **Reframes negative situations**

Positive thinking encourages viewing challenges as opportunities for growth rather than impossible problems. This reduces feelings of helplessness and stress.

**Example:** A learner who views a difficult exam as a chance to improve their knowledge feels motivated rather than anxious.

#### b. **Enhances problem-solving skills**

Hopefulness allows individuals to focus on solutions rather than dwelling on problems. This proactive approach helps reduce stress by creating a sense of control in individuals.

**Example:** An employee facing a missed deadline to perform a task focuses on ways to recover rather than panicking about the mistake.

c. **Boosts resilience**

Positive thinking strengthens the ability to bounce back from setbacks, reducing the impact of stressful situations.

**Example:** An athlete who loses a competition views it as a learning experience, motivating them to train harder for the next one.

d. **Reduces negative emotional reactions**

Positive thinkers are less likely to experience intense negative emotions like anger, frustration or fear, which are major contributors to stress.

**Example:** A driver stuck in traffic listens to music and enjoys the moment rather than becoming irritated by the situation.

e. **Improves physical health**

Positive thinking reduces the production of stress hormones like cortisol, which can lead to improved immune function and overall physical health. A healthy body is less susceptible to stress.

**Example:** A person who stays optimistic during an illness has better recovery outcomes compared to someone consumed by worry.

f. **Encourages healthy relationships**

Positivity fosters better communication and stronger social bonds, which provide emotional support during stressful times.

**Example:** A friend who remains hopeful and expectant during tough times can uplift and reassure others, reducing collective stress.

g. **Promotes relaxation and joy**

Focusing on the good aspects of life releases feel-good hormones like endorphins, promoting relaxation and reducing stress levels.

**Example:** Writing, recording or journaling about positive experiences boosts mood and lowers anxiety.

### Practical Strategies for Positive Thinking

- a. **Practise gratitude:** Reflecting regularly on things one is thankful for; shift focus from problems to blessings.

**Example:** Writing down three good things that happened each day.

- b. **Use affirmations:** Repeating positive statements to challenge and replace negative thoughts.

**Example:** I can handle this situation successfully.

- c. **Focus on strengths:** Identifying and leveraging personal strengths to tackle challenges confidently help prevent stress.

**Example:** I am a good organiser, a good athlete, a good learner, a good boss and I will use this skill to manage my tasks.

- d. **Reframe negative thoughts:** Replace negative self-talk with constructive and positive alternatives.

**Example:** Instead of I cannot do this, just say, this is challenging, but I can learn and improve.

## 6. Building Support Systems

**Surround yourself with supportive people:** Building support systems helps prevent stress by providing emotional, social and practical assistance during challenging times. A strong network of supportive individuals creates a sense of belonging, fosters resilience and offers resources to cope with stress effectively. Hence, spend time with supportive and encouraging people who uplift spirits during difficult times and try to practise staying in the present moment and letting go of worries about the future or regrets about the past.

- a. **Provides emotional support:** Talking to supportive friends, family or peers help relieve stress by sharing burdens and gaining reassurance. This reduces feelings of isolation and provides a sense of comfort.

**Example:** A learner overwhelmed with studies feels relieved after discussing their worries with a friend who encourages and empathises with them.

- b. **Encourages problem-solving:** A support system offers different views and solutions to problems, reducing the stress of trying to handle everything alone.

**Example:** An entrepreneur facing a business challenge consults a mentor, who suggests practical steps to resolve the issue.

- c. **Fosters a sense of belonging:** Feeling connected to others prevents loneliness, a major contributor to stress. Being part of a group or community can boost self-esteem and emotional well-being.

**Example:** Joining a fitness group helps an individual form bonds while engaging in activities that reduce stress.

- d. **Provides practical assistance:** Support systems can offer tangible help, such as assisting with tasks, financial aid, or childcare, which reduces the burden on an individual.

**Example:** A single parent receives help from family members to babysit their children, easing the pressure of juggling work and parenting.

- e. **Acts as a buffer against stressful events:** During crises, support systems act as a safety net, reducing the intensity of stress. Knowing help is available make challenges feel less discouraging.

**Example:** A person facing job loss receives emotional and financial support from friends, helping them navigate the transition.

- f. **Promotes accountability:** A supportive network can encourage individuals to stay on track with healthy habits that prevent stress, such as exercise or time management.

**Example:** A workout buddy motivates someone to stick to their fitness routine, which helps reduce stress.

- g. **Improves coping skills:** Observing how others in a support system manage stress inspire effective coping strategies that improves resilience.

**Example:** A college learner learns from a classmate how to use study schedules to handle academic pressure.

### Practical steps to build support systems

- a. **Nurture existing relationships:** Strengthen bonds with family and friends by spending quality time together.

**Example:** Regular family visits, visiting places of interest together or weekly calls with close friends.

- b. **Join groups and communities:** Join clubs or community support groups or community activities to meet likeminded people.

**Example:** Joining a virtuous ladies or faithful gents club or a local book group.

- c. **Seek professional help when needed:** Establish connections with therapists, counsellors or mentors who can provide expert guidance during stressful times.

- d. **Be open and communicative:** Share feelings and challenges honestly to build trust and deepen relationships.

**Example:** Letting a friend know when feeling down and weary so they can offer support.

- e. **Offer support to others:** Reciprocal relationships foster trust and reliability, creating a stronger network.

**Example:** Helping a friend with their task shows a person is dependable, encouraging them to support in return.

## Negative Ways of Managing Stress

Negative ways of managing stress are unhealthy behaviours or coping strategies that may provide temporary relief but can harm have long-term damaging effects on physical, mental and emotional well-being of individuals who use them.

Examples of unhealthy ways of managing or coping with stress include:

### 1. Substance abuse

**What it involves:** Using alcohol, tobacco or any other drug to cope or temporarily escape feelings of stress. This includes recreational drug use, excessive drinking or relying on substances to manage stress.

**Why it is harmful:** Although substances may provide short-term relief for individuals who use them, they can lead to addiction, long-term physical health problems (e.g., liver damage from alcohol, lung issues from smoking) and mental health challenges such as depression or anxiety. They use also impair decision-making, leading to harmful consequences like accidents or strained relationships.

### 2. Overeating or undereating

**What it involves:** Some people turn to food more for comfort. That is consuming high calorie or sugary snacks in excess (binge eating) while others may lose their appetite and skip meals entirely.

**Why it is harmful:** Overeating leads to weight gain, obesity and related health issues such as diabetes or heart problems whereas undereating deprives the body of essential nutrients, weakens the immune system and causes fatigue or malnutrition which disrupt long term physical and emotional health.

### 3. Isolation and avoidance

**What it involves:** Withdrawing from social interactions, friends, family or responsibilities to avoid confronting stressors or avoiding stressful situations. Individuals may avoid stressful conversations, events or tasks altogether.

**Why it is harmful:** While occasional privacy can be restorative, prolonged isolation increases loneliness, anxiety and depression. Avoiding problems does not resolve them but often worsens the situation or leads to missed opportunities for help or resolution.

#### 4. **Aggression**

**What it involves:** Expressing stress through anger or violence towards others. This is expressed by yelling at others, physical confrontations or passive aggressive behaviour which harms relationships and worsens stress.

**Why it is harmful:** Lashing out at others damages relationships, creates tension, and leads to guilt or regret. It can alienate support systems and escalate conflict, adding to the stress rather than alleviating it.

#### 5. **Excessive screen time**

**What it involves:** Spending hours on social media, playing video games or always watching TV shows as a form of distraction.

**Why it is harmful:** While it may temporarily take the mind off stress, excessive screen time disturbs sleep patterns, reduces physical activity and isolates individuals from meaningful social interactions. It can also lead to feelings of inadequacy or anxiety and reduce productivity, especially when comparing oneself to others on social media.

#### 6. **Risky behaviours**

**What it involves:** Engaging in impulsive or reckless activities such as gambling, gaming, unsafe driving or risky sexual behaviours to distract from stress or seek an adrenaline rush.

**Why it is harmful:** These actions lead to serious consequences, such as financial loss, physical harm or sexually transmitted infections (STIs). Instead of reducing stress, these behaviours often add new sources of worry or regret.

## **Benefits of Preventing Stress**

Preventing stress offers numerous physical, emotional and social benefits, contributing to overall well-being.

### 1. **Physical benefits**

- a. **Improved health:** Reduces the risk of stress-related illnesses such as hypertension, heart disease, and diabetes.
- b. **Better sleep:** Preventing stress enhances the quality and duration of sleep, leading to improved energy levels.
- c. **Boosted immune system:** A stress-free body is more resilient to infections and diseases.
- d. **Increased energy levels:** Preventing stress reduces fatigue, leaving you more energised for daily activities.
- e. **Fewer aches and pains:** Reduces physical tension, headaches, and muscle pain often caused by stress.

### 2. **Emotional benefits**

- a. **Enhanced emotional stability:** Preventing stress reduces mood swings, irritability, and feelings of overwhelm.

- b. **Increased happiness:** Supports a positive outlook on life and greater emotional fulfilment.
  - c. **Better focus and mental clarity:** Allows for improved decision-making and problem-solving abilities.
  - d. **Reduced anxiety and depression:** Helps maintain mental health by keeping negative thoughts in check.
  - e. **Social Benefits:** Helps maintain mental health by providing support and guidance during times of stress.
  - f. **Improved relationships:** A calm and balanced individual communicates better, resolves conflicts effectively, and fosters stronger bonds.
  - g. **Better teamwork:** Stress prevention supports collaboration and reduces misunderstandings in group settings.
  - h. **More enjoyable social interactions:** A stress-free mindset promotes relaxation and fun during social activities.
3. **Performance and productivity benefits**
- a. **Enhanced productivity:** With less stress, focus and efficiency improve at school, work, and daily tasks.
  - b. **Improved time management:** Stress prevention encourages planning and prioritisation, leading to better use of time.
  - c. **Greater creativity:** A relaxed mind is more innovative and open to new ideas.
4. **Long-term benefits**
- a. **Prolonged life expectancy:** Chronic stress can shorten lifespan, so its prevention promotes longevity.
  - b. **Resilience:** Preventing stress fosters the ability to cope with future challenges more effectively.
  - c. **Healthier lifestyle choices:** A stress-free individual is more likely to eat well, exercise, and avoid harmful habits like smoking or excessive drinking.

Incorporating stress prevention into daily life is essential for holistic well-being and success in all areas of life.

### Learning Tasks

1. Identify and explain signs and symptoms of stress.
2. Explain how to prevent and manage stress.

## Pedagogical Exemplars

### Activity

#### Starter activity

Recap the previous lesson on stress, types of stress, stressors, how the body response to stress, common sources of stress and impact of stress on health and well-being with learners.

#### Introductory activity: Mystery clues - What am I?

**Preparation:** Prepare a series of mystery clues or phrases on cards or slide shows related to the topic of the lesson. Each clue gives a bit more information on the topic. Start broadly and get gradually more specific. Use objects or images related to the clues as visual aids to help learners guess the answer to the clues if possible. For example, the clues should include:

**Clue 1:** I often show up when you feel overwhelmed by life's demands.

**Clue 2:** I can cause physical signs like headaches, muscle tension and tiredness.

**Clue 3:** I might affect your emotions, making you irritable or anxious.

**Clue 4:** If left unchecked, I can harm your mental and physical well-being

**Clue 5:** Etc.

#### Execution

Read the first clue aloud to the class and allow learners to guess the answer by raising hands. If no one guesses correctly, proceed to the next clue and so on, until someone gets it. Encourage learners to explain their reasoning. Keep a light-hearted atmosphere, encouraging guesses even if they are incorrect.

Once a learner guesses the answer right, confirm the answer and celebrate their participation briefly. Introduce the lesson by explaining that the lesson will focus on identifying signs and symptoms of stress, how to recognise the signs and symptoms in themselves and others, strategies to prevent and manage stress and the benefits of preventing stress.

#### Main activity – Signs, symptoms and avoidance of stress.

##### Structured Talk for Learning, Brainstorming and Collaborative Learning

Help learners relate the topic to their own experiences and generate ideas collaboratively about the signs and symptoms of stress. Allow learners to brainstorm and share possible signs and symptoms they have experienced or observed in others. Write their responses on the board and organise them in a chart divided into categories of signs and symptoms. Ask this question, '**How do you know when you are stressed or when others are stressed?**' and encourage them to share physical, emotional, behavioural and cognitive signs they notice in themselves or others when stressed.

##### Role Play and Collaborative Learning

Write simple stress scenarios on cards and task learners in groups to role play them to create an interactive and visual way to explore the signs and symptoms of stress. These and other stress scenarios of stress can be used.

1. You have an exam tomorrow but have not studied.
2. You are running late for an important event.
3. Your teacher gives you extra homework after a busy day.
4. You have had a disagreement with a friend.

Divide learners into small groups and give each group a card and 5 minutes to prepare a short skit showing how someone in the scenario might react physically, emotionally or behaviourally. For example:

1. **Physical reactions:** Headache, rapid breathing, sweating, etc.
2. **Emotional reactions:** Anxiety, anger, sadness etc.
3. **Behavioural reactions:** Avoiding tasks, snapping at others, eating excessively, etc.

Each group presents their skit and the rest of the class guesses the signs of stress demonstrated. Facilitate a brief discussion after each skit.

### Talk for Learning

Teach learners practical ways to avoid unnecessary stress such as time management, healthy lifestyle, setting boundaries, positive mindset. Explain the importance of planning and organising tasks to avoid the last-minute rush that causes stress. Highlight tools like planners, to-do lists and how prioritise tasks.

Divide learners into small groups and provide each group with a scenario, such as preparing for an exam, organising an event or managing schoolwork and chores. Ask each group to create a simple planner or to-do list to manage their time effectively. Have each group present their plans and discuss how they can improve or adapt them. Emphasise how setting realistic goals, breaking tasks into smaller steps and tackling one task at a time can reduce stress.

Discuss with the class the role of regular exercise, a balanced diet and sufficient sleep in maintaining physical and mental health. Explain how these habits help the body cope better with stress. Ask learners to share their favourite healthy habits (e.g., walking, eating fruits, dancing, etc.). Facilitate a discussion about how these habits contribute to reducing stress. Lead a short session of simple physical activities, such as stretching or deep breathing to demonstrate how exercise can immediately reduce tension.

Teach learners the importance of politely saying no to additional responsibilities when they are overburdened or tired and discuss how setting boundaries can prevent burnout and maintain healthy relationships. Guide learners in pairs or groups to role-play scenarios where they need to say no politely, such as refusing a friend's request to hang out when they have unfinished homework. Provide constructive feedback to help learners practise assertiveness without feeling guilty. Emphasise that saying no is a form of self-care and a way to prioritise their well-being. Explain how viewing challenges as opportunities for growth rather than an impossible problem can reduce stress.

Discuss the power of affirmations and positive self-talk in building resilience and provide examples of positive affirmations, such as *I can handle this* or *Every problem has a solution so I can solve this*. Encourage learners to write their own affirmations and share them with the class. Discuss how they can use these affirmations in stressful situations to boost their confidence. Encourage learners to record their experiences with stress management and share their progress in the next class.

## Digital Based Learning and Project Based Learning

In their groups guide learners to search the internet for the strategies for managing stress and have them design a 'stress management kit' with ideas like listening to music, drawing, engaging in a favourite and relaxing physical activity, journalling or writing their thoughts in a diary, etc. also develop a weekly plan integrating healthy eating, regular exercise, good sleep patterns, etc. have the groups present their work to the class for further discussion. Summarise signs and symptoms, and the key prevention and management strategies to the class and discuss with them the benefits of preventing stress.

Discuss the importance of identifying and managing stress in healthy ways. Mention that different strategies work for different people and that it is key to explore a variety of options to know which one works well for an individual.

Divide the class into small mixed ability groups and instruct each group to use the internet to research various strategies for managing stress. Some examples to guide their search include:

1. Relaxation techniques (deep breathing, meditation, practising good sleeping patterns).
2. Physical activities (walking, jogging, swimming or playing any sports).
3. Creative outlets (drawing, journaling, writing, listening to music or playing a musical instrument).
4. Social strategies (spending time with friends, talking to a counsellor, joining a support group).
5. Time-management techniques (setting realistic goals, taking breaks, prioritising tasks).

Encourage learners to search for a variety of methods and ideas that appeal to different senses (e.g., auditory, visual, physical) and can be done alone or with others.

Task each group to design a ***Stress Management Toolkit***. Let learners know a stress management toolkit is a collection of strategies, techniques and resources designed to help individuals effectively to cope with and reduce stress. Let learners know that the items or ideas to include in the toolkit are collection of strategies or activities that can help manage stress, like listening to music, drawing, engaging in a relaxing physical activity, recording stress triggers, breathing exercises, etc. Encourage them to draw pictures, make or create a list of items that could be included in their kit and give brief descriptions on how to use each item or strategy (e.g., listen to calming music for 15 minutes to relax after a stressful event or engage in a 20-minute walk or jogging each morning to improve mood). Learners should also integrate one or more healthy lifestyle habit into their kit, such as eating balanced meals with nutrient rich foods, etc.

Ask each group to present their *Stress Management Toolkit* to the class.

### Encourage learners to explain:

1. The different stress management strategies included in their kit and why they chose them.
2. The benefits they expect from integrating these strategies into their daily life.

3. The role of healthy eating, regular exercise, and good sleep in stress prevention and management.

Each group should also provide suggestions for integrating wellness into the classroom or school

After all presentations, engage the class in a group discussion. Ask learners to reflect on the different strategies shared by their peers and which ones they find most appealing or effective.

Discuss the benefits of preventing and managing stress, touching on improved mental and physical health, better focus, enhanced productivity and stronger relationships. Summarise the key signs and symptoms of stress some of which include irritability, fatigue, headaches, difficulty concentrating and changes in sleep or losing appetite. Emphasise the importance of a balanced lifestyle, including eating well, getting enough sleep, staying active and taking time to relax.

## Key Assessment

### Level 1

1. List three physical signs of stress.
2. Identify two emotional symptoms of stress.
3. What is a behavioural sign of stress?
4. Name one hormone released during stress.
5. State two causes of stress in students.
6. Identify one way exercise helps in stress prevention.
7. Match the following symptoms with their category (physical, emotional or behavioural)
  - a. Fatigue.
  - b. Anxiety.
  - c. Procrastination.
8. Identify one social benefit of preventing stress.

### Level 2

1. Distinguish between physical and emotional symptoms of stress, giving one example of each.
2. Describe the relationship between stress and headaches.
3. Describe how poor time management can lead to stress with an example.

### Level 3

1. Explain how stress can affect a person's sleep.
2. Explain the difference between preventing stress and managing stress.
3. Explain how stress prevention leads to better decision-making.

### Level 4:

1. Design a school awareness programme to educate students about the signs and symptoms of stress.

2. Develop a personal action plan for managing stress during high-pressure situations.

**Homework:** Develop a stress prevention plan for a college student and explain how it supports physical, emotional and social benefits.

## SECTION 10 REVIEW

Section 10, Part Three of health and wellness, provides a thorough understanding of stress and how to deal with it in real life. Learners understand stress and recognise it as a natural response to life's demands and pressures. They differentiate between acute and chronic stress and their respective impacts. They identify the physical, emotional, behavioural and cognitive signs and symptoms of stress and know how stress manifests differently in individuals. Learners also identify ways to prevent stress, such as maintaining a healthy lifestyle and managing time effectively and understand the importance of social support and self-care in reducing stress. Learners also explore various methods for managing stress, including mindfulness, exercise and seeking professional help and gain practical tips for handling stress in everyday situations. Again, learners are taught how to recognise the physical, emotional and social advantages of preventing stress, such as improved health, enhanced relationships and increased productivity and appreciate the role of stress prevention in fostering resilience and overall well-being.

Learners can now identify their own stress triggers and how they can apply prevention and management strategies to prevent it and reduce its effect on their daily lives. Teaching approaches used included brainstorming, think pair and share/think in and share, structured talk for learning, collaborative learning, talk for learning, group-based learning, digital based learning and role play.

## SECTION 11: WALKING AS A SPORT

### STRAND: PHYSICAL ACTIVITY AND HEALTH

#### SUB-STRAND: LONG DISTANCE EVENTS

**Learning Outcome:** *Demonstrate the ability to use core skills in race walking*

**Content Standard:** *Demonstrate knowledge and understanding of long-distance events in athletics*

#### HINT



- The recommended mode of assessment for Week 24 is **End of Semester Examination**. Refer to **Appendix G** at the end of Section 11 for further information on how to go about the group presentation.
- Week 24 marks the end of the second semester examination. All pending scores for mandatory assessments must be finalised and submitted to the STP.

### INTRODUCTION AND SECTION SUMMARY

Race walking is a competitive athletic discipline that combines speed, endurance and precision. Unlike running, race walking requires athletes to maintain continuous ground contact and adhere to specific technique rules, mainly keeping one foot on the ground at all times and ensuring the leading leg is straightened when it makes contact with the ground. These rules distinguish race walking from other forms of walking and running which makes it a unique and challenging sport.

Beyond competitive contexts, race walking serves as a form of fitness and recreational activity, offering a low-impact yet highly effective workout. Its popularity is growing worldwide, with opportunities for people of all ages and abilities to participate. This section explores the foundational aspects of race walking, including its definition, history, and technical requirements.

#### Key topics covered include:

**Historical context:** A brief history of race walking, tracing its evolution from a 19th-century pastime to a modern Olympic sport.

**Rules and techniques:** Understanding the mechanics of race walking, that is proper posture, stride, and compliance with judging criteria.

**Events and competitions:** An overview of race-walking events, distances and their place in international athletics.

**Training and fitness:** Insights into the physical and mental preparation required for race walking, highlighting its benefits as a competitive and recreational activity.

This section aims to provide a comprehensive understanding of race walking, encouraging appreciation for its details and accessibility as both a sport and a fitness activity.

**The week covered by this section is:**

**Week 24:** Identify the core skills in race walking and apply them.

## SUMMARY OF PEDAGOGICAL EXEMPLARS

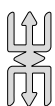
Pedagogical exemplars for this section emphasise engaging and progressive methods designed to enhance learners' abilities, understanding and confidence in race walking. These approaches integrate technical and physical elements of race-walking strategies while fostering sportsmanship, confidence, endurance and strategic thinking. The methods include Talk for Learning, Practical-Based Learning and Collaborative Team Exercises. By combining these pedagogical strategies, a learning environment that goes beyond teaching the technical aspects of race walking is created. This approach also teaches essential values such as teamwork, discipline, and perseverance in learners, contributing to their overall personal and athletic development.

## ASSESSMENT SUMMARY

Tasks should cover description and demonstrations of posture, foot placement, leg movement, stride length frequency, arm action and hip movement. Adapt tasks to suit learners' ability levels and the complexity of the concepts covered. Structured talk-for-learning strategies can be used to foster meaningful discussions, encourage collaboration and integrate practical-based activities that engage mixed-ability and mixed-gender groups wherever possible. Provide learners with opportunities to respond in various ways, including oral descriptions, practical demonstrations, or full performances. Ensure a fair and holistic evaluation of learners' progress and achievements.

The following assessment would be conducted and recorded for each learner:

**Week 24:** End of Semester Examination



### Note

For additional information on how to effectively administer these assessment modes, refer to the Appendices.

**WEEK 24**

**Learning Indicator:** Identify the core skills in race walking and apply them

**FOCAL AREA: RACE WALKING****Introduction**

Race walking traces its origins to the early 19th century, developing from the practice of pedestrianism in England. This form of competitive walking captivated audiences as a popular form of entertainment and sport, with participants competing in long distance events for wagers (a wager refers to a person who makes a bet or places a stake on the outcome of an event, game or activity which often involves money or something of value). These endurance contests often lasted for several days and attracted large crowds of audience.



**Figure 24.2:** *Pedestrianism, now race walking in the early 19th century in England*

**Early Beginnings**

In 18th-19th century competitive walking gained prominence as a form of professional entertainment in England, where pedestrians competed in endurance events covering distances that sometimes exceeded 1,000 miles. In 1860s, rules to standardise the walking technique were introduced. The introduction of the rules laid the basis for modern race walking.

**Transition to a Recognised Sport**

In the 1870s, race walking became a formalised athletic discipline with established techniques and regulations and was included in amateur athletic competitions. In 1908 the sport made its Olympic debut in London with a 3,500-metre event, signalling its shift from entertainment to a respected competitive sporting event.

In 1024, the Olympic programme for race walking expanded to include the 10,000 metre and 50-kilometre race walking events, establishing its place in international athletics.



**Figure 24.3:** *First Olympic race walking held in 1908 in London*

## International Growth and Popularity

Over time, race walking gained international recognition, with major events hosted across Europe, Asia, and the Americas. Governing bodies such as World Athletics (formerly IAAF) refined its formalised rules and introduced global championships. The first official World Race Walking Cup was held in 1961 which brought together to athlete walkers from around from around the world.

## Modern Advancements

Advances in training techniques, equipment, and race management further enhanced the sport. Technologies such as video replay are now used to assist judges in ensuring fair competition.

Today, race walking remains a key feature of international competitions, including the Olympic Games, World Athletics Championships, and Commonwealth Games. Race walking has evolved from its humble beginnings as pedestrianism into a technically demanding and globally respected sport. Its long history reflects its enduring appeal as a test of endurance, skill and discipline.

## Walking

Walking is a natural and low-impact form of movement where one foot remains in contact with the ground at all times. It involves a steady gait with a straightened leading leg upon ground contact. Walking is essential for daily mobility, fitness, and overall well-being, making it suitable for all age groups.



**Figure 24.4:** *Walking and one foot is of the ground*

## Running

Running is a form of movement where both feet are off the ground at the same time during each stride, distinguishing it from walking. It is a high impact activity that improves cardiovascular fitness, muscular strength and endurance. Running is widely practised for recreation, competition, and overall health benefits.



**Figure 24.5:** *Running and both feet are off the ground*

## Race walking

Race walking is a competitive athletic discipline that requires a blend of speed, endurance and precise technique. Athletes must ensure one foot remains in contact with the ground at all times and the leading leg stays straight from initial contact until it passes under the body. Race walking is an international sport, performed and is also recognised as an excellent activity for fitness and recreation.



**Figure 24.1:** *Race walking*

## Key Differences Between Race Walking and Regular Walking

### 1. Technique

**Race walking:** Requires specific rules to be followed.

- a. One foot must always be in contact with the ground.
- b. The knee must be straightened from the moment the leading foot touches the ground until it passes under the body.

**Regular walking:** Does not have strict rules for form or technique, the movements are more relaxed and natural.

## 2. Speed

**Race walking:** Performed at a much faster pace, often ranging between 6-10 km/h or more depending on the skill level.

**Regular walking:** Generally slower and averaging about 3-5 km/h for casual walkers.

## 3. Stride

**Race walking:** Features a longer stride and a smoother gliding motion with minimal vertical movement.

**Regular walking:** Strides are shorter and more natural with a slight up and down motion as part of the walk.

## 4. Posture

**Race walking:** Requires an upright posture with the head held high, back straight and arms bent at a 90-degree angle for efficient motion and balance.

**Regular walking:** Posture is less rigid and arm movements are more relaxed.

## 5. Physical intensity

**Race walking:** A high intensity cardiovascular activity that engages more muscles, including the hips and legs due to its specific form.

**Regular walking:** A low to moderate intensity activity primarily engaging the legs.

## 6. Purpose

**Race walking:** Often performed competitively with a focus on speed, endurance and adherence to technique.

**Regular walking:** Naturally done for leisure, transportation or light exercise without the pressure of performance or technique.

## 7. Judging

**Race walking:** Subject to strict judging in competitions with penalties or disqualification for improper form (e.g., lifting or bent knees).

**Regular walking:** No rules or external evaluation of the walking style.

These differences make race walking a more demanding and structured activity compared to regular walking that requires practice and discipline to master.

## Rules of Race Walking

Race walking is a highly regulated sport with specific rules that distinguish it from other athletic disciplines. These rules, set by World Athletics, ensure fairness and maintain the sport's unique identity.

1. **Ground contact rule:** Athletes must always have at least one foot in contact with the ground. This rule ensures that race walking is distinct from running, where athletes often have both feet off the ground during a stride. Judges watch closely for infractions, often using visual observation to determine if an athlete appears to 'lift' (both feet lose contact). In some high-level competitions, video replay is used to confirm this.
2. **Straightened leading leg rule:** The leading leg must be fully extended (straightened) from the moment it contacts the ground until it passes beneath the body. Bending the knee during this phase is considered a violation. This technical requirement ensures the

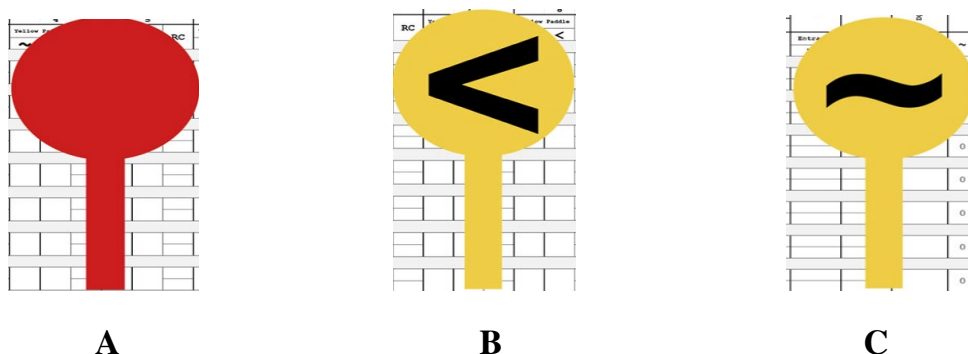
characteristic walking walk of race walking is maintained. Athletes must practise to ensure compliance as tiredness often leads to bending the knee unintentionally.

3. **Judging:** A panel of trained race-walking judges are strategically placed along the race course to monitor the athletes' adherence to the rules. Judges observe the walk techniques and body mechanics, focusing on ground contact and knee straightening. They observe athletes' technique and issue warnings or penalties if rules are breached. Each judge operates independently and their observations are recorded without influence from other judges to ensure impartiality.

#### 4. Warnings and penalties

**Yellow paddle:** If a judge notices a rule violation (e.g., loss of ground contact or bent knee), they issue a yellow paddle as a warning to the athlete. Yellow paddles indicate the need to correct technique but do not lead to immediate penalties.

**Red card:** When a judge confirms a violation, they issue a red card. That is if an athlete repeatedly violates the rules. Accumulating three red cards from different judges results in disqualification. Athletes are informed of their rule violations through a posting board near the course or by officials during the race.



**Figure 24.6:** Card for disqualification(A), bent knee (B) and loss of contact (C)

#### 5. Judging assistance

In elite or high-level competitions, video assisted judging is used to ensure accurate assessments.

Cameras positioned at critical points on the racecourse allow for detailed evaluation of foot placement and leg movement rule compliance. This technology has reduced disputes and improved the accuracy of officiating in the sport.

#### 6. Competition rules

**Attire or equipment:** Athletes must wear race numbers (bibs) and adhere to uniform guidelines or identification specified by the competition organisers.

**Race Distances:** Race distances vary. The standard distances include 10 kilometres, 20 kilometres, and 50 kilometres. Track events normally take place on a 400-metre track while road races use certified circuits.

**Course standards:** The race course must meet specific standards and must be clearly marked with proper measurement on a flat or gently undulating surface to minimise interference with athletes' techniques.

#### 7. Start and finish

**Start:** Races begin with a mass start which are often accompanied by a countdown or starting signal. Athletes must stay or remain within their designated lanes or paths until instructed otherwise.

**Finish:** The winner is determined by the first athlete whose torso crosses the finish line. Unlike running the position of the head, arms or legs does not affect the result.

## 8. Fair play and conduct

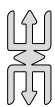
Athletes are expected to compete with integrity and respect for other competitors, judges and officials.

Deliberate obstruction, such as blocking another athlete's path is considered unsportsmanlike and can lead to penalties or disqualification. Officials also monitor for physical or verbal misconduct throughout the race.

## The two main rules that make race walking different from running

What makes race walking stand out is not just that the competitors are walking but how they are walking. The reason race walkers look as they do is as a result of the two key rules of the sport.

1. The first rule is that, one foot must be touching or must be in contact of the ground at all times and that is what makes walking. When people run, there is a moment during the running when both of their feet are off the ground but it is not like that with walking.
2. The second rule is that the front leg must not bend until it has pass under the body. These are the two main rules that make race walking different from running.



### Note

Adhering to these rules is key, as any violations can lead to warnings, penalties or disqualification. Mastery of technique combined with endurance and focus is essential for success in race walking.

## Techniques of Race Walking

Race walking requires a combination of speed, skill and endurance. The key techniques for performing race walking include,

### 1. Posture

**Upright position:** Maintaining an upright body posture with the head held high, shoulders relaxed and arms bent at 90 degrees is key for optimal performance. The body should be straight, with shoulders and back relaxed, which allows for better lung capacity and more efficient breathing. A slouched posture can lead to unnecessary strain and tiredness.

**Head position:** The head should remain straight and level, looking slightly ahead and not down. This helps maintain balance, improves forward motion and prevents muscle strain in the neck. Constantly looking down disrupts posture and negatively affects movement.

### 2. Leg and foot movement

**Heel-to-toe roll:** The most important aspect of race walking is the heel-to-toe technique. The leading foot should land with the heel touching the ground first, followed by a smooth roll through the foot from heel to toe. This promotes a fluid energy efficient stride, key for long distances.

**Ground contact:** It is essential to ensure that the foot remains in contact with the ground at all times. Race walkers cannot have both feet off the ground at the same time like in running. This constant ground contact creates friction, which helps with the forward motion and prevents violation of the ground contact rule.

**Foot positioning:** As the foot rolls, it should be angled properly to support the body's weight. An improper foot angle leads to discomfort and poor energy transfer, affecting both speed and endurance.

### 3. Knee action

**Straight leading leg:** The rule of keeping the leading leg straight is one of the most defining characteristics of race walking. The knee of the leading leg must be fully extended from the moment the foot hits the ground until it passes under the body. This is key to differentiating race walking from running.

**Flexibility and control:** A bend in the knee, even if momentary, could lead to a disqualification, hence proper skill and muscle control are essential. To master this, race walkers must practise strengthening the muscles around the knee to improve flexibility in the hip flexors to aid leg extension.

**Efficient leg movement:** When the straightened leg passes under the body, it should remain in a controlled, smooth motion. Unnecessary bending or snapping of the leg can increase the risk of injury and decrease overall efficiency.

### 4. Stride length and cadence

**Shorter strides:** Race walking requires shorter strides to maintain constant ground contact. Over striding leads to tiredness and reduce the effectiveness of the technique. Strides should be short and rapid steps with each foot contact designed for maximum energy transfer.

**Increase pace:** Because steps are short, they must be increased to achieve the desired speed. Race walkers must develop a rhythmic pace that works in harmony with their breathing and arm swing. The ability to balance stride length with tempo is vital for covering long distances at high speeds.

### 5. Hip rotation

**Natural rotation:** The hips should rotate gently with each step to aid in stride length and movement efficiency. Proper rotation facilitates the flow of energy through the body and maximises forward motion.

**Avoid excessive swinging:** Allow the hips to rotate naturally, excessive hip swinging or lateral movement leads to inefficiency and waste of energy. The goal is to ensure smooth, controlled movement without overexerting the body.

**Core engagement:** Maintaining core stability helps control the rotation of the hips and ensures the motion remains smooth and consistent throughout the race. Engaging the core prevents unnecessary movement and helps stabilise the lower back.

### 6. Arm swing or movement

**Elbow position:** The arms should be bent at roughly 90 degrees at the elbows. The arm swing should match the rhythm of the legs with the arms driving the body forward while ensuring balance. A controlled swing helps propel the body forward without wasting energy.

**Forward and backward motion:** The arms should move forward and backward and not side to side. The forward arm should reach roughly in line with the chest or shoulder and the backward arm should extend toward the back pocket. A smooth and efficient arm swing contributes to maintaining pace and posture.

**Avoid over-swinging:** The arms should not be swung too far forward or backward, as this could cause excessive energy expenditure and disrupt the rhythm of the race. Proper arm swing prevents unnecessary upper body tension and helps with forward motion.

## 7. Breathing

**Rhythmic breathing:** Just as the walking stride follows a rhythm, so too should the breathing pattern. Race walkers must focus on maintaining a deep, steady breath to ensure adequate oxygen intake, especially during long events.

**Inhalation and exhalation:** Deep inhalations through the nose should fill the lungs, while controlled exhalations through the mouth help release carbon dioxide and regulate the body's energy. This breathing pattern supports sustained performance and prevents early fatigue.

**Breathing and pace:** At faster paces, breathing will become more rapid. However, it's important to ensure that it remains controlled to avoid hyperventilation and loss of focus. Maintaining a steady breathing rhythm helps preserve energy over long distances.

## 8. Relaxation

**Tension free movement:** Throughout the race, race walkers should remain relaxed to conserve energy. Tension in the neck, face, or upper body can waste energy and disrupt the flow of the race. Keeping the face and upper body relaxed encourages smooth, efficient movement.

**Mental focus:** Relaxation also applies to mental focus. A calm, clear mind helps maintain concentration on the task, enabling the athlete to stay in tune with their technique and avoid tiredness.

**Minimise stress:** Excessive muscular tension or mental stress hinder performance and increase the risk of injury. Proper relaxation techniques and mental clarity contribute to better physical performance.

## 9. Focus and consistency

**Attention to technique:** Maintaining focus on race walking's strict rules is essential for long-term success. Consistency in technique and awareness of the rules ensures that athletes don't violate the ground contact or knee extension laws.

**Mind body connection:** Developing a strong connection between the mind and body through practice helps ensure consistent performance. Muscle memory built through regular drills enables race walkers to perform without overthinking the mechanics.

**Adaptability:** Race walkers must stay adaptable to changing conditions during a race, such as fatigue, changes in terrain, or changes in weather. They should adjust their technique as needed to maintain efficiency and avoid technical errors.

## Race Walking Distance for Beginners

Race walking distances for beginners commonly range from 1 kilometre (1 km) to 5 kilometres (5 km). These shorter distances allow beginners to focus on mastering technique and building endurance without the physical strain of longer races. The walking speed required ranges from 5 to 6 km/h for beginners.

The general speed for race walking varies based on skill level and competition. For recreational race walkers, the speed usually ranges from 5 to 8 km/h. In competitive race-walking, high-

level athletes can achieve speeds of up to 14 to 16 km/h. The key is maintaining proper technique while gradually increasing speed.

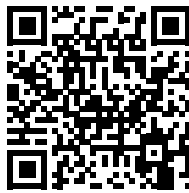
## How to Correct Walking Technique if Learners Begin to Jog

Guide learners to:

1. **Focus on foot contact:** Ask them to ensure that one foot is always in contact with the ground and concentrate on landing on the leading foot before lifting the back foot.
2. **Straighten the knee:** Explain/demonstrate that when the leading foot strikes the ground, they should make sure their knees are fully extended to avoid bending it during the contact phase.
3. **Adjust their stride:** Ask them to shorten their stride to prevent a bouncing motion as this resembles jogging. In walking we must maintain a smooth and gliding motion.
4. **Use arm movement:** Instruct them to swing the arms in a controlled motion, keeping them bent at a 90-degree angle. This will help them maintain balance and rhythm.
5. **Monitor their posture:** Tell them to keep the back straight, head up and their gaze forward and avoid leaning too far forward or backward, which can lead to improper technique.

By consciously focusing on these aspects, learners can regain proper form and avoid disqualification for breaking the race-walking rules.

The following videos provide tutorials on race walking:



### *Race walking tutorial*

<https://www.youtube.com/watch?v=jOzvn6NpeMU>



### *Race walking*

[https://www.youtube.com/watch?v=ttQer\\_S3F\\_A](https://www.youtube.com/watch?v=ttQer_S3F_A)

## Race Walking as a Form of Exercise

Race walking is a unique form of exercise that combines elements of both walking and running but with strict technique requirements. It is a low impact and full body workout that engages multiple muscle groups, making it an effective cardiovascular and muscular endurance exercise.

## Benefits of Race Walking as Exercise

There are many benefits to participating in race walking as a form of exercise. These include:

1. **Improved cardiovascular health:** Race walking is an excellent cardiovascular workout that increases heart rate and improves cardiovascular health. It helps to strengthen the heart, lower blood pressure and reduce the risk of heart disease.
2. **Low-impact exercise:** Race walking is a low impact activity that places less stress on the joints. This makes it an ideal option for individuals with joint problems or those recovering from injuries.
3. **Weight management:** Race walking helps with weight management by burning calories, improving metabolism and increasing overall energy expenditure. It can be part of a weight loss programme when combined with a balanced diet.
4. **Muscle strengthening and toning:** Race walking involves the use of the legs, core and the upper body which promotes muscle strengthening and toning. The movement of the hips, thighs, calves, and arms helps to build lean muscle mass especially in the lower body.
5. **Improved posture and balance:** Proper race-walking technique requires good posture and balance. Engaging the core muscles and maintaining a tall, upright stance improves overall posture and enhance stability.
6. **Mental health benefits:** As with most aerobic exercises, race walking helps to reduce stress, anxiety and depression by boosting the production of endorphins, the body's natural 'feel-good' hormones. It also provides an opportunity for outdoor activity which improve mood and mental clarity.
7. **Improved flexibility:** The full range of motion required in race walking helps to increase flexibility, especially in the hips and legs. This contributes to better overall mobility and reduces the risk of stiffness.
8. **Social activity:** Race walking can be done in groups, offering a social element. Walking clubs and competitions provide motivation and accountability making it a fun and engaging group and social activity.

### Learning Tasks

1. Differentiate between walking and running
2. Describe race walking.
3. Demonstrate race walking.

## Pedagogical Exemplars

### Activity

#### Starter/warm-up

Take learners through these activities to get them physically and mentally ready for the lesson. High knees (1 minute): Learners perform high knees in place, lifting their knees to waist level and swinging the arms.

**Arm circles and swings (1 minute):** Lead learners to perform large forward and backward arm circles, followed by crossing the arms in front of the chest and opening wide to stretch the shoulders and chest.

Lateral shuffles (1 minute): Learner's shuffle side-to-side between two markers (about 5 metres apart), staying low and keeping the movements quick.

Jumping jacks (1 minute): Have learners perform jumping jacks at a moderate pace to increase heart rate and engage multiple muscle groups.

Dynamic lunges with a twist (1 minute): Instruct learners to step forward into a lunge and twist the torso towards the leading leg and return to standing position and alternate sides.

Finish the warm-up with a light jogging or walking in a circle and gradually slowing to bring the heart rate down.

## **Introduction**

### **Talk for Learning**

Briefly take learners through the definition, history and the rules of race walking. Begin by defining race walking and explain the basics of race walking and how it differs from regular walking and running. Explain the rules to learners and emphasise the key rules, one foot must be in contact with the ground at all times and the leading leg must remain straight from the point of contact until it passes under the body. Allow time for learners to ask questions to clarify their understanding. Mark straight lines on the field or court for practice.

### **Main Activity**

#### **Video watching and demonstration of technique**

Show learners a short video on race walking to help them identify the fundamental techniques of race walking which are posture, foot placement, arm swing and hip movements. After the video section, demonstrate the skills step-by-step for learners to see. Start with the foot contact, explaining that the heel of the leading foot should touch the ground first, followed by a smooth roll through to the toe. Emphasise that the leading leg must remain straight from the moment it touches the ground until it passes under the body. Use slow motion demonstrations to ensure learners understand each movement by taking time to perform the activity. Emphasise the importance of an upright posture with relaxed shoulders and coordinated arm swings at a 90-degree angle that matches the leg movements to maintain balance and forward motion.

#### **Individual and Collaborative Skill Based Learning**

Divide the class into small teams and instruct all learners to practise walking in place to focus on proper technique. Emphasise key aspects of the race walking. That is heel-to-toe roll, straight leg and arm swing. After practicing he walking in place for a while, halt the activity and demonstrate how to walk along a straight line, focusing on keeping one foot directly in front of the other while maintaining an upright posture. After the demonstration, have learners walk slowly along the line, paying attention to their heel-to-toe roll and posture. Emphasise deliberate heel-to-toe rolling with each step to ensure proper form. Encourage learners to individually practise walking to build their technique further. Have learners stand behind the lines and practise walking to and from along the line. Instruct them to rotate their hips to extend their stride length while maintaining smooth and controlled movements. Help focus on arm movements by having learners walk with exaggerated arm swings to build muscle memory and coordination. Stress the

importance of straightening the leading leg, as this is key for race walking. Allow ample time for learners to practise and perfect this technique. Encourage deliberate movement practice and proper form throughout the session to ensure learners understand the importance of each technique.

**Slow walking:** In their groups, guide learners to practise walking slowly along straight lines and assist them to focus on maintaining continuous ground contact and straightening their legs fully. This helps learners internalise the race-walking technique at a comfortable pace without rushing and experimenting with their stride length while ensuring that their form remains correct. Emphasise avoiding overreaching with the lead leg to maintain efficiency and reduce strain or becoming tired easily. Constantly remind learners to straighten their lead leg completely at the point of contact and ensure they walk in a straight line with their feet landing directly forward to prevent undue stress on their knees and ankles.

**Shadow walking:** Pair learners together and have them mirror each other's movements, allowing them to correct any form errors by observing one another. Start with short race-walking sessions (2–3 minutes) and gradually increasing the duration as their technique improves and endurance develops. Guide learners in maintaining a steady pace and emphasise the importance of conserving energy, as race walking requires endurance over time. Monitor their posture closely, correcting slouching or leaning forward as these can hinder performance and correct them. Encourage a slight lean from the ankles rather than the upper body. Provide constant feedback focused on progress and improvement and offering words of encouragement to help build their confidence as they master the technique. As learners become more comfortable, gradually increase the distance and speed of the walk while still ensuring proper technique.

**Fun walking:** Organise friendly competitions where learners practise walking quickly or fast but correctly. If the class size is small, they can work individually but if the class size is large let them work in teams to cover specific distances within a set time. Encourage them to maintain correct form and pace throughout. Offer positive reinforcement for achieving personal bests.

### Mini Competition

#### 1. Event structure

**Individual and team categories:** Depending on class size, learners can compete individually or form teams.

**Distance:** Set a specific distance (e.g., 100m, 200m) for learners to walk at a fast pace while adhering to race walking rules (one foot must be in contact with the ground at all times and the knee must be fully extended when the foot strikes the ground).

**Time limit:** Set a time frame for the competition, ensuring everyone has enough time to complete the distance.

#### 2. Scoring system for the first three positions (overall total 100%)

Correct technique (30 points)

30 points: Maintains correct walking technique throughout.

15 points: Occasionally loses form but quickly corrects it.

5 points: Frequently breaks form, e.g., jogging or improper knee extension.

### **Speed (40 points)**

40 points: Finishes with the fastest time in their group.

20 points: Finish within 5 seconds of the fastest time.

10 points: Finish within 10 seconds of the fastest time.

5 points: Takes longer than 10 seconds over the fastest time.

### **Distance completion (20 points)**

20 points: Completes the full distance without stopping.

10 points: Completes the distance but takes a short break.

2 points: Does not finish the distance.

### **Teamwork (10 points, if in teams)**

10 points: Works well with teammates, supports and encourages one another.

5 points: Works with teammates but with little interaction.

2 points: Minimal interaction with teammates, no teamwork shown.

## **3. Competition rules**

**Race walking technique:** Remind learners about race walking form, emphasising no jogging or running.

**Timekeepers:** Assign some learners as timekeepers for fairness.

**Judges:** Select a few learners to act as judges, ensuring everyone adheres to race walking rules.

## **4. Prize/recognition**

- a. Offer small prizes for individual winners (e.g., biscuits, toffees or any other thing that can be used for recognition of their efforts).
- b. For teams, prize should be given to the team with the most cohesive performance.
- c. Overall winner(s) should be given double what the individual or team winners received.

## **5. Wrap up**

Review performances by giving positive feedback on form, speed and effort. Encourage learners keep practising at home to improve in the next competition.

## **Key Assessment**

### **Level 1**

1. What is the primary rule of race-walking regarding foot contact with the ground?
2. What distance is commonly used in race walking competitions for beginners?
3. Name one benefit of race walking as a form of exercise.

4. Which body part should be kept straight during the race-walking stride?
5. What is the general speed required for competitive race walking?

### Level 2

1. Describe race walking.
2. Describe a proper race-walking stance when the foot first hits the ground.
3. Describe how to correct a walking technique if the walker begins to jog during a race-walking event?

### Level 3

1. Explain four key differences between race walking and regular walking?
2. Explain the importance of hip rotation in race walking.
3. Demonstrate the basic techniques used in race walking.
4. Why is it important to keep the knee straight when the foot strikes the ground in race walking?

## SECTION 11 REVIEW

Week 24 introduces learners to race walking and its techniques and rules. Learners at the end of the week will have grasped the basic techniques of the sport and the essential rules required to perform it. Learners focus on race walking and study its history, rules and techniques. Learners also cover the differences between recreational walking, running and race walking, how to correct walking technique if learners begin to jog during race walking, and, race walking as a form of exercise. Learners practise race walking and compete in a friendly competition. Teaching approaches used for the lesson include talk for learning and collaborative learning in an inclusive learning environment.



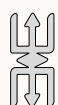
## APPENDIX G: END OF SECOND SEMESTER EXAMINATION

**Nature:** The end of second semester examination questions should cover Weeks 13-24 focal areas in the Teacher Manual. It should include;

- A. MCQs 40 items
- B. Five (5) Essay questions where learners will select and answer three of them.

**Table of Specification for End of Second Semester Examination**

Weeks	Focal Area	Type of questions	DoK Levels				Total
			1	2	3	4	
13	African cloth parachute	Multiple choice	1	1	1	-	3
14	Underarm serve and digging reception in volleyball	Multiple Choice	1	2	1	-	4
15	Reinforcement of underarm serve and digging reception in volleyball (Skill polishing)	Multiple choice	1	1	1	-	3
		Essay			1		1
16	Zones and rotational order on the court in volleyball	Multiple choice	1	2	1	-	4
		Essay	1				1
17	Concept of First Aid	Multiple choice	1	1	1	-	3
18	Applying the knowledge of first aid	Multiple choice	1	2	1		4
		Essay			1		1
19	Rules, grip and pushing in hockey	Multiple choice	1	1	1		3
20	Dribbling in hockey	Multiple choice	1	1	1	-	3
		Essay		1			1
21	Hitting in hockey	Multiple choice	1	1	1	-	3
22	Stress and its common sources	Multiple choice	1	1	1	-	3
23	Prevention and management of stress	Multiple choice	1	2	1		4
		Essay		1			1
24	Race walking	Multiple choice	1	1	1		3
Total		MCQs	12	16	12	-	40
		Essay type	1	2	2	-	5



### Note

Kindly ensure that all learners' scores for mandatory six modes of assessments are accurately prepared and ready for submission to the STP.

## BIBLIOGRAPHY

- Adamu, I. (2016). Traditional Sports and Games in Northern Ghana. *Sports Heritage Journal*, 2(4), 34-47.
- Africasacountry.com. (2021). <https://africasacountry.com/2022/12/after-we-have-grown-too-tired-of-jumping>
- Alhassan, A. (2013). Traditional Wrestling in Ghanaian Culture. *Northern Heritage Journal*, 5(2), 23-35.
- American Psychological Association (2024). The impact of chronic illness on the family.
- Amoako, E. (2012). Children's Games in Ghana: A Cultural Perspective. *Ghanaian Cultural Studies*, 3(2), 67-78.
- Asiedu, M. (2015). Traditional Board Games in Ghanaian Culture. *African Games Journal*, 7(3), 102-115.
- Australia Wide First Aid. (n.d.). First aid kit sign. <https://www.australiawidefirstaid.com.au/resources/first-aid-kit-sign>
- Bartovation. (n.d.). 500 wood splints. <https://bartovation.com/product/other-lab-supplies/500-wood-splints/>
- Black History Month. (2024). The history of AIDS in Africa. <https://www.blackhistorymonth.org.uk/article/section/real-stories/the-history-of-aids-in-africa/>
- Business Ghana. (2020). Table tennis excitement galore at Chairman's Cup. <https://businessghana.com/site/news/sports/206560/Table-Tennis-Excitement-galore-at-Chairman-s-Cup>
- Centres for Disease Control and Prevention (2024). Bacteria and foodborne illness
- Centres for Disease Control and Prevention (2024). Caregiving: A public health priority.
- Centres for Disease Control and Prevention (2024). Chronic diseases in America.
- Centres for Disease Control and Prevention (2024). Fungal diseases.
- Centres for Disease Control and Prevention (2024). Parasites – biology.
- Cidrap. (2023). US reports 2023 rise in TB cases incidence. <https://www.cidrap.umn.edu/tuberculosis/us-reports-2023-rise-tb-cases-incidence>
- Cleveland Clinic. (2022). Bacteria information. <https://my.clevelandclinic.org/health/articles/24494-bacteria>
- Commons.wikimedia.org. (2024).
- Dreamstime.com. (2024). <https://www.dreamstime.com/photos-images/black-man-coughing.html>
- El-Beshbishi, S. N., Ahmed, N. N., Mostafa, S. H., & El-Ganainy, G. A. (2012). Parasitic infections and myositis. *Parasitology research*, 110(1), 1–18. <https://doi.org/10.1007/s00436-011-2609-8>
- EMSStuff. (n.d.). Ace bandages. <https://www.emsstuff.com/Ace-Bandages/>
- Expert Table Tennis. (n.d.). Forehand drive. <http://www.experttabletennis.com/forehand-drive>

- Fitness Fighters. (n.d.). Fitness information. [fitnessfighters.co.uk](https://fitnessfighters.co.uk)
- Folkloreoftheafricanchildrussian13spring(2015).<https://folkloreoftheafricanchildrussian13spring2015.wordpress.com/2015/05/31/pilolo/>
- Food Safety News. (2024, June). Journal of Food Protection publishing more evidence of risks of disposable gloves. <https://www.foodsafetynews.com/2024/06/journal-of-food-protection-publishing-more-evidence-of-risks-of-disposable-gloves/>
- Ghana New Updates. (2024). 2023 African Games: Here're the official ticket prices for games. <https://ghananewsupdates.com/2023-african-games-herere-the-official-ticket-prices-for-games/>
- Ghana Olympic Committee. (2019). Ghana table tennis president promises to deliver outstanding world tournament. <https://ghanaolympic.org/?item=3727>
- Ghana Table Tennis Association. (2019). Photo album. Facebook. [https://web.facebook.com/578067656023979/photos/a.578425905988154/582742568889821/?type=3&\\_rdc=1&\\_rdr](https://web.facebook.com/578067656023979/photos/a.578425905988154/582742568889821/?type=3&_rdc=1&_rdr)
- Gracia, L.S. (2016). Diagnostic medical parasitology. ASM Press.
- <https://buffalohealthyliving.com/dementia-in-the-black-community/>
- <https://www.masterfile.com/search/en/picture+of+black+man+on+a+sick+bed>
- IndiaMart. (n.d.). Elastic adhesive plasters. <https://www.indiamart.com/proddetail/elastic-adhesive-plasters-9436296748.html>
- IndiaMart. (n.d.). Surgical cotton balls. <https://www.indiamart.com/proddetail/surgical-cotton-balls-25529660655.html>
- International Table Tennis Federation. (n.d.). Serving. [www.ottf.org/serving](http://www.ottf.org/serving)
- iStock. (n.d.). Tweezers [Search results]. <https://www.istockphoto.com/search/2/image-film?phrase=tweezers>
- Istockphoto.com.(2024).<https://www.istockphoto.com/search/2/imagefilm?phrase=diabetes+patient+black>.
- Jumia. (n.d.). 14 pack scissors all purpose ultra sharp craft scissors set soft grip handle multipurpose fabric scissor. <https://www.jumia.com.gh/14-pack-scissors-all-purpose-ultra-sharp-craft-scissors-set-soft-grip-handle-multipurpose-fabric-scissor-more-generic-mpg8232512.html>
- Masterlife.com. (2024). <https://www.masterfile.com/search/en/sick+black+person>
- Mayo Clinic. (2024). Parasitic infections.
- Mayo Clinic. (2024). Parasitic worms.
- Mensa, A. A., Sarpong, C., Kubi, F. N., Donkor, O. (2023). Akan traditional games: An indispensable tool in Ghanaian language classroom in respect to classroom interaction. Integrated Journal for Research in Arts and Humanities. 3(4): 69-75
- Mensah, P. (2014). Urban Games and Their Influence on Youth in Ghana. Journal of African Studies, 6(1), 81-93.
- Microbeonline.com. (2024). <https://microbeonline.com/parasitic-infections-source-of-infection-mode-of-transmission-and-prevention/>
- Microbiology Society. (2024). What Are Bacteria?
- Microteknik. (n.d.). Wood splints. <http://www.microteknik.com/product/wood-splints/>
- National foundation for infectious diseases (2024). <https://www.nfid.org/infectious-disease/coronaviruses/>

- National Institute of General Medical Sciences (2024). Bacteria.
- National Institute of Mental Health. (2024). Chronic illness & mental health.
- National Institutes of Health (2024). Understanding Fungi.
- National Sports Authority. (2024). Ghana Table Tennis Association. <https://sportsauthority.gov.gh/ghana-table-tennis-association-2/>
- National foundation for infectious diseases.(2024).<https://www.nfid.org/infectiousdisease/coronaviruses/>
- Nbcnews.com. (2024). <https://www.nbcnews.com/id/wbna10137632>
- New Vision. (2023). Latest news on table tennis in Djibouti. [https://www.newvision.co.ug/category/ebyemizannyo/ttiimu-ya-ttena-yoku-mmeeza-etuuse-e-djibouti-BUK\\_132538](https://www.newvision.co.ug/category/ebyemizannyo/ttiimu-ya-ttena-yoku-mmeeza-etuuse-e-djibouti-BUK_132538)
- Nhs.uk. (2024). <https://www.nhs.uk/conditions/athletes-foot/>
- Open Colleges. (n.d.). Why you need to manage learner stress and 20 ways to do it. <https://www.opencolleges.edu.au/blogs/articles/why-you-need-to-manage-learner-stress-and-20-ways-to-do-it>
- Opoku-Agyemang, K. (2010). Ghanaian Traditional Games and Their Educational Value. *Cultural Heritage Journal*, 4(1), 45-56.
- Orthoinfo.aaos.org. (2023). <https://orthoinfo.aaos.org/en/diseases--conditions/arthritis-of-the-knee/>
- Osei, K. (2017). Stone Games and Their Role in Child Development in Ghana. *Childhood Studies Journal*, 4(3), 56-70
- oware.org. (<http://www.oware.org/history.asp>)
- Pilolo <https://en.wikipedia.org/wiki/Pilolo>
- Reddit. (n.d.). Was looking into table tennis/ping pong and these. [https://www.reddit.com/r/drums/comments/1e60lyd/was\\_looking\\_into\\_table\\_tennis\\_ping\\_pong\\_and\\_these/](https://www.reddit.com/r/drums/comments/1e60lyd/was_looking_into_table_tennis_ping_pong_and_these/)
- Researchgate.net.(2021).[https://www.researchgate.net/publication/357476742\\_Essential\\_facts\\_about\\_Covid19\\_the\\_disease\\_the\\_responses\\_and\\_an\\_uncertain\\_future\\_For\\_South\\_African\\_learners\\_teachers\\_and\\_the\\_general\\_public/Figureures?lo=1](https://www.researchgate.net/publication/357476742_Essential_facts_about_Covid19_the_disease_the_responses_and_an_uncertain_future_For_South_African_learners_teachers_and_the_general_public/Figureures?lo=1)
- Rockymtnfootandankle.com. (2024). <https://rockymtnfootandankle.com/treat-foot-fungus/>
- Sastry A.S. & Bhat S. (2014) Essentials of medical parasitology. Jaypee brothers' medical publishers (P) Ltd
- Senah, K. A. (2008). Ewe Traditional Games and Their Socio-Cultural Significance. *Ewe Cultural Studies Review*, 2(1), 45-58.
- SHD Medical. (n.d.). Bodyguards blue nitrile gloves GL985 box of 100. <https://www.shdmedical.co.uk/gloves/bodyguards-blue-nitrile-gloves-g1985-box-of-100/>
- Shutterstock. (n.d.). Round band-aid [Search results]. <https://www.shutterstock.com/search/round-band-aid>
- Shutterstock. (n.d.). Sterile gauze pads [Search results]. <https://www.shutterstock.com/search/sterile-gauze-pads>
- Singapore Disability Sports Council (SDSC). (2024). National para table tennis championships 2024. [https://sdsc.org.sg/sdsc\\_events/national-para-table-tennis-championships-2024/](https://sdsc.org.sg/sdsc_events/national-para-table-tennis-championships-2024/)
- Smithsonianmag.com. (2024). <https://www.smithsonianmag.com/science-nature/the-hunt-for-ebola-81684905/>

- Spine-health.com. (2019). <https://www.spine-health.com/conditions/osteoporosis/what-you-need-know-about-osteoporosis>
- Sportsmedicine.mayoclinic.org. (2024). <https://sportsmedicine.mayoclinic.org/condition/early-mild-arthritis/>
- Surgical-dressing.com. (n.d.). OEM medical disposable wound dressing medical gauze bandage for first aid. <https://www.surgical-dressing.com/sale-40862791-oem-medical-disposable-wound-dressing-medical-gauze-bandage-for-first-aid.html>
- Tako. (2021). Training sessions are ongoing at Edudrive table tennis in Ghana. <https://takobypsf.com/en/training-sessions-are-ongoing-at-edudrive-table-tennis-in-ghana/>
- Telegraph.co.uk. (2024). <https://www.telegraph.co.uk/global-health/science-and-disease/wiping-tb-2045-could-cost-10bn-year/>
- The Suburban Table Tennis Association, Mumbai. (2022). Service strategies in table tennis. <https://tsttamumbai.org/blog/165815203563/service-strategies-in-table-tennis>
- Theconversation.com. (2024). <https://theconversation.com/why-poor-rheumatoid-arthritis-sufferers-in-south-africa-have-it-worse-54348>
- TradeIndia. (n.d.). Surgical dressing cotton rolls for clinical, commercial, hospital & home. <https://www.tradeindia.com/products/surgical-dressing-cotton-rolls-for-clinical-commercial-hospital-home-6219353.html>
- Vsports. (n.d.). Tennis de mesa/ping pong. vsports tennis de mesa/ping pong
- Walmart. (n.d.). 1L rubber hot water bottle heat therapy bag hot relaxing. <https://www.walmart.com/ip/1L-Rubber-Hot-Water-Bottle-Heat-Therapy-Bag-Hot-Relaxing-C2K7/1346886831>
- wikiHow. (n.d.). Shoot in netball. <https://www.wikihow.com/Shoot-in-Netbal>
- Wikimedia Commons. (n.d.). File: Ampe is a game played by two people or two groups of persons.jpg. [https://commons.wikimedia.org/wiki/File:Ampe\\_is\\_a\\_game\\_played\\_by\\_two\\_people\\_or\\_two\\_groups\\_of\\_persons.jpg](https://commons.wikimedia.org/wiki/File:Ampe_is_a_game_played_by_two_people_or_two_groups_of_persons.jpg)
- Wikimedia. (n.d.). Media files. <http://upload.wikimedia.org>
- Wikipedia. (n.d.). Table tennis. [https://en.wikipedia.org/wiki/Table\\_tennis](https://en.wikipedia.org/wiki/Table_tennis)
- Wikipedia. (n.d.). Tweezers. <https://en.wikipedia.org/wiki/Tweezers>
- World Health Organisation. (2023). The economic impact of chronic diseases.
- World Health Organization (2023). Global health estimates.
- World Health Organization (2023). Mental health and covid-19.
- World Health Organization (2024). Parasites.
- World Health Organization (2024). Parasitic infections.
- Wsj.com. (2024). <https://www.wsj.com/articles/in-hospital-strained-by-omicron-weary-nurses-treat-too-many-patients-11642933804>
- YouTube. (n.d.). [Video]. <https://www.youtube.com/watch?v=wZPeon377mM>

