MINISTRY OF EDUCATION

GHANA ASSOCIATION OF HEALTH, PHYSICAL EDUCATION, RECREATION, DANCE AND SPORTS

Physical Education and Health (Core)

for Senior High School

Year 3

Writer

John Benedict Nyarko

Albert Sackey

Ebenezer Ewiah Quarm

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FOREWORD

Ghana's new Senior High School Curriculum aims to ensure that all learners achieve their potential by equipping them with 21st Century skills, knowledge, character qualities and shared Ghanaian values. This will prepare learners to live a responsible adult life, progress to further studies and enter the world of work. This is the first time that Ghana has developed a Senior High School 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.

The Ministry of Education is proud to have overseen the production of these Learner Materials which can be used in class and for self-study and revision. These materials have been developed through a partnership between the Ghana Education Service, teacher unions (Ghana National Association of Teachers- GNAT, National Association of Graduate Teacher -NAGRAT and the Pre-Tertiary Teachers Association of Ghana-PRETAG) and National Subject Associations. These materials are informative and of high quality because they have been written by teachers for teachers with the expert backing of each subject association.

I believe that, if used appropriately, these materials 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.

Haruna Iddrisu MP

Minister for Education

SECTION

1

SPORTS PARTICIPATION - PART ONE

PHYSICAL ACTIVITY AND HEALTH

Sports Participation

INTRODUCTION

In recent years, sports participation has increasingly focused on inclusivity and adaptability, not just skill development. This section explores Pickleball—a sport that blends elements of tennis, badminton, and table tennis—promoting physical activity, cooperation, and social interaction. Played with short-handled paddles and a perforated plastic ball on a level court with a low net, it can be enjoyed in a singles or doubles format. The objective is to rally until the opponent fails to return the ball correctly. Pickleball is accessible and inclusive, with adaptive sports programmes enabling individuals with physical disabilities to participate using modified equipment and special court setups. The sport's inclusive nature allows everyone, regardless of ability, to engage actively and enjoy the game. Notably, the first Pickleball tournament took place in Tukwila, Washington, highlighting the sport's growing popularity and community spirit.

KEY IDEAS

- Core skills in pickleball include serving, forehand and backhand strokes, footwork, dinks, volleys, and positioning.
- **Pickleball** is a hybrid sport that combines elements of tennis, badminton, and table tennis.
- Pickleball promotes health benefits such as cardiovascular endurance, hand-eye coordination, agility, and teamwork.
- The court and rules are designed to make it accessible to a wide age range and ability levels, including students with disabilities.
- **The non-volley zone** (kitchen) plays a critical role in game strategy and safety.
- Understanding game rules and etiquette is essential for fair play and sportsmanship.

SERVICE AND RECEPTION IN PICKLEBALL

Figure 1.1: Pickleball Equipment

PICKLEBALL

What is Pickleball?

Pickleball is a paddle sport that combines elements of tennis, badminton and table tennis. It is played either indoors or outdoors on a court similar in size to a badminton court, with a slightly modified tennis net with simple rules. Players use solid paddles (usually made of wood or composite materials) to hit a lightweight plastic ball with holes like a wiffle ball. The game was invented in 1965 on Bainbridge Island, Washington, United States of America (USA) by Joel Pritchard, Bill Bell, and Barney McCallum. The game began to entertain their families using improvised equipment like a badminton court, ping-pong paddles and a perforated plastic ball. The name "pickleball" is said to have come either from the Pritchard's' dog named Pickles, who would chase after the ball when it bounces out of court or from the term 'pickle boat,' referring to a crew of leftover rowers which symbolises the sport's mix of different games. From these humble beginnings, pickleball grew steadily in popularity across the United States and beyond, particularly among older adults, schools and community recreation programmes. It is now one of the fastest-growing sports worldwide, with formal organisations like USA Pickleball and the International Federation of Pickleball overseeing its development.

Basic Rules of the Game

Rules are official guidelines that govern how the game is played. They ensure fairness, safety and consistency for all players. The following are the set of rules that governed the game.

Table 1.1: Basic rules of the game

Serving Rules	• The serve must be made underhand with the paddle contacting the ball below the waist. • The server must serve diagonally across the court into the opponent's service box. • The serve must clear the net and land beyond the non-volley zone (the kitchen). • Only one serve attempt is allowed, except in the case of a let (when the ball hits the net but still lands in the correct service court).
Double Bounce Rule	• After the serve, each side must let the ball bounce once before hitting it (i.e., the serve and the return must bounce). • After these two bounces, the ball may be volleyed or played off the bounce.
Non-Volley Zone (The Kitchen)	• Players cannot volley the ball (hit it in the air) while standing in the non-volley zone, which is a 7-foot area on both sides of the net. This rule adds a strategic element to the game by discouraging players from standing too close to the net and forcing more thoughtful shot selection. • A player can enter the kitchen to play a ball that has bounced but must exit before volleying again.

Scoring	• Only the serving team can score points. • Games are played to 11 points, and a team must win by at least 2 points difference. • In doubles, each player on the serving team serves before a side-out occurs, except at the start of the game when only one player serves.
Faults	• A fault is any action that stops play because of a rule violation. Faults in a pickleball game include: • Failing to hit the ball over the net. • Hitting the ball out of bounds. • Volleying from the non-volley zone. • Violating the double-bounce rule. • A serve that lands in the kitchen (non-volley zone) or hits the net and fails to go over.
Player Positioning (Doubles Play)	• Players switch sides only when they win a point on their serve. • The player on the right-hand side always serves first after the side gains the serve.

The Ball

Pickleball balls are lightweight, plastic balls specifically designed for the sport. They are similar in appearance to wiffle balls but are made to meet the unique needs of pickleball play, both indoors and outdoors. The ball has multiple holes (usually 26 to 40), which reduce wind resistance and affect flight and bounce. They come in different sizes and ranges, from about 2.87 to 2.97 inches in diameter and weigh between 0.78 to 0.935 ounces. The balls are made of bright colours like yellow, orange or green for high visibility.

Types of Balls

1. **Indoor Balls**

Indoor pickleball balls are specially designed for play on smooth indoor surfaces, such as gymnasium floors. They are lighter, softer and have fewer and larger holes (usually 26) compared to outdoor balls, making them ideal for controlled play and better bounce on smooth floors in enclosed environments. They are usually made in bright colours like yellow or orange for clear visibility under indoor lighting. Indoor balls allow for more precise play, making them popular in schools, clubs and recreation centres.

2. **Outdoor Balls**

Outdoor pickleball balls are designed to perform well in open-air conditions where wind, sun and rougher court surfaces affect play. They are durable, rough surfaces, wind-resistant and built for faster and more aggressive gameplay. They have 40

smaller holes which help reduce wind interference and maintain a straight flight path and weigh slightly heavier and harder than indoor balls (approx. 0.9 ounces), with a diameter of about 2.9 inches. The movement of the ball is lower, and the bounce is firmer to suit hard outdoor courts like asphalt or concrete and resist cracking or deforming under pressure in varying weather conditions. They come in bright colours such as neon yellow, orange and other bright colours to ensure visibility in daylight.

Figure 1.3: Pickleball balls

Figure 1.4: Wiffle balls

The Paddle

Pickleball paddles are solid, lightweight paddles used to hit the ball during play. Originally, the paddles were made of wood. Now they are made from materials like graphite, fibre glass or carbon fibre with honeycomb cores made of polymer, aluminium or Nomex for control and feel. Offering a balance of power, control and comfort. Modern paddles weigh between 6 to 14 ounces, have a non-slip grip and come in various shapes and sizes to suit different playing styles and skill levels, with a standard length of 15-16 inches and a width of 8 inches. The surface of a pickleball paddle can be smooth, textured or rough. Some paddles have a rough surface to impart spin on the ball, while others have a smoother surface for better control.

Types of Paddles

Table 1.2: Types of Paddles

Recreational Paddles	These paddles are designed for beginners and casual players. They are more affordable and made from materials like wood or basic composites, making them a good option for those new to the game or playing occasionally for fun. Though they lack advanced features like fine-tuned balance or spin technology, recreational paddles are durable, comfortable to help players develop basic skills and enjoy the sport.
Competitive Paddles	Paddles from these categories are targeted at intermediate to advanced players and are built for high performance. These paddles are often made with lightweight yet durable materials such as graphite, carbon fibre or advanced composites. They include features that enhance spin, control, power and precision, enabling players to execute complex shots more effectively. Competitive paddles also offer improved grip technology, balance and responsiveness, making them suitable for tournament and league play.

Specialty Paddles	Specialty paddles are designed to cater for specific playing styles, physical needs or performance preferences. For example, some have an extra-large sweet spot to reduce mishits. Others may be elongated for extended reach for players using wheelchairs or with reach limitations or feature custom core materials for a softer or harder feel. They are also designed for players with joint issues, offering extra shock absorption, wheelchair compatible paddles offering balance and reach in mind for selected players. These paddles allow players to adapt their equipment to match unique requirements or strategies.

Benefits

1. Control and Precision: Pickleball paddles are designed to provide players with precise control over the ball, allowing for accurate shots and strategic play.
2. Durability: High-quality paddles are built to withstand the demands of regular play, offering durability and longevity.
3. Customisation: Many paddles offer customisation options, such as grip size, weight, and surface texture, allowing players to tailor their paddle to their preferences to enhance the playing experience.

Figure 1.5: Pickleball paddles

Figure 1.6: Pickleball paddles

The Court

A pickleball court is a compact, rectangular playing area designed for both singles and doubles play. Measuring 20 feet in width and 44 feet in length. At the centre of the court is a net that stands 36 inches high at the sidelines and dips slightly to 34 inches at the centre, allowing for a fair and consistent level of play.

One of the most distinctive features of the pickleball court is the non-volley zone, commonly known as 'the kitchen.' This is a 7-foot area extending from the net on both sides where players are not allowed to volley the ball; that is, they must let it bounce before hitting it within this zone. Each side of the court is further divided into two service areas, left and right, by a centre line. Serves must be made diagonally into the opponent's service box, starting from behind the baseline, which runs along the back of the court. The sidelines define the court's lateral boundaries. These markings guide both movement and gameplay, ensuring clarity during serves and rallies.

The surface of the court is usually made of hard materials such as asphalt or concrete, often coated with a textured, slip-resistant paint for safety and improved ball bounce. The court's size and layout promote quick reflexes, smart positioning and strategic shot placement, making pickleball both accessible and exciting for players of all ages and skill levels.

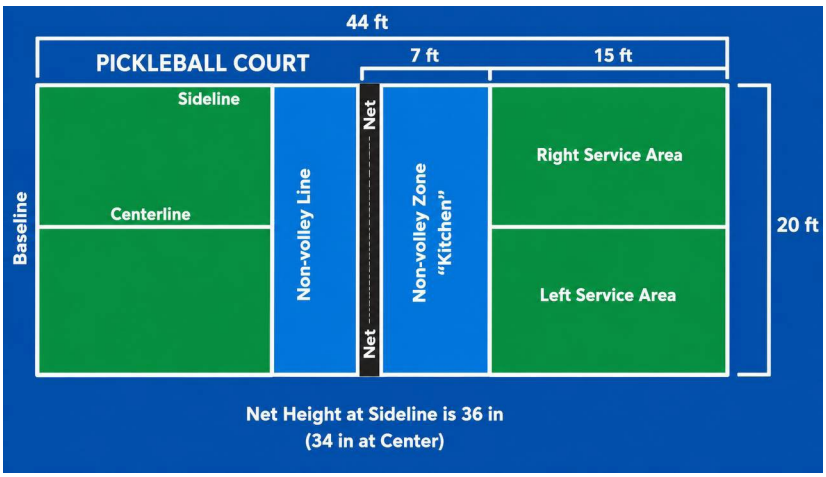


Figure 1.7: Pickleball court

GRIPS

Grips are how players hold their paddles. How the paddles are held affects control, spin and power of the ball. There are three primary grips, namely, the Eastern grip, the Continental grip, and the Western grip. Different grips give different shots more power and better accuracy.

Figure 1.8: The three types of grips in pickleball

Types of Grips

Table 1.3: Eastern Grip

Description	How to hold	Characteristics	Ideal for
The Eastern grip, also known as the handshake grip, is one of the most used and beginner-friendly grips in pickleball. It is known for its natural feel and flexibility, making it ideal for both forehand and backhand strokes.	Imagine shaking hands with the paddle. Hold the paddle as if greeting someone with a handshake. Place the base knuckle of the index finger on the third bevel (if the paddle handle were shaped like an octagon). Wrap the other fingers comfortably around the grip.	Neutral grip is suitable for forehand and backhand shots. Provides a good balance of power, control, and comfort. Reduces the need to switch grips between different shots. Helps players develop consistent and accurate strokes.	Beginners and intermediate players are learning basic techniques. Players who want a versatile and easy-to-learn grip. Those aiming for smooth transitions between different shot types.

Figure 1.9: The Eastern Grip

Table 1.4: Continental Grip

Description	How to hold	Characteristics	Ideal for
The Continental grip is an all-around grip best suited for both beginners and players who play close to the net, like to use spin and slice and want the flexibility to react quickly on both sides of the body without changing hand position.	Imagine holding a hammer to hit a nail into a wood. Place the base knuckle of the index finger on the second bevel of the paddle handle (if the handle were an octagon). Wrap the thumb comfortably around the opposite side, and the hand is positioned so the paddle face is almost vertical or perpendicular to the ground.	Allows quick switching between forehand and backhand without changing grip. Keeps the paddle in a neutral position, making it ideal for fast exchanges. Common among players with a tennis background.	Volleys and blocks at the net. Drop shots, dinks and slice shots. Underhand serves with spin or control.

Advantages

1. Good for quick transitions in fast-paced play.
2. Provides good control and touch at the net.
3. Easy to use for both forehand and backhand shots without switching grips.

Limitations

1. It can feel awkward for beginners, especially for forehand groundstrokes.
2. May generate less power and topspin compared to the Eastern or Western grips.

Figure 1.10: The Continental Grip

Table 1.5: The Western Grip

Description	How to hold	characteristics	Ideal for
The Western grip in pickleball is a grip where the paddle face is tilted sharply downward, making it ideal for generating topspin, especially on forehand groundstrokes. This grip is less common than the Eastern or Continental grips, and it is used mostly by advanced players who focus on topspin-heavy forehand shots from the baseline.	Hold the paddle as if hitting a fly with the paddle face tilted downward. Place the base knuckle of the index finger on the fifth or sixth bevel (assuming the paddle handle is shaped like an octagon). The palm is more behind the paddle, and the wrist is rotated underneath the handle.	It maximises topspin potential, especially on forehand drives. The paddle face naturally angles downward, promoting an upward brushing motion across the ball. Commonly used by players transitioning from Western tennis grips.	Aggressive baseline players who rely on forehand topspin shots. Players who prefer a strong offensive style. High-arching topspin lobs and deep drives.

Advantages

1. Excellent for producing heavy topspin, which helps keep shots inbounds with aggressive pace.
2. Can create difficult bounce angles for opponents.
3. Encourages offensive forehand play.

Limitations

1. Not ideal for backhands because it often requires a grip change.
2. Harder to control in soft shots like dinks and drops.
3. Can be awkward at the net or during fast exchanges.
4. Less suitable for beginners due to limited adaptability.

Figure 1.11: The Western Grip

THE SERVE/SERVICE

A service or the serve is the action that starts each rally. It is the first shot made to begin play, where one player strikes the ball underhand from behind the baseline and sends it diagonally into the opponent's service court. The basic pickleball serve is best used for beginners and those still getting comfortable with a racket sport. The serve can be learned in 3 simple steps. These steps are:

1. Preparing the stance and grip
2. Ball hold and release
3. Hitting the ball

Figure 1.12: Basic stance for serving in pickleball

Preparing the Stance and Grip

1. Find a comfortable stance and a grip. The Eastern and Continental grips are ideal and easy for beginners to use to learn and control the ball.
2. Stand sideways to the net with feet shoulder-width apart.
3. Position the paddle back and low, ready to swing underhand in a smooth motion.

Ball Hold and Release

1. Hold the ball in the non-dominant hand at waist height or slightly lower to prepare for the toss.
2. Drop or release the ball from the hand (not tossed); this is key if using a drop serve, which is now legal.
3. Toss: Gently toss the ball upward with the non-dominant hand. The toss should be straight up and not too high, ideally 6-12 inches.

Hitting the Ball

1. Swing execution: As the ball reaches its peak, swing the paddle to contact the ball below the waist.
2. Contact and follow-through: Contact the ball as it descends from the toss and follow through with the swing to ensure control.
3. Foot placement: Ensure not to step on or over the baseline until the ball is struck.
4. Target the opponent's diagonal service court: Direct the ball to the diagonal service court of the opponent.
   a. The serve must land in the diagonal service court opposite the server.
   b. It must clear the non-volley zone (kitchen) and land past the kitchen line.
   c. If the ball lands on any part of the non-volley zone line, it is a fault.

Figure 1.13: Service execution

Reflection

"How does a strong and accurate serve contribute to success during a Pickleball game?"
Share your ideas with a partner. Can you add to your list?

RECEIVING THE SERVED BALL

Ready Position

The ready position in pickleball is a stance where the player holds the paddle in front of their body, usually at chest or waist height, with knees slightly bent and weight balanced on the balls of the feet. This position allows players to react quickly to incoming shots and transition smoothly between offensive and defensive plays.

1. Stand behind the baseline, near the centre of the service return area.
2. Feet shoulder-width apart, knees slightly bent, and weight on the balls of your feet.
3. Hold the paddle up in front in a neutral position (around chest level), ready to move either left or right.

Figure 1.14: Ready position for a return shot in Pickleball

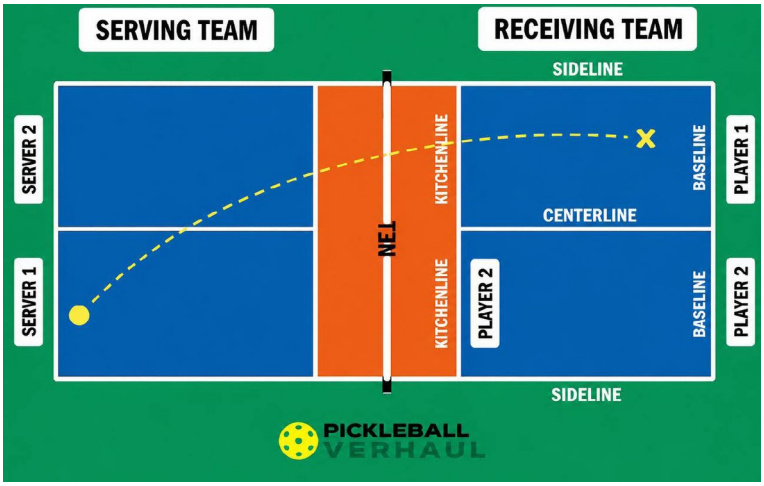


Figure 1.15: Service Zone

Types of Service in Pickleball

1. **Volley Serve**

   This is the traditional and most common serve in pickleball.

   a. The ball is hit out of the air without bouncing, using an underhanded motion.
   b. The paddle makes contact below the waist, and the paddle head moves below the wrist at contact.
   c. Often used by experienced players to control placement and apply spin.

Figure 1.16: The Volley Serve in Pickleball

2. **The Drop Serve**

   a. The ball is dropped and allowed to bounce once before hitting it.
   b. The ball must fall naturally. No tossing or spinning is allowed.
   c. Easier to execute for beginners or those who prefer more time to set up.
   d. Offers flexibility in positioning and helps improve consistency.
   e. Helps develop proper serving technique before progressing to the volley serve.

Figure 1.17: The Drop Serve in Pickleball

Activity 1.1 Service and Reception of Pickleball

1. Use the links below to watch the videos on pickleball. Make sure you identify the various skills and techniques involved in the service and reception of the game.

   Video 1

   Video 2

2. Follow your teacher or work with your classmates to complete a warm-up before you begin your pickleball practice.
3. Working in pairs, take turns exploring the following;
   a. Where to stand on the court.
   b. Practise finding a balanced stance.
   c. Try out different paddle grips.

   After exploring the activities above, try underarm serving and receiving the ball using demonstrations and peer support to help each other improve.

4. **Paddle Grip, Control & Basic Serve Drill**

   Form a group of up to 6 members with your classmates, move around the court balancing a ball on your paddle. Transition to gentle taps in place, alternating between hands. Focus on using a relaxed, “handshake grip” and keeping eyes on the ball.

5. **Serve-and-Receive Movement Drill**
   a. In your groups from **point 4** above, form two lines on opposite sides of the Pickleball net. stand behind the baseline.
   b. Practice drop-then-hit serves underhand, aiming diagonally to a target in the opposite service box. Start with drop serves (ball bounces first), then progress to air serves (drop and hit without bounce). Use cones or hoops as target zones for accuracy.

6. **Serve-and-Receive Movement Drill**

   Join with another group and form two lines on opposite sides of the Pickleball net. Serve the ball, then quickly step into the receiving ready position after the serve. Your Partner on the other side of the court, will act as receiver, gently catching or returning the ball. Switch roles every few turns.

7. **Target Practice (Serve Accuracy)**

   In pairs, one serves a ball to the other to receive, focusing on the proper ready stance: knees bent, paddle up, and body balanced. The receiver returns the ball with a forehand or backhand stroke after it bounces. Use soft, controlled returns into a target zone.

FOREHAND AND BACKHAND STROKES IN PICKLEBALL

Background

Forehand and backhand strokes are the two primary ways players strike the ball with the paddle during a pickleball game. They are fundamental to rallies, returns, volleys, dinks, serves and when transitioning between offensive and defensive play. Mastering these strokes improves consistency, control and power in a game. When learning these strokes as a beginner, emphasis should be placed on the following:

1. Proper grip (commonly the continental or eastern grip)
2. Body positioning (feet shoulder-width apart, knees slightly bent)
3. Swing mechanics (smooth follow-through, using the whole body and not just the arm)
4. Footwork (quick and balanced steps to get into position)

FOREHAND STROKE

The forehand stroke is made by swinging the paddle across the body with the palm facing forward in the direction the ball is to go. The forehand stroke is the most natural and often the first one to be taught and learned when introducing beginners to the game. It is performed on the dominant hand side of the body, with the palm of the paddle hand facing the ball during contact or the direction of the stroke. Its familiarity as a natural arm movement helps learners build early confidence in the stroke procedure on their dominant side. To execute the forehand stroke effectively, the player draws the paddle back, rotates the shoulders, and swings the arm forward, striking the ball at or slightly above waist level for optimal control and power. The stroke is used for returning balls coming to the dominant hand side.

Key Elements in Performing the Forehand Stroke

1. Grip: Hold the pickleball paddle with both hands using the Continental grip.
2. Stance: Stand with feet shoulder-width apart and slightly bent. (Right-handed learners' left foot should be slightly in front, while left-handed learners' right foot should be in front.)

3. Swing: Pulling the paddle back and keeping the non-dominant elbow pointed at the net. Keep eyes on the ball the whole time the arm is in motion.
4. Contact point: The ideal contact point for a forehand shot is in front of the body and slightly to the side. Aim to make contact with the centre of the paddle strings.
5. Follow through: After hitting the ball, keep swinging towards where the ball is intended to go. The hitting hand should finish up around shoulder height, and the other hand should be out in front, pointing towards the target.
6. Recovery: Quickly get back to the ready position, prepared to respond to the opponent's return action.

Figure 1.18: Forehand stroke in pickleball

Types of Forehand Strokes

In pickleball, the forehand stroke is executed in various ways depending on the player's intent, game situation and position on the court. These are the main types of forehand strokes.

Table 1.6: Types of Forehand Strokes

Types	Description	Technique Involves
Forehand Groundstroke	A standard stroke hit after the ball bounces, usually from the baseline or mid-court. It is used to initiate rallies, return deep shots or set up offensive opportunities.	Use a continental or eastern grip. Swing the paddle forward, making contact with the ball in front of the body. Follow through in the direction of the shot.
Forehand Drive	This is a standard and powerful forehand stroke used to hit the ball flat over the net with speed and minimal arc deep into the opponent's court to put pressure on them, mostly from the baseline or during a rally.	• Use the Eastern grip or Continental grip • Stay balanced with knees slightly bent. • Contact the ball in front of your body, around waist height.

Forehand Topspin	This is a stroke where the ball is brushed upward, creating a forward spin that makes the ball dip into the court faster and bounce higher and faster, making it difficult for opponents to return.	• Use the Eastern grip or Continental grip • Stay balanced with knees slightly bent. • Contact the ball in front of your body. • Swing the paddle upwards and across your body.
Forehand Dink	Dinks are soft and controlled shots hit from near the non-volley zone line (the kitchen), landing just over the net. Gentle and upward motion with minimal wrist action is used in executing dinks. The focus and aim of Dinks are to keep the ball low and neutralise the power of the opponent's shot, and to draw them forward and create openings to land the ball softly in their kitchen area. Controlling the ball and placing it is preferred here rather than power.	• Use a continental grip • Contact the ball around knee height • Swing the paddle from low to high
Forehand Volley	This is a fast, short swing that helps block or quickly return a ball while the ball is still in the air before it touches the ground and bounces. It is used to apply pressure on opponents and control the pace of the game.	• Keep the paddle up and in front of your body. • Use a short, controlled motion to direct the ball. • Minimise backswing to maintain quick reaction times.
Forehand Slice	A shot used to impart backspin on the ball by moving the paddle from high to low in order to slow down the game or disrupt the opponent's rhythm and force awkward returns of shots.	• Use a high-to-low swing path. • Contact the ball with a slightly open paddle face. • Focus on brushing under the ball to generate backspin.
Forehand Lob	A high-arching shot hit deep into the opponent's court to push opponents back, if they are crowding the net to regain control of the rally.	• Use an open paddle face and a gentle, upwards swing. • Aim for depth and height to move opponents away from the net.

BACKHAND STROKES IN PICKLEBALL

The backhand stroke in pickleball is a type of shot where the paddle crosses the body and the back of the hand faces the direction of the shot. Unlike the forehand stroke, which is hit on the dominant side of the body, the backhand stroke is played on the non-dominant side using the backside of the paddle. This stroke is often more challenging for beginners because it requires a different grip angle, coordination and timing. However, it is important for effective play when returning shots that come to the weaker side or when under pressure during rallies.

How to Perform a Backhand Stroke

Table 1.7: How to Perform a Backhand Stroke

Stance	Turn shoulders to face the sidelines; knees slightly flexed, feet shoulder-width apart, and paddle held in front of the body.
Grip	Use either the Continental grip or the Eastern grip, which allows for easy transition between forehand and backhand. Ensure the paddle face is angled appropriately to contact the ball squarely on the backhand side.
Shoulder and body rotation	As the ball approaches the non-dominant side, rotate the shoulders and torso slightly so that the paddle arm moves across the body. Keep the non-paddle hand for balance.
Paddle preparation	Take the paddle back slightly across the body, keeping the elbow close to the torso and then swing the arm forward with eyes on the ball.
Contact Point	Step forward with the foot opposite the paddle hand (usually the non-dominant foot) and hit the ball in front of the body, around waist height, using a smooth and controlled motion.
Follow-through	Swing the paddle forward with a straight or slightly upward motion in the direction of the shot, finishing near the opposite shoulder while maintaining balance.
Recovery	Return to the ready position immediately to prepare for the next shot.

Tips for Beginners

1. Practice the motion slowly at first to build muscle memory.
2. Keep the wrist firm during contact to maintain paddle stability.
3. Focus on timing and control rather than power, especially for soft shots.

Uses of the Backhand Stroke

1. Returning balls approaching the non-dominant side.
2. Executing controlled dinks and drives.

3. Transitioning quickly at the net or baseline.
4. Playing defensive shots under pressure.

Figure 2.2: Backhand stroke in pickleball

Types of Backhand Strokes in Pickleball

Each type of backhand stroke in pickleball serves a specific purpose depending on the game situation, shot intention and court position. Mastering the different types of backhand strokes improves defence, control and offensive capability during a game.

Table 1.8: Types of Backhand Strokes in Pickleball

Types of Strokes	Description
Backhand groundstroke	The backhand groundstroke is a fundamental shot executed after the ball has bounced once, using the non-dominant side of the body. It is used to return deep shots from the baseline when low balls are sent to the non-dominant side.
Backhand volley	This is a quick reaction shot played in the air before the ball bounces, usually during net play, to redirect fast-paced shots and maintain control at the net when a player is positioned near the non-volley zone.
Backhand dink	A backhand dink is a soft, low shot played close to the net with a gentle touch into the opponent's non-volley zone to engage in a strategic exchange and wait for a mistake or an attackable ball.
Backhand drive	The backhand drive is a forceful and direct shot executed with a flat paddle or slight topspin, aimed deep into the opponent's court to apply pressure, create openings or finish points.
Backhand slice	This is a backhand stroke with a high-to-low paddle motion, producing backspin to make the ball slide or stay low after bouncing, making it difficult for opponents to attack. It is used to change the pace of the rally or as a defensive shot, or during drop shots.

Key Elements that Contribute to Effective Forehand and Backhand Strokes in Pickleball

Table 1.9: Key elements that contribute to effective forehand and backhand strokes

Proper grip	**For forehand**: Use an Eastern grip as it allows a natural swing with the palm facing forward. **For backhand**: Use the Continental grip as if it offers flexibility and control, or a modified Eastern grip, depending on comfort. **Importance**: Ensures better paddle control, accurate direction, and reduces wrist strain.
Correct stance and footwork	**Stance**: Stand with knees slightly bent and feet shoulder-width apart. **For forehand**: Step into the shot or take a step forward with the non-dominant foot forward. **For backhand**: Step across with the dominant foot forward (for one-handed backhands). **Importance**: Proper positioning increases balance, power, and stroke efficiency.
Body rotation and weight transfer	Rotate the shoulders and hips during the backswing. Shift weight from the back foot to the front foot during the swing. **Importance**: It adds power to the stroke while maintaining balance.
Paddle preparation and swing path	**For forehand**: Move the paddle back on the dominant side and swing forward in a smooth arc. **For backhand**: Move the paddle across the body to the non-dominant side before swinging forward. Keep the paddle face vertical to the target. **Importance**: Ensures consistent contact and directional control.
Contact point	Hit the ball in front of the body, around waist height. Avoid hitting the ball behind the body. **Importance**: This offers an ideal timing at the correct contact point, which improves shot accuracy and pace.
Follow-through	Continue the motion after contact in the direction of the shot. **For forehand**: The Arm should extend across the body. **For backhand**: The Arm should finish across the chest or above the opposite shoulder. **Importance**: Improves control, reduces injury risk and adds spin and depth.
Paddle control and angle	Maintain a firm yet relaxed grip. Adjust the angle of the paddle to direct the ball and apply topspin or slice when necessary. **Importance**: Helps with accuracy and adapts the stroke for different game situations.

Focus and visual tracking	Keep eyes on the ball from the toss or bounce to the point of contact. Anticipate ball speed and direction. **Importance**: Enhances reaction time and improves the timing of the stroke.
Consistency through practice	Repeat drills that focus on rhythm and control. Build muscle memory for each stroke. **Importance**: It helps with consistency that builds confidence and effectiveness in game situations.

Figure 1.19: Bouncing the ball on the forehand side of the paddle in pickleball

Common Errors by Beginners Learning Pickleball

Table 1.10: Common errors by beginners learning pickleball

Common errors	Impact
Improper grip: Beginners often hold the paddle too firmly or wrongly.	Reduces control, causes wrist strain and affects accuracy.
Poor footwork and stance: Standing flat-footed, not moving to or meeting the ball or using an overly wide or narrow stance.	Limits mobility, balance, and ability to reach or return shots effectively.
Incorrect paddle positioning: Holding the paddle too low or not ready between shots.	Delayed reactions and poor shot execution, particularly at the net.
Hitting the ball too hard: Overhitting due to excitement or misjudging power.	Causes unforced errors and missed shots, especially on serves and volleys.
Inconsistent serves: Serving from the wrong position, hitting above the waist or failing to keep the paddle below the wrist (illegal serve).	Faults and loss of points or service opportunities.

Violating the double bounce rule: Forgetting that the serve and the return must each bounce once before volleys are allowed.	Early volleying leads to faults and confusion during play.
Poor court awareness: Standing too close to the net or the baseline or wandering into the non-volley zone (kitchen) during volleys.	Vulnerability to lob or foot fault violations.
Not using the non-dominant hand: Failing to use the non-dominant hand for balance and positioning.	Hinders full-body rotation and reduces control.
Inconsistent follow-through: Stopping the swing abruptly after hitting the ball.	Decreases power and accuracy and affects the shot path.
Lack of communication in doubles: Beginners often fail to call shots or cover for their partner in doubles.	Leads to missed balls and poor team coordination.
Not practising shot variety: Relying only on forehand or basic shots.	Makes the player predictable and easier to defend against.

Activity 1.2 Forehand and Backhand Strokes in Pickleball

1. Start with a general and specific warm-up to prepare your body for play. Begin with light jogging or dynamic movements, then stretch your arms, shoulders, legs, and wrists. Practice a few gentle paddle swings and short rallies with a partner to activate your muscles and coordination.
2. **Wall Bounce Drill**

   Form groups with your classmates, practice forehand and backhand strokes without a ball. Focus on grip, stance, and follow-through.
3. **Forehand and Backhand Wall Bounce**
   a. In your groups, stand a few feet away from a wall. Use your forehand stroke to hit the ball against the wall. Aim for consistent, controlled bounces at a manageable height. Focus on smooth motion and proper follow-through.
   b. Repeat the drill using your backhand stroke only. Maintain soft, controlled hits to build rhythm and reinforce good technique.
4. **Partner Rally Challenge**

   Working in pairs, rally with your partner using only:
   a. Forehand strokes
   b. Backhand strokes
   c. Then alternate between both.

Count and record your longest rally. What is your highest number? Share your scores with classmates and celebrate everyone's progress!

Top Tip

Begin with soft, gentle hits, then gradually increase speed as you gain confidence.

5. **Target Zones challenge**

   Your teacher has set up a Pickleball court divided into four target zones. Organise yourself into pairs or small groups of 3 to 4 people:

   a. Take turns aiming your shots into specific zones.

   b. Before each shot, clearly announce your stroke and target (e.g., "Forehand, Zone 3" or "Backhand, Zone 1").

   c. Focus on using the correct stroke form, paddle control, and body balance to land the ball in the chosen zone.

6. Take time to reflect on the forehand and backhand strokes in Pickleball.

   a. What did you find most challenging about the strokes?

   b. Which of the skills were you able to perform?

   c. How can you improve your forehand and backhand strokes?

   Remember to cool down following the activities.

FOOTWORK AND MOVEMENT ON THE COURT IN PICKLEBALL

Background

Footwork and movement on the court in pickleball refer to how players position and move their feet to stay balanced, reach the ball efficiently and maintain control during play. Good footwork is important for executing strokes correctly, responding to opponents' shots and reducing the risk of injury.

TYPES OF FOOTWORK AND MOVEMENT

The split step

The split step in pickleball is a fundamental footwork technique used to prepare the body for quick, reactive movements in any direction. It is a small, controlled hop or bounce that players make just as their opponent is about to hit the ball. The goal of the split step is to put the player in a balanced and ready stance that allows for faster and more efficient movement.

Table 1.11: The split step

Key Characteristics	Why it matters in pickleball	When to Use the Split Step
Timing: It is performed just as the opponent contacts the ball.	Improves balance and readiness.	Before returning serves.
Motion: It is a slight hop where both feet leave the ground briefly and land shoulder-width apart with knees slightly bent.	Prepares the player to move quickly in any direction.	When anticipating volleys at the net.
Posture: A low stance with weight evenly distributed and ready to push off in any direction.	Reduces the risk of being caught flat-footed.	During rallies, when expecting a fast return.
Purpose: It helps with better reaction time and agility that allows players to respond quickly to volleys, groundstrokes or smashes.	Useful both at the baseline and the non-volley zone (kitchen).	

Figure 1.20: The split step in pickleball

Table 1.12: Types of footwork and movement

Types	Description	Purpose
Side Shuffle (Lateral Footwork)	Side shuffling involves moving sideways without crossing the feet and keeping the body square to the net. It is commonly used at the net and when defending dinks or wide returns. This helps in staying in control while maintaining coverage with a doubles partner.	• Maintains balance and readiness during volleys • Ideal for covering the width of the court • Keeps the paddle in front for quick reactions

Forward movement (Approach steps)	Forward movement involves short, controlled steps toward the net or the ball. Used after serving to approach the net or to cut off an opponent's short ball. Important to take control of the rally by reaching the kitchen line quickly.	• Helps transition from the baseline to the non-volley zone • Supports offensive positioning • Encourages early ball contact for control
Backwards Movement (Retreat Footwork)	Stepping or shuffling backwards is a movement used to drop a step to safely create space while facing the net. Used when responding to deep shots or lobs.	• Maintains court awareness • Helps retrieve deep lobs or hard drives • Prevents being caught too close to the net
Pivoting	Rotating on the balls of one or both feet to adjust body orientation without large steps. Used during forehand and backhand transitions when the ball comes to the non-dominant side.	• Assists in changing direction efficiently • Helps align the body correctly for different strokes • Minimises unnecessary movement
Crossover Step	This involves crossing one leg over the other, normally used for faster lateral or backwards movement when shuffling is not fast enough. This is used in emergency situations like reaching for a wide ball or recovering from one side of the court to the other.	Covers more ground quickly Supports recovery to the middle of the court Useful for repositioning
Adjustment steps (Micro footwork)	This is a small, quick step taken to adjust positioning just before hitting the ball. This type of movement is commonly used before groundstrokes or dinks, which helps players hit the ball at the ideal height and location.	Fine-tunes body alignment Improves balance during shot execution Prevents awkward reaches
Diagonal Footwork	Moving diagonally forward or backwards, combining lateral and forward/backwards steps. Useful in covering dinks, cross-court rallies, and returning sharply angled shots.	Helps approach or retreat from angled shots Enables coverage of cross-court hits Maintains balance and efficient movement

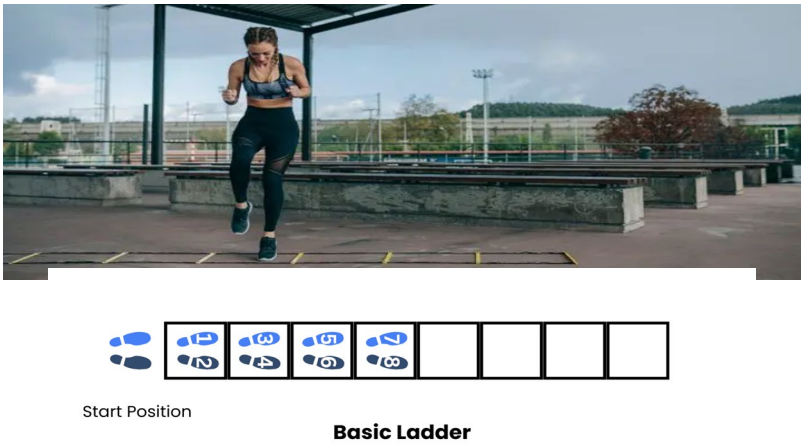


Figure 1.22: Forward movement (Approach steps) in pickleball

Common Footwork and Court Movement Mistakes Beginners Make and How to Correct Them

1. **Standing flat-footed**

   Mistake: Beginners often stand with locked knees and heels planted on the ground.
   Why it matters: This position limits quick reactions and reduces mobility.
   Correction: Encourage a ready position with knees slightly bent and weight on the balls of the feet.

2. **Backpedalling instead of pivoting or drop-stepping**

   Mistake: Learners try to move backwards by walking or running straight back.
   Why it matters: Backpedalling is unsafe and unbalanced, increasing the risk of falls.
   Correction: Teach drop-step or pivot techniques to retreat safely and quickly.

3. **Crossing feet during lateral movement**

   Mistake: Learners cross one foot over the other when moving sideways.
   Why it matters: It causes instability and slows down court coverage.
   Correction: Emphasise the shuffle step for side-to-side movement to maintain balance.

4. **Poor recovery after a shot**

   Mistake: Beginners often stay where they hit the ball and do not return to a neutral or strategic position.
   Why it matters: It leaves them vulnerable to the next shot.

Correction: Reinforce the habit of returning to the ready position after each stroke.

5. **Overcommitting in one direction**

   Mistake: Learners may move too far toward one side of the court and cannot recover for the next shot.

Why it matters: It reduces court coverage and increases errors.
Correction: Teach learners to anticipate and recover, using small, controlled steps.

6. **Slow or hesitant first step**

   Mistake: Learners delay movement after the ball is hit toward them.
   Why it matters: The delay causes missed shots or poor positioning.
   Correction: Train a quick reaction using the split step as the opponent hits the ball.

7. **Holding the paddle too low or too high while moving**

   Mistake: Learners may drop or raise their paddle awkwardly while moving around the court.
   Why it matters: This delays the response time for returning the ball.
   Correction: Teach them to keep the paddle at chest height in a ready position.

8. **Running through the ball instead of setting up**

   Mistake: Learners rush to the ball and hit while still moving fast.
   Why it matters: It compromises balance and stroke control.
   Correction: Emphasise positioning, stopping, and then hitting the ball with control.

9. **Forgetting to use diagonal or angled movement**

   Mistake: Learners try to reach balls by moving only straight forward or sideways.
   Why it matters: It limits effective court coverage.
   Correction: Include drills that encourage diagonal footwork and angled positioning.

10. **Misjudging court zones (especially the non-volley zone)**

    Mistake: Learner steps into the kitchen during volleys or lingers too far from the net.
    Why it matters: Violating kitchen rules or poor positioning disrupts play.
    Correction: Reinforce court awareness and legal movement patterns near the net.

Activity 1.3 Footwork and Movement on the Court in Pickleball

1. Begin with a general and specific warm-up to prepare your body for movement. Start with light jogging, side steps, and skipping to activate your leg muscles and raise your heart rate. Follow with dynamic stretches focused on the ankles, knees, and hips. Finish with short sprints and quick direction changes across the court to get comfortable moving with control and balance.
2. Organise yourself into groups of 5 to 6 people. In your group, start from the centre of the court in a ready position. On your partner's signal (e.g., clap, whistle, or verbal cue), move quickly to the designated cone spots using proper footwork:

a. Side-shuffle to the sideline
b. Quick step forward to the net
c. Crossover step to move back to the baseline

Focus: Keep a low, balanced stance, and stay paddle-ready throughout the drill.

3. In pairs, one partner leads and the other mirrors their movements (without a ball). Performs realistic court movements such as lateral steps along the kitchen line, quick approaches to the net, or recovering to the centre. After 1 minute, switch roles.
4. In pairs, engage in a soft rally (optional ball use). Focus on:
   a. Staying in a ready position
   b. Using efficient footwork to reach and return the ball
   c. Recovering quickly to the centre of the court after each shot

THE PICKLEBALL GAME

Figure 1.23: Pickleball Game during the All-African Games in Ghana

A pickleball game starts with a serve. A coin toss or a pre-agreed method is used to determine the starting server. In doubles, the serving team starts with both players on the baseline while the receiving team has one player at the baseline and the partner near the kitchen line. The server on the right side of the court serves underhand and diagonally across the court to the opposing team's service court, and the receiving team must let the serve bounce once before returning it. The return can land anywhere on the side of the court of the opponent. The first two shots of the rally (the first serve and return) must bounce before returning it. After that, players can volley or hit the ball without allowing it to bounce first. The scores must be verbally called out before every serve, and the scores for singles contain only two numbers, while the scores for doubles contain three numbers, as this also includes the server number.

Serving Order

In a pickleball singles match, there is only one player on each side of the court. Therefore, after a player loses a point, a side out occurs, and service is awarded to the opponent. If the score is even, the server will serve from the right side of the court, and if the score is odd, the server serves from the left side of the court. However, in doubles, each team has two players, and they each serve before a side out is declared. A side out means a serving possession is switched to the opponent. After each side out, service always begins with the player positioned on the right side of the court. This player is referred to as Server 1, and the player on the left side of the court is referred to as Server 2. Server 1 will continue to alternate serving positions from right to left if the serving team continues to win points. When the serving team's score is an even number, Server 1 will serve from the right side of the court, and when the score is an odd number, Server 2 will serve from the left side of the court.

Scoring Basics in Pickleball

There are five basic scoring rules in pickleball. The games are played in a best-of-three format, meaning the first team or player to win two games out of the three wins the match. However, some major tournaments play the best out of five matches during championship matches. The games are played up to 11 points. The first team or player to reach 11 points with at least a two-point margin is the winner. If the score is tied at 10-10 or 11-11, etc, the game continues until one team or player leads by a two-point difference. A point is scored if the receiving team or player fails to return a ball, hits the ball out of bounds or makes a fault. After scoring a point, the serving team or player switches sides, and in doubles, each player on the serving team gets a turn to serve until they lose a point. The game continues with the receiving team now serving and alternating serves between the team or players on the serving team.

Score Methods in Pickleball

Pickleball is played following one of two scoring methods. These methods are the traditional or the rally method. With the traditional scoring method, a point is earned when a player or a teammate is serving. If the player or a teammate commits a fault or error while serving, it doesn't result in the loss of a point but the loss of a serve. While in the rally scoring method, a point is awarded after each rally, regardless of which team served. This means a player or a team can win a point on offence and defence.

Recap

Before we move on, let us do a quick recap of what we have covered so far.

- To succeed in the dynamic and highly strategic sport of pickleball, a player must master several fundamental skills. Whether playing defensively or offensively, players can execute tactical strategies when these fundamental skills are used effectively.
- Successful performance is based on these skills, which include grip technique, footwork, service techniques, stroke mechanics, hand-eye coordination, and spin control.
- The serve is a crucial skill that starts each point, and building confidence in your serve is a powerful way to strengthen your game strategy and gain an advantage.
- Mastering stroke mechanics, particularly the forehand and backhand strokes
- The forehand and backhand are two of the most important strokes in pickleball because they let players control the ball and set the pace of the match.
- The forehand stroke allows players to fully rotate their bodies and apply force to the ball; it is frequently used to create strong, offensive shots. Players can attack their opponent's weaknesses with the forehand stroke, which is often the preferred offensive tool.
- The backhand stroke is crucial for quick defensive returns and control. The backhand gives the player the ability to react fast to shots on the other side of their body, even though it might not produce as much power as the forehand.
- Grip technique is important as it allows players to control the speed, spin, and trajectory of the ball, depending on how they hold the racket.
- A player with a well-maintained grip can effortlessly switch between forehand and backhand strokes and modify their shots during fast rallies.
- Good footwork allows players to position themselves correctly to execute shots. It ensures 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.
- Good hand-eye coordination is essential. To hit the ball accurately, players must time their strokes, predict the ball's path, and closely track its movement. This coordination becomes even more important when facing opponents who vary their spins and shot speeds to disrupt the player's rhythm.
- Spin control is another key skill for success in table tennis. Spin affects how the ball behaves when it hits the table or the opponent's racket. Skilled players use sidespin, backspin, and topspin to create unpredictable bounces, making it harder for opponents to return the ball effectively. Understanding spin mechanics allows players to control the game's pace and force opponents into making mistakes.

- These fundamental skills allow players to execute a variety of strategies and perform well during games. As players continue to develop these skills, they become better at handling the challenges and demands of competitive pickleball.

Activity 1.4 Playing a Pickleball Game

1. Start with a general and specific warm-up to prepare for gameplay. Begin with light jogging, dynamic stretches, and paddle swings. Focus on warming up your arms, legs, and joints to be game-ready.
2. **Winner Stays Challenge**

   Form two groups: Group A and Group B.

   a. Select one player from each group to start a match.

   b. Play a short rally to 5 or 7 points.

   c. The winner stays on the court; the loser returns to the back of their team's line.

   d. The first player to win five consecutive matches earns the title of King or Queen of the Court!
3. **Match Play Challenge Courts**

   Multiple courts will be set up, each with a unique challenge. Examples include:

   a. Forehand-Only Court

   b. Backhand-Only Court

   c. Serve-and-Volley Court

   d. Mini-Court Rally (no baseline shots)

How to Play

1. Team up with a partner or small group.
2. Rotate through each challenge court, taking turns to play matches.
3. Matches may be time-based or point based.
4. If your team wins in a court, move on to the Champions Court for a final round.
5. Play using standard Pickleball rules, while sticking to each court's specific challenge.

Keep Practising! Do not stop at school. Practise in your own time at a local court or with friends in your community to keep improving your skills and game confidence.

EXTENDED READING

- USA Pickleball: "Beginner's Guide to Pickleball" – https://usapickleball.org/what-is-pickleball

- Shape America. (2021). "Pickleball in the School Curriculum: Instructional Approaches and Inclusion." www.shapeamerica.org

- Pickleball 101 – YouTube Channel: Pickleball Channel
  Video: https://youtu.be/fTvPYdKZqO0

- Mooney, K. (2021). Smart Pickleball: The Pickleball Guru's Guide. PB Publishing.
- Gagliardi, D. (2023). Winning Pickleball*: Expert Techniques and Strategy for Every Level*.

REVIEW QUESTIONS

1. Pickleball has some unique serving rules. What are two rules that make serving in pickleball different from other net games like tennis or badminton?
2. What is the “kitchen” (non-volley zone) in pickleball, and how does it affect the way you play the game?
3. Imagine you’re playing a game, and your team has been defending hard. How should you change your position and the kind of shots you use to go from defence to attack?
4. Design a 15-minute practice session for students who already know how to play pickleball. Your goal is to help them improve their “third shot drop” — a soft shot played after the serve and return. Include activities and explain how they contribute to the overall build-up.
5. Analyse a game situation where using a backhand stroke would be more effective than a forehand stroke. Justify your reasoning.
6. Develop a strategy for improving your forehand consistency during gameplay. Include how you would practice and apply it in a match setting.

SECTION 2

HEALTH AND WELLNESS - PART ONE

PHYSICAL ACTIVITY AND HEALTH

Health and Wellness

INTRODUCTION

In today's fast-paced world, understanding the importance of maintaining both physical health and mental well-being is crucial. This section focuses on two significant themes: the structure and care of the human skin, and the implications of negative practices associated with Information and Communication Technology (ICT). We will explore the human skin as the body's largest organ, examining its various layers, functions, and the essential role it plays in protecting our internal systems. Through this exploration, learners will gain insight into effective skincare routines and grooming practices that promote overall health and enhance self-esteem. This understanding is particularly vital in fostering a sense of responsibility regarding personal hygiene and skin health.

We will then shift the focus to the potential health risks associated with excessive and irresponsible use of technology. As digital devices become increasingly integrated into daily life, it is imperative to address the negative effects of prolonged screen time, poor posture, and exposure to inappropriate content. Learners will discuss these issues, recognising their impact on physical and mental health, and will be equipped with practical strategies to mitigate these risks. By the end of this section, you will appreciate the importance of nurturing their bodies, both through proper skincare and responsible ICT usage, to lead balanced and healthy lifestyles.

KEY IDEAS

- The skin performs several essential roles, including protecting the body from harmful substances, regulating body temperature, sensing touch, and preventing water loss.
- The skin is made up of three main layers: **the epidermis** (outer layer), **dermis** (middle layer), and **hypodermis** or **subcutaneous tissue** (innermost layer), each serving specific functions.
- These are various health problems that affect the skin, such as acne, eczema, ringworm, and rashes, often caused by bacteria, fungi, viruses, or allergies.
- **Cyberbullying** is the use of digital devices such as phones, computers, or social media platforms to deliberately harm, threaten, or harass another person repeatedly.
- **Social media addiction** refers to behavioural condition in which a person becomes overly dependent on social media platforms, leading to neglect of daily responsibilities and potential mental health issues like anxiety or low self-esteem.
- The sending of inappropriate messages or images can be a form of this exploitation. Both can lead to emotional harm, loss of privacy, and long-term consequences. It is important to be cautious and responsible when using digital platforms.

STRUCTURE OF THE SKIN

THE SKIN

The skin is the body's largest organ, serving as a protective outer layer that covers and shields internal organs, muscles and bones. It regulates body temperature, enables sensory perception, synthesises vitamins and acts as a barrier against pathogens and environmental damage.

It is made up of three main layers called the epidermis, dermis and hypodermis (or subcutaneous tissue).

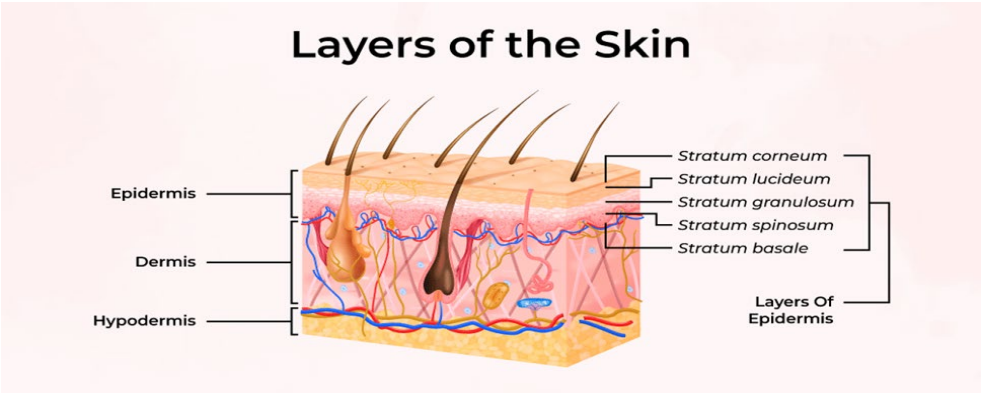


Figure 2.1: Layers of the skin

Epidermis

The epidermis is the outermost layer of the body that acts as a barrier. It is thick and hard in some parts of the body, like on the palms, soles of the feet and the heels. It is devoid of blood vessels in all places. The epidermis is also tough and serves as a waterproof barrier that prevents germs and bacteria from entering and causing infections inside the body. The skin has mesodermal cells which produce pigmentation, such as melanin, provided by melanocytes, which absorb some of the potentially dangerous ultraviolet radiation (UV) in sunlight. Human skin pigmentation varies substantially between populations. This has led to the classification of people(s) based on skin colour. The Epidermis is subdivided into the following layers: Stratum corneum, stratum lucidum, granular cell layer, spinous cell layer and basal cell layer.

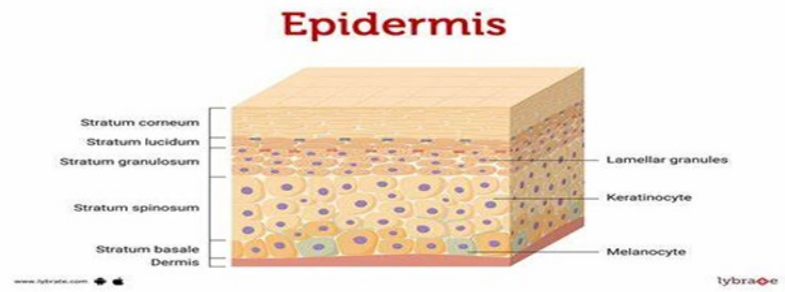


Figure 2.2: Structure of the epidermis

Layers of the Epidermis

Table 2.1: Layers of the epidermis

Layer	Description
Stratum Corneum	The stratum corneum is the first layer of the epidermis, composed of dead skin cells that are regularly shed and replaced. These cells are rich in keratin, a protein that provides strength and protection to the skin.
Stratum lucidum	The stratum lucidum is a thin, clear layer of dead skin cells found in the epidermis, named for its translucent appearance under a microscope. It is visible primarily in thick skin areas, such as the palms of the hands and soles of the feet and lies between the stratum granulosum and the stratum corneum. This layer consists of three to five layers of flattened, dead keratinocytes that lack distinct boundaries. These cells are filled with eleidin, an intermediate form of keratin, and are surrounded by an oily substance released from lamellar bodies during their movement through the stratum spinosum and stratum granulosum. The thickness of the stratum lucidum is influenced by the rate of cell division in the epidermis, while the darkness of this layer is affected by the concentration of melanosomes in the underlying Stratum Basale.
Granular Layer	The stratum granulosum is a thin layer of the epidermis, named for the keratohyalin granules present in its cells. These granules contain proteins that bind to keratin filaments, helping to strengthen the skin. In this layer, keratinocytes begin their final stage of development, losing their nuclei and organelles as they fill with keratin. The stratum granulosum also contains lamellar bodies that release lipids into the intercellular spaces, forming a lipid-rich barrier that prevents water loss and maintains skin hydration.
Spinous layer	The spinous layer, also known as the stratum spinosum, is a layer of the epidermis found between the Stratum Basale and the stratum granulosum. It is characterised by keratinocytes with desmosomes, which are cell junctions that appear as 'spines' under a microscope (hence the name 'spinosum'). These desmosomes provide structural support and cohesion between cells. Langerhans cells, a type of immune cell, are also present in this layer. The stratum spinosum contributes to the skin's flexibility and immune defence.
Basal Cell Layer	This is the deepest layer of the epidermis, known as the basal cell layer. It contains small, round basal cells that continuously divide to produce new skin cells. As new cells are formed, they push older cells upward toward the skin's surface, where they are eventually shed. This layer is well supplied with blood vessels, which support the active growth and nourishment of the dividing cells.

Dermis

The dermis is the layer of skin beneath the epidermis that consists of connective tissue and cushions the body from stress and strain. The dermis is tightly connected to the epidermis by a basement membrane. It also harbours many nerve endings that provide the sense of touch and heat. It contains hair follicles, sweat glands, sebaceous glands, apocrine glands, lymphatic vessels and blood vessels. The blood vessels in the dermis provide nourishment and waste removal from its cells as well as from the Stratum Basale of the epidermis. The dermis is structurally divided into two areas: a superficial area adjacent to the epidermis, called the papillary region and a deeper and thicker area known as the reticular region.

Regions of the Dermis

Table 2.2: Regions of the dermis

Region	Description
Papillary region	The papillary region is composed of loose areolar connective tissue. It is named for its finger-like projections called papillae, which extend toward the epidermis. The papillae provide the dermis with a 'bumpy' surface that interdigitates with the epidermis, strengthening the connection between the two layers of skin. In the palms, fingers, soles and toes, the influence of the papillae projecting into the epidermis forms contours in the skin's surface. These epidermal ridges occur in patterns (e.g., fingerprints) that are genetically and epigenetically determined and are therefore unique to the individual, making it possible to use fingerprints or footprints as a means of identification.
Reticular region	The reticular region lies deep in the papillary region and is usually much thicker. It is composed of dense, irregular connective tissue and receives its name from the dense concentration of collagenous, elastic and reticular fibres that weave throughout it. These protein fibres give the dermis its properties of strength, extensibility and elasticity. Also located within the reticular region are the roots of the hairs, sebaceous glands, sweat glands, receptors, nails and blood vessels. Tattoo ink is held in the dermis. Stretch marks, often from adolescent growth spurts, weight gain, pregnancy and obesity, are also located in the dermis.

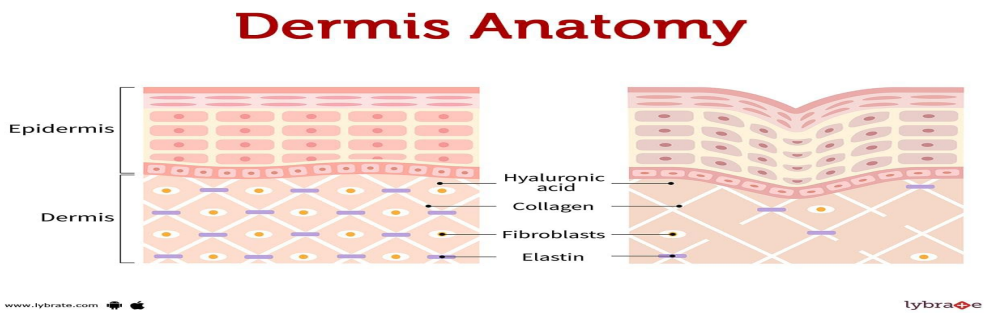


Figure 2.3: Structure of the dermis

Hypodermis

The hypodermis is the innermost layer of the skin. The fats in the hypodermis protect the bones and muscles from injuries during a fall. It is made of subcutaneous fats, blood vessels, tissues and nerve cells. It contributes to the body's shape and defined appearance. The fat in the hypodermis acts like a shock absorber or padding, which protects the body's muscles from heat, cold and trauma. This layer also plays a vital role in regulating body temperature. As a person ages, it tends to become thinner. Additionally, it serves as a common site for administering certain types of injections.

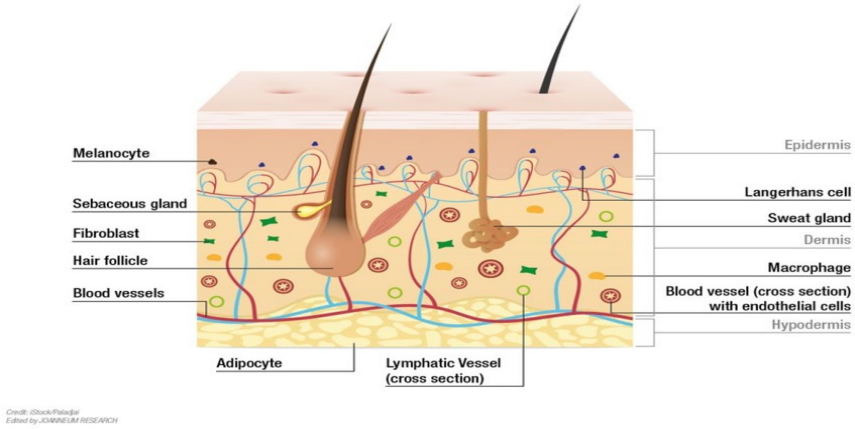


Figure 2.4: Structure of the hypodermis

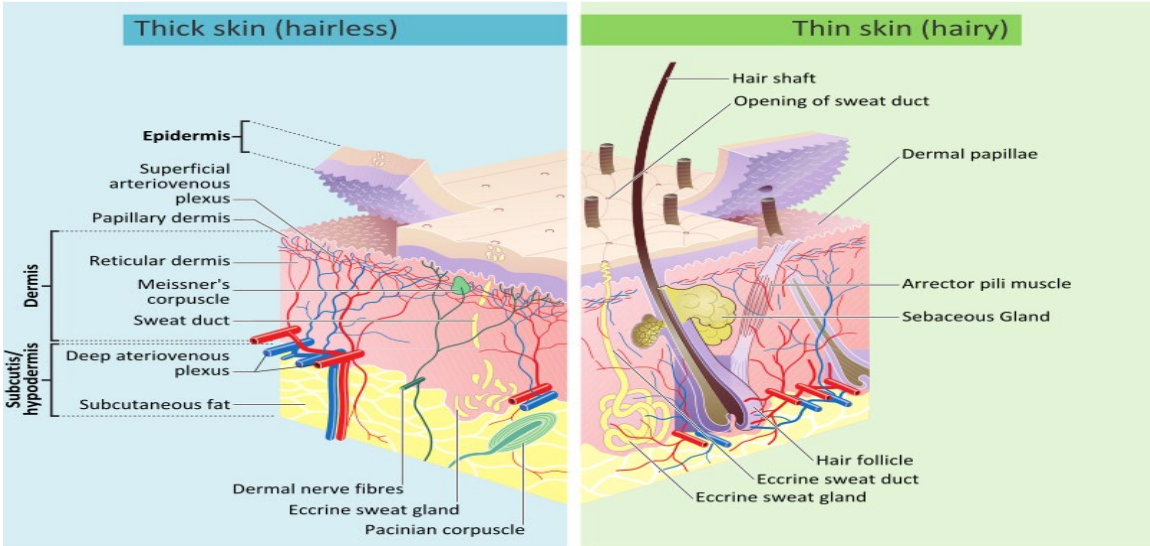


Figure 2.5: Thick skin without hair and thin skin with hair

TYPES OF SKIN

Skin type is primarily determined by genetics, but can also be influenced by factors like environment, diet, stress and hormones. Knowing one's skin type is important for choosing the right skincare products and establishing an effective routine. The main skin types are:

Table 2.3: Types of Skin

Skin Type	Characteristics	Appearance	Care
Normal Skin	The skin has a balanced moisture content, small pores, smooth texture, even skin tone, good elasticity and minimal sensitivity. Not excessively oily or dry.	Healthy, radiant and clear.	Focus on maintaining the balance with gentle cleansing, hydration and sun protection.
Dry Skin	Lack of moisture can feel tight, rough, and sometimes itchy. May have visible fine lines and flaky patches.	Looks dull, crepey and may show signs of premature ageing.	Requires rich moisturisers, hydrating serums and gentle, hydrating cleansers. Avoid harsh exfoliants and hot water.
Oily Skin	Excess sebum production, enlarged pores, prone to blackheads, whiteheads and acne.	Shiny or greasy, particularly in the T-zone (forehead, nose, and chin).	Needs oil-free or gel-based products, regular cleansing, and exfoliation to prevent clogged pores. Consider using blotting papers throughout the day.
Combination of Skin	A combination of oily and dry areas, normally with an oily T-zone and dry cheeks.	Shiny forehead, nose and chin, with possible dryness or flakiness on the cheeks.	Requires a balanced approach, using different products for different areas. Gentle cleansers and targeted treatments for specific concerns are beneficial.

Figure 2.6: Normal human skin

Figure 2.7: Dry skin

Figure 2.8: *Oily skin*

Figure 2.9: *Combination of skin*

Functions of the Skin

1. **Protection against microorganisms:** Skin prevents pathogens from entering our body and causing diseases.
2. **Prevents dehydration:** thick skin reduces water loss and hence prevents dehydration.
3. **Sensation:** Our skin serves as a sense organ for pain, touch, pressure, heat, cold, vibration and tissue injury.
4. **Temperature regulation:** The skin prevents loss of heat in cold weather and loss of heat in hot weather.
5. **Storage:** The skin stores reserve food in the form of a layer of fat contained in the main cells
6. **Excretion:** The skin assists in the process of excretion of water, salts, and, to a very limited extent, urea. Since sweating from the skin occurs mainly in temperature regulation, we cannot really consider the skin as an excretory organ.
7. **Synthesis of Vitamin D:** The skin synthesises vitamin D when exposed to sunshine. This is a minor function, and its mechanism is not yet fully understood. Too much sunshine may cause tanning and other ill effects, including skin cancers.
8. **Control of evaporation:** The skin provides a relatively dry and semi-impermeable barrier to fluid loss. Loss of this function contributes to the massive fluid loss in burns.
9. **Aesthetics and communication:** Others see skin and can assess mood, physical state and attractiveness.
10. **Absorption:** The cells comprising the outermost 0.25–0.40 mm of the skin is ‘almost exclusively supplied by external oxygen, although the “contribution to total respiration is negligible. In addition, medicine can be administered through the skin, by ointments or utilising the adhesive patch, such as the nicotine patch or iontophoresis. The skin is an important site of transport in many other organisms.
11. **Water resistance:** The skin acts as a water-resistant barrier, so essential nutrients are not washed out of the body.

SKIN HEALTH

Skin health refers to the overall condition, functioning and appearance of the skin. Healthy skin performs its vital roles effectively, including protecting the body from external harm, regulating temperature, preventing water loss and sensing the environment.

Characteristics of Healthy Skin

1. Smooth texture, free from cracks or lesions
2. Even tone without unusual spots or discolouration
3. Proper hydration (not too dry or oily)
4. Elastic and firm
5. Free from infections, rashes or persistent irritation

Factors that Promote Skin Health

1. **Hydration:** Well-hydrated skin appears plump, moist, soft and elastic.
2. **Nutrition:** A balanced diet rich in vitamins (A, C and E), minerals and antioxidants support skin vitality.
3. **Protection:** Shielding the skin from harmful UV rays, pollution, and harsh chemicals is key for maintaining health.
4. **Hygiene:** Regular cleansing helps remove dirt, oil and bacteria, preventing issues like acne, eczema and fungal infections such as ringworm.
5. **Skincare Routine:** Using appropriate products (moisturisers, sunscreens and treatments) tailored to skin type enhances health.
6. **Lifestyle Factors:** Regular exercise, sleep, stress management and avoiding smoking or excessive alcohol contribute to skin health

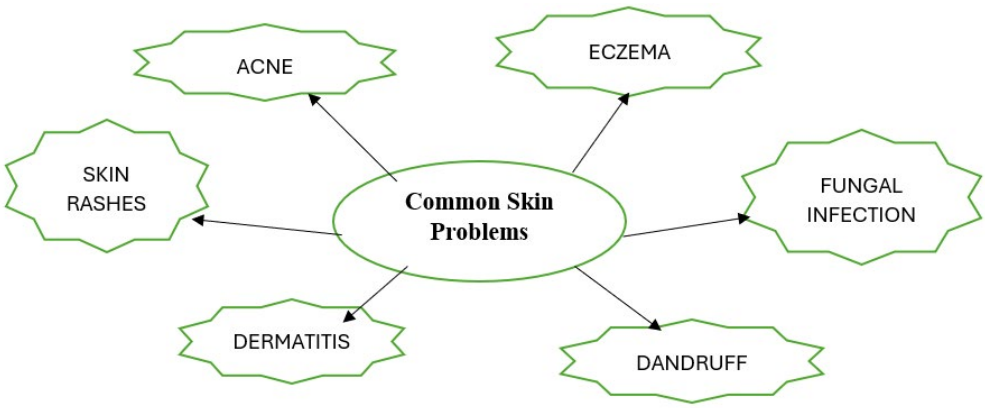
Factors that Affect Skin Health

1. **Extreme sun exposure:** Exposing the skin to excessive UV radiation causes sunburn, premature ageing, dark spots, and increases the risk of skin cancer.
2. **Poor diet and nutrition:** Lack of a balanced diet with vitamins A, C, E, and omega-3 fatty acids affect healthy skin. Poor nutrition (e.g., excessive sugar or junk food) may lead to dullness, acne and dryness.
3. **Dehydration:** inadequate fluid intake makes the skin dry, flaky and tight and may lead to irritation and premature ageing.
4. **Sleep:** Poor sleep affects skin repair and regeneration and can lead to dark circles, puffiness and early ageing.
5. **Hygiene and skincare routine:** "Irregular or inadequate cleansing and moisturising can contribute to acne, infections, and skin irritation. Also, the use of harsh or

inappropriate skin products may cause further damage. Skin bleaching can thin the skin and result in permanent damage such as burns, peeling, scarring, discolouration, and uneven skin tone, often leading to 'bleach spots' or a patchy appearance on the skin or face.

6. **Weather and Environment:** Dry and cold weather can make skin cracked and dry. Hot and humid weather may increase sweating and oil production, leading to breakouts.
7. **Infections and Diseases:** Fungal, bacterial or viral infections (e.g., ringworm, scabies, herpes) directly harm the skin.
8. **Medications and Chemicals:** Some drugs cause rashes, allergies or skin thinning. Harsh cosmetics or chemicals can irritate or burn the skin.
9. **Smoking and Alcohol:** Smoking reduces blood flow to the skin, leading to wrinkles and dullness. Alcohol dehydrates the skin and worsens certain skin conditions.

COMMON SKIN PROBLEMS AMONG ADOLESCENTS



Acne

Acne is a skin condition that occurs when hair follicles become clogged with oil (sebum), dead skin cells and bacteria. It is caused by hormonal changes during puberty, oily skin, poor hygiene, stress and use of greasy cosmetics. Symptoms include pimples, blackheads, whiteheads, cysts or lumps mostly on the face, chest, shoulder and back. It may leave scars on the skin if untreated.

Prevention tips

1. Wash face twice daily with mild soap.
2. Avoid touching or popping pimples.

Figure 2.10: Acne on the face.

Eczema (Atopic Dermatitis)

This is a chronic skin condition that causes dry, itchy, inflamed skin. It is caused by genetic factors, allergens, irritants like soaps or detergents and stress. Its symptoms are red, dry, scaly patches, intense itching, and sometimes cracked or oozing skin.

Prevention tips

1. Moisturise skin regularly with fragrance-free creams.
2. Avoid harsh soaps and hot showers.
3. Wear soft, breathable clothing (e.g., cotton).
4. Identify and avoid personal triggers (e.g., dust, stress, foods).

Figure 2.11: Eczema on the neck and face of an individual

Skin Rashes

Rashes are temporary outbreaks of red, itchy or inflamed skin caused by allergic reactions, heat, infections, friction or skin sensitivity. Symptoms are itchy bumps, redness, blisters or dry patches.

Prevention tips

1. Identify and avoid allergens (e.g., certain foods, lotions, fabrics).
2. Keep skin clean and dry.
3. Use soothing creams (if advised).
4. Seek medical help if the rash spreads or worsens.

Figure 2.12: Skin rashes on the back of a person

Fungal Infections (e.g., Ringworm, Athlete's Foot)

These infections are caused by fungi that grow on the skin, especially in warm and moist areas.

Common Types

1. **Ringworm:** Circular, red, scaly patches with a clear centre on the skull, arm or any other part of the body.
2. **Athlete's Foot:** An itchy, peeling skin between the toes caused by shared towels, shoes, poor hygiene, and sweating. Symptoms consist of itching, redness, ring-like patches, and flaking skin.

Prevention tips

1. Keep skin dry and clean.
2. Avoid sharing personal items.
3. Wear breathable shoes and change socks regularly.
4. Use antifungal creams as recommended.

Figure 2.13: Ringworm on the scalp

Dermatitis

A skin irritation caused by contact with an irritating substance. It may be caused by soaps, perfumes, metals (like nickel), certain plants or chemicals. Symptoms: Red, itchy, swollen, or blistered skin.

Prevention tips

1. Identify and avoid irritants or allergens.
2. Use protective gloves when needed.
3. Wash skin after contact with potential irritants.

Figure 2.14: Dermatitis on the fingers

Dandruff (Seborrheic Dermatitis of the Scalp)

A condition that causes flaky skin on the scalp. It is caused by the overgrowth of yeast on the scalp, oily skin or stress. Symptoms comprise white or yellowish flakes and an itchy scalp.

Prevention tips

1. Wash hair regularly with anti-dandruff shampoo.
2. Avoid using too many hair styling products.
3. Keep scalp clean and avoid scratching.

Figure 2.15: Dandruff

GROOMING HABITS

Grooming habits are the regular practices and routines individuals follow to maintain personal hygiene, appearance and overall well-being. These habits encompass various aspects of self-care.

Appropriate Grooming Practices

Table 2.4: Appropriate grooming practices

Grooming Practices	What To Do
Bathing Regularly Maintaining body cleanliness helps remove odour-causing bacteria and sweat.	Bathe twice daily using clean water and soap.

Hair Care Clean and well-kept hair contributes to overall appearance and hygiene.	Wash hair regularly, comb it and trim both private hair and head hair when needed.
Nail Care Dirty nails can harbour germs and cause infections.	Trim nails weekly and clean under them with a soft brush.
Oral Hygiene Oral health affects breath, teeth and overall appearance.	Brush teeth at least twice a day and floss regularly.
Wearing clean clothes Clean clothes prevent odour, rashes and boost self-confidence.	Change into clean clothes daily, especially underwear and socks.
Managing Body Odour Good hygiene keeps one smelling fresh and presentable.	Apply deodorant or antiperspirant and wash sweat-prone areas like armpits daily.
Avoiding sharing personal items Sharing grooming items can spread infections and skin diseases.	Use your towel, razor, comb or makeup tools.

Key Considerations for Achieving a Radiant Glow

1. Consistency: Consistency is key. Stick to your skincare routine and healthy lifestyle habits for long-term results.
2. Patience: It takes time to see results. Be patient and don't expect overnight miracles.
3. Skin Type: Tailor your skincare routine and treatments to your specific skin type.
4. Individual Needs: Address your specific skin concerns.
5. Listen to Your Skin: Pay attention to how your skin responds to different products and treatments.
6. Professional Advice: Consult a dermatologist or licensed aesthetician for personalised advice and treatment options. Achieving a radiant, glowing complexion is a journey that requires a holistic approach, encompassing consistent skincare, a healthy lifestyle, and targeted treatments.

By following these guidelines, you can unlock your skin's natural luminosity and achieve a healthy and vibrant glow.

Activity 2.1 The Human Skin – its Structure, Care and Grooming Practices

1. Join with a friend to form a pair. With your partner, reflect and share your thoughts on these questions: Why do you think so many people choose to spend money on skin products? Have you ever thought about what might happen to your skin when you use bleaching creams?
2. With your partner, choose five skin conditions and explain their characteristics and how they can be prevented.

Condition	Characteristics	Prevention

Join with another pair to form a group. In your group, discuss the importance of the skin and how to care for it. After your discussion, Share your key points with the class.

Take-home Project

3. Organise yourself into to a group of 4 to 6 people. In your group, create a written report on the structure and functions of the skin, and highlight three common skin conditions in your community. Your report should include:
   a. Title page
   b. Table of contents
   c. Introduction
   d. Skin structure and functions
   e. Skin types and factors affecting skin health
   f. Common skin conditions among adolescents (causes, symptoms, prevention, treatment)
   g. Conclusion
   h. References

You will also prepare a visual presentation. Include

a. Diagrams or illustrations
b. Charts or tables
c. Summary of key points

Note

You will be assessed on

- Content quality
- Presentation clarity

- Group collaboration
- Organisation and neatness

EXPLORING NEGATIVE ICT PRACTICES AND THEIR HEALTH IMPLICATIONS

INFORMATION AND COMMUNICATION TECHNOLOGY (ICT)

What is ICT?

ICT refers to the use of digital tools, systems and networks to access, store, process, share, and communicate information. It combines two main elements in its operation. The elements are Information Technology (IT), which are tools used to handle information (e.g., computers, software, databases) and Communication Technology also tools used to transmit information (e.g., phones, internet, radio, email). Examples of ICT Tools include computers and laptops, smartphones and tablets, internet and wi-fi, email, messaging apps and social media, television and radio and projectors and smartboards.

Why ICT is Important

ICT has become an important part of modern life.

Table 2.5: Importance of ICT

Improves Communication	ICT makes communication easier, faster and more efficient. People can connect and share messages, pictures, videos and documents instantly. For example, using WhatsApp to message friends and family, teachers and learners using email to send homework, and people making video calls with Zoom or Google Meet.
Supports Education and Learning	ICT provides access to a wide range of learning materials. It helps both teachers and students teach and learn in more exciting ways. Examples include learners watching educational videos on YouTube, teachers using projectors or smartboards to explain diagrams and students using Google to do research and complete assignments.
Makes Daily Activities Easier	ICT helps in everyday activities like shopping, paying bills, banking and entertainment. For instance, using a mobile money app to buy airtime or pay electricity bills, ordering food online through apps or websites and listening to music or watching movies on smartphones or smart TVs.

Creates Job and Business Opportunities	ICT skills are needed in almost every profession today. It also allows people to run businesses online. For example, learning computer skills like graphic design, coding, or data entry can lead to jobs, running a business and using social media to advertise products and starting a YouTube channel or online shop.
Connects People Around the World	ICT removes distance barriers and allows people from different parts of the world to connect and work together. As it helps learners participate in international school debates online, families staying connected through video calls even when living in different countries, social media platforms like Facebook, TikTok and Instagram allow global interaction.
Promotes Creativity and Innovation	ICT tools encourage people to be creative and come up with new ideas, solutions or digital content. Using design apps to make art and logos, creating and editing videos with mobile apps and writing and publishing a blog or eBook online.

However, if ICT is not used wisely, it can create health problems for the user.

Negative ICT Practices

Negative ICT practices refer to the unhealthy, irresponsible, or harmful use of digital devices like smartphones, computers, tablets, and gaming consoles. They also include harmful or unethical behaviours and activities carried out using these technologies. These practices can have detrimental effects on individuals, communities and society. Adolescents are digital natives, heavily reliant on ICTs for communication, education and entertainment. However, this reliance also exposes them to various risks and negative practices, which can have substantial consequences for their mental and emotional health and social well-being.

Common Negative ICT Practices

1. **Using devices in the dark or under improper lighting**

   Using devices in the dark or under improper lighting refers to operating phones, tablets, computers or TVs in environments that are either too dim in total darkness or low light, too bright or with a strong contrast between the screen and background lighting.

   Risks

   Using digital tools in improper lighting will lead to eye strain (digital eye strain or computer vision syndrome) because the eyes work harder to adjust to the poor lighting, leading to discomfort, headaches and blurred vision, sleep disruption as blue light from screens in dark rooms interferes with melatonin production, making it harder to fall asleep.

   Impact

   a. *Physical:* Sore or dry eyes, tiredness, disrupted sleep patterns and increased risk of myopia (especially in children).

b. *Mental:* Poor sleep can lead to fatigue, irritability and difficulty concentrating during the day.
c. *Academic or Work Performance:* Reduced focus due to eye discomfort or poor sleep can affect productivity and learning.

Mitigation

a. *Devices should be used in well-lit rooms.* By ensuring the lighting is not too harsh or too dim and avoiding high contrast between the screen and surroundings.
b. *Adjust Screen Brightness and Text Size.* Match screen brightness to the environment and increase text size for easier reading.
c. *Enable Night Mode or Blue Light Filters:* Most devices have a night mode or blue light filter to reduce eye strain in the evening.
d. *Follow the 20-20-20 Rule*: Every 20 minutes, look at something 20 feet away for 20 seconds to relax your eyes.
e. *Limit Screen Time Before Bed:* Avoid using screens at least 30 minutes to an hour before sleeping.

Figure 2.16: Using ICT devices in the dark

2. **Cyberbullying**

Cyberbullying is using ICT tools to oppress, insult, threaten or embarrass others online.

Forms

Sending harassing or offensive messages, spreading false rumours, posting embarrassing photos or videos and creating fake profiles to impersonate people online.

Impact

Cyberbullying may lead to anxiety, depression, low self-esteem, social isolation and even suicidal thoughts. The secrecy offered by the internet can encourage bullies and make it difficult for victims to escape the abuse.

Mitigation

Education on responsible online behaviour, reporting mechanisms, and parental monitoring can help curb online bullying.

Figure 2.17: Cyberbullying

3. **Poor posture and prolonged device use means**

   Sitting or lying in unhealthy or bad positions (e.g., slouching, bending over or bending the neck too far forward) while using a phone, tablet, computer or other devices for long periods without breaks.

   Risks

   a. *Muscle and Joint Pain:* This posture commonly affects the neck, shoulders, back, wrists and fingers due to strain.
   b. *Spinal Problems:* Bad posture over time leads to curvature of the spine or chronic back pain.
   c. *Headaches and Fatigue*: Muscle tension from poor posture often causes headaches and body fatigue.
   d. *Reduced Lung Function:* Slouching compresses the lungs and can reduce breathing efficiency.
   e. *Carpal Tunnel Syndrome:* Repeated movements (like scrolling or typing) can damage nerves in the wrist.

   Impact

   a. *Physical Health:* These may lead to discomfort, reduced flexibility and long-term posture issues.
   b. *Academic Performance*: Pain and fatigue may reduce focus, motivation and ability to participate effectively in academic work, which affects performance.
   c. *Mental Well-being*: Constant physical strain can contribute to stress and mood swings, making it difficult to concentrate and do things properly.
   d. *Appearance and Confidence:* Habitual slouching may negatively affect body alignment and self-image.

   Mitigations

   a. *Practice Good Posture*: Sit with the back straight, feet flat on the ground and the screen at eye level.
   b. *Take Frequent Breaks*: Every 30 minutes, stand up, stretch or walk around to relieve muscle tension.
   c. *Use Ergonomic Furniture and Accessories*: Use a chair with back support and a desk that suits the height of the person using a device and use a keyboard and mouse if typing a lot.

d. *Limit Continuous Device Use:* Use timers or apps that remind users of a device to take tech breaks and reduce screen time.

e. *Exercise Regularly:* Strengthen muscles and improve flexibility with physical activity like stretching or sports.

Figure 2.18: Bad posture during laptop usage

4. **Social Media Addiction and Online Gaming**

Spending excessive time on social media platforms or games can become addictive and disrupt daily life.

Forms

Spending too much time online, neglecting schoolwork or other responsibilities, experiencing withdrawal symptoms when unable to access social media platforms and prioritising online interactions over real-life relationships.

Impact

Staying all day or late into the night on social media may lead to sleep disturbances, decreased academic performance, anxiety, depression, body image issues and a fear of missing out (FOMO).

Mitigation

Setting time limits for social media use (using the 20-20-20 rule), engaging in offline activities and seeking professional help if addiction is suspected. The 20-20-20 rule is a simple eye-care guideline designed to reduce digital eye strain caused by prolonged use of screens (it means, in every 20 minutes of screen use, take a 20-second break and look at something 20 feet [or about 6 metres] away) before returning to the screen.

Figure 2.19: Addiction to social media

5. **Sexting and Online Exploitation**

Sexting is sending or sharing sexually explicit messages, photos or videos through phones or the internet to people, while online exploitation refers to the abuse of a child or adolescent through the internet.

Risks

Sexting can lead to serious consequences if images or messages are shared without one's permission or consent. It can also lead to emotional distress, loss of self-confidence and damage to one's reputation. It can get one into legal troubles, especially if the images involve minors, even if shared between peers. More dangerously, sexting can open the door to online exploitation, where strangers or even people one knows may try to groom, manipulate or involve the person in sexual abuse or trafficking.

Impact

The aftermath experience of sexting and online exploitations may lead to trauma, anxiety, depression and legal repercussions.

Mitigation

Education on the risks of sexting, privacy settings and the importance of not sharing personal information online is needed. Parental monitoring and having open communication with their wards on what they do online are essential in dealing with these issues.

6. **Exposure to Inappropriate Content or Viewing Harmful Content**

Accessing online content that is harmful, offensive or age inappropriate. Some online content is unsuitable for young people and may influence negative behaviour among them.

Examples

Violent content, pornography, hate speech and content that promotes harmful behaviours such as eating disorders, substance abuse and the like.

Impact

Desensitisation to violence (becoming less sensitive to a stimulus after repeated exposure to it), distorted views of reality, negative body image and the adoption of harmful behaviours.

Mitigation

Adolescents should be sensitised to reduce exposure to harmful content by enabling safe search settings, using age-appropriate platforms and installing parental control tools to block inappropriate websites. They should avoid clicking suspicious links or pop-ups and be cautious of unknown websites and messages. If they are accidentally exposed to disturbing content, they should be encouraged to talk to a trusted adult for guidance and support. They should also be encouraged to report or block harmful content or users to help make the online space safer. Finally, learning digital safety skills and limiting screen time can reduce risks and promote healthier online habits.

7. **Misinformation and Fake News:** Spreading or believing false or misleading information online.

   Impact

   Distorted understanding of events, the spread of harmful beliefs and the erosion of trust in reliable sources.

   Mitigation

   Education on critical thinking, fact-checking and identifying reliable sources of information.

Health Implications of Negative ICT Practices

Table 2.6: Health Implications of Negative ICT Practices

Physical Health Effects	**Scenarios**
Eye strain, blurry vision and headaches. Postural issues (hunched back, neck pain). Fatigue and insomnia. Obesity due to lack of movement.	i. Linda spends long hours doing assignments on her laptop while lying on her bed. She begins to experience constant neck and back pain. ii. After 6 hours of continuous screen time, a student experiences blurry vision and headaches. iii. Kwame browses on his phone at night with the lights off. Over time, he develops frequent eye irritation and poor sleep. iv. A teenager who rarely plays outside and spends weekends on social media and gaming gains weight and feels tired even after sleeping.
Mental and Emotional Effects	**Scenarios**
Anxiety from comparing oneself to others online. Low self-esteem due to negative comments. Increased feelings of loneliness and sadness.	i. Afia compares herself to filtered photos on social media and feels she's not attractive enough. She begins to isolate herself. ii. A student receives insulting messages about her looks from classmates through a class WhatsApp group. She becomes depressed and refuses to attend school.
Behavioural Consequences	**Scenarios**
Reduced academic focus and performance. Aggression from exposure to violent content. Disobedience and conflict at home over device use.	i. Yaw uses his phone late into the night, chatting and watching videos. He wakes up tired and finds it hard to concentrate in school. ii. Kofi skips meals and isolates himself just to play online games. He misses schoolwork and stops socialising with friends.

	iii. A young learner is exposed to violent games and videos. He starts acting aggressively and becomes less empathetic toward others. iv. A boy argues with his parents daily when they ask him to put away his phone. His grades begin to fall.

Safe and Healthy ICT Practices

1. Setting daily screen time limits (e.g., no more than 2 hours of recreational use).
2. Taking breaks every 20–30 minutes during device use.
3. Sitting upright at a desk with proper lighting.
4. Using blue light filters or glasses to protect your eyes.
5. Avoid using devices at bedtime.
6. Reporting and blocking cyberbully.
7. Balancing online and offline activities.

Role of Schools and Families

1. Educate learners on responsible ICT use.
2. Monitor device usage and set boundaries.
3. Encourage screen-free activities like reading or physical play.

Activity 2.2 Negative ICT Practices and How They Affect Our Health

1. Organise yourself into groups of 3 to 5 people. Discuss the meaning and importance of ICT. After the discussion, write answers to the following questions in your workbook:
   a. What is ICT in your own words?
   b. List five ways ICT is useful in your daily life.
   c. Identify any two ICT tools you use regularly and describe what you use them for.
2. In your group, list any harmful ways that you or your peers use digital devices. Present your answers on a manila sheet and share with the class.

   Questions

   a. What are some common negative ICT practices you observe in school or at home?
   b. What are some reasons people might engage in those behaviours?
3. With a partner, match the negative ICT practice in activity 2 above on one card with its health implications on another.

   Example of Match Pairs:

a. Using devices in the dark ? Eye strain and poor sleep

b. Poor posture ? Back and neck pain

c. Cyberbullying ? Depression and anxiety

d. Social media addiction ? Reduced academic performance

4. With a partner, read the following scenario and answer the questions that follow:

Scenario

Kwesi often browses his phone in bed late at night with the lights off. Recently, he has started experiencing frequent headaches and trouble sleeping.

Questions

a. Identify the negative ICT practice in the story.

b. What physical health issue is Kwame facing?

c. Suggest two ways Kwame can avoid this health problem.

5. **Role Play**

a. Organise yourself into a group of 4 to 6 people.

b. In your group, choose one of the following scenarios:

i. Online bullying among classmates.

ii. Late-night screen time causing sleep problems.

iii. Excessive social media use and declining academic performance.

iv. Poor posture during long gaming sessions.

v. Viewing harmful or age-inappropriate content.

vi. Sharing personal photos (sexting) and its aftermath.

c. Write a short role play script on the negative ICT use and its health implications. Focus on clearly showing the problem, its effects and a realistic solution.

d. Perform your groups role play in front of your class.

e. When watching other role plays, ask yourself:

i. Which ICT misuse is being demonstrated?

ii. What is the health or social impacts shown (e.g., anxiety, eye strain, poor sleep, isolation)?

iii. How did the characters handled or resolve the issue?

f. Share your thoughts with each group following their role play presentation.

g. Make notes for each role play on the following:

i. What did you learn from the scenario?

ii. Have you or someone you know experienced a similar situation?

iii. What could you do differently in real life to avoid or address this problem?

Reflection Journal-My ICT Habits

In your workbook, reflect on your use of ICT by answering:

1. How much time do I spend daily on my phone, TV or computer?
2. What is one ICT habit I need to change?
3. What is one healthy ICT practice I already follow?
4. How can I balance online and offline activities?

Debate

Topic: "Parents should be responsible for controlling students' screen time at home.

Instructions: Split into two teams. One team will argue *for* the motion, and one *against* it. The class will vote on which team made the stronger case.

EXTENDED READING

- Articles & Reports
  - UNICEF (2023). *Adolescents in a Digital Age: Risks and Opportunities.*
  - WHO (2022). *Adolescent Mental Health and Screen Time.*
  - Common Sense Media (2024). *The Truth About Teens and Technology.*
- Videos & Documentaries
  - "The Social Dilemma" – Netflix documentary on social media addiction.
  - "Screenagers" – A documentary exploring tech use in teenagers.
  - YouTube Series: "Think Before You Post" – Digital citizenship awareness.
- Web Resources
  - www.stopbullying.gov
  - www.childnet.com
  - www.unicef.org/child-rights-digital-world

REVIEW QUESTIONS 2

1. Analyse how the skin's functions work together to protect the body and explain what might happen if one of these functions fails.
2. Evaluate the causes and consequences of sunburn and propose an effective strategy to prevent it in a tropical climate like Ghana.
3. Compare two common skin infections in terms of their symptoms, causative agents, and recommended treatments. How would you educate a peer on preventing them?
4. Explain the meaning of online exploitation and describe two ways it can negatively impact a young person's emotional well-being.
5. Analyse how excessive use of social media can affect both the mental and physical health of students. Propose two realistic strategies a senior high school student can use to manage their screen time effectively.
6. Compare the health implications of cyberbullying and sexting among teenagers. How might schools and communities intervene to reduce the risks associated with both practices?

SECTION

3

TRADITIONAL GAMES - PART ONE

PHYSICAL ACTIVITY AND HEALTH

Traditional Games

INTRODUCTION

Chaskele is a traditional Ghanaian game that enhances physical activity and social bonding among children and youth. This exciting game uses simple, readily available materials like a crushed can and a stick, making it accessible for all. By introducing you to Chaskele, we aim to enhance your physical and motor skills while fostering creativity and cultural appreciation. This game is a vital part of Ghanaian heritage, and through active participation, you will develop a deeper awareness of your physical abilities. Throughout this session, we will focus on core skills essential for Chaskele, including accurate striking, effective defending, and efficient movement within the playing area. You will engage in warm-ups, skill drills, and role-specific activities, culminating in a small-sided game. Emphasis will be placed on teamwork, strategy, fair play, and inclusive participation. By the end of this lesson, you will confidently demonstrate and apply these skills in a game setting, while also appreciating the cultural significance of Chaskele as both a physical and recreational activity. Let's get started!

KEY IDEAS

- **Chaskele** is a traditional Ghanaian game involving a crushed can and a stick, where players aim to either throw the can into a goal or defend a goal from being hit.
- Core Skills in Chaskele include throwing, hitting, blocking, stance, grip, hand-eye coordination, and reflexes.
- **Cultural Relevance:** Chaskele promotes physical fitness, social bonding, creative play, and preserves indigenous culture.
- **Safety in Play:** Proper equipment use, appropriate environment, and observing rules reduce injuries and promote fair play.
- **Skill Development:** Playing Chaskele fosters agility, hand-eye coordination, quick reflexes, and teamwork, while also teaching discipline and strategy.
- **Traditional Games:** These are indigenous games that are played using local materials and passed down from one generation to another. They form part of the cultural heritage of a people.

CHASKELE

Background

Chaskele is a traditional game played in Ghana and several other West African countries. It has a long history and has been passed down through generations, although its exact origin remains uncertain. Some believe it may have originated in ancient Egypt and was introduced to West Africa through trade routes. Others believe it was developed by African tribes as a way to pass time and hone their skills.

Regardless of its origin, Chaskele has been played for many years and is popular among children, teens, and adults. In the past, it was used to teach children discipline, strategy, and teamwork, while also keeping them active and healthy due to its physical nature.

Today, Chaskele is still played in Ghana, though it has been somewhat overshadowed by more modern forms of entertainment. Despite this, it remains an important part of Ghanaian culture and heritage, enjoyed by people of all ages. The game is energetic and competitive, requiring minimal equipment, which makes it accessible to many. Chaskele is somewhat similar to cricket or baseball but adapted with local materials.

The game involves two roles: the thrower and the hitter (or defender). The thrower aims to get an object—often a crushed can or maize cob—into a container. The hitter's job is to stop this by using a stick or bat to hit the object away before it reaches the target.

BASIC RULES OF PLAYING CHASKELE

The rules can be modified to suit individuals or groups playing the game.

Players and Teams

1. Players and Teams: The game is usually played between two individuals or two teams (a thrower and a defender).
2. One player is the thrower (or bowler), and the other is the hitter or defender.

Materials needed to play the game

Chaskele is played using materials such a stick, club or bat, containers like a basket, bucket, car tyre, cardboard box, and small objects that can be thrown, such as plastic bottles, maize cobs or crushed cans.

1. **Ball**

   The ball used in the game is usually made from everyday items like a crushed milk can, a tomato can, a beverage can, a plastic drink bottle, or a maize cob. These objects are used as the target to be hit during the game.

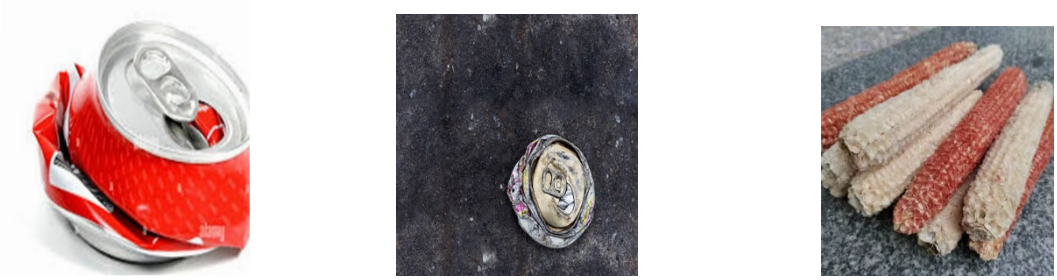


Figure 3.1: Crushed cans (left) and maize cob (right) used as a ball in playing Chaskele

2. **A target area or container**

   The goal is usually an old basket, bowl, bucket, car tyre, or empty cardboard box placed in a specific area. It serves as the target where the thrower tries to toss the object, while the defender tries to stop it from going in.

Figure 3.2: A basket positioned at a designated spot where players aim to throw the can or maize cob

Figure 3.3: Buckets placed at a specific target point where players attempt to throw the can or maize cob

Figure 3.4: A designated car tyre were players aim to toss the can or maize cob during the game

3. **Stick, club or bat**

   This is used as a bat to hit, strike, knock, or kick the object away when it is thrown.

Figure 3.5: Players holding clubs as bats used in playing Chaskele

Figure 3.6: Players playing Chaskele

Scoring

1. A point is awarded to the thrower if the object thrown enters the basket or lands close to it, depending on the agreed-upon rules.
2. The defender gains a point for successfully blocking or hitting away the object.

Fouls and Penalties

1. Throwing or hitting the object in a way that endangers others or goes far off-target may be considered a foul.
2. Rough play or arguments can result in a forfeit or temporary removal from play.

Winning the Game

1. The game continues for a set time or number of turns.
2. The player or team with the most points at the end wins.

HOW TO PLAY THE GAME

1. A line drawn as a designated place to stand and throw the object, with a container placed at a distance agreed upon by the players. Each player is required to have a stick or a bat and an object to throw.

2. Players stand behind the line, and each player shows his or her can or maize cob to throw into the container. Those who successfully toss their object into the container earn the chance to be the hitters. Those who do not succeed continue as throwers, aiming to get the object into the container.
3. Whenever the object is hit, smashed, or kicked away, the thrower must go and retrieve it. They then stand at the spot where it landed and, after a signal from the hitting team, throw it again, aiming to get it into the container.
4. If a player on the hitting team fails to hit or kick the object away and it lands in the container, that player switches roles and joins the throwers. The game continues this way until the last person manages to get their object into the container. In an instance where the object hits a member of the hitting team, the parties involved will have a shot at the container. Just like at the start of the game.
5. If a member of the throwing team catches the object in the air before it hits the ground after being hit or kicked, it is called "going to court." When this happens, the hitting team might sing a playful or mocking song. The song often carries a message like:

   "When your mother, father, sister, or brother sends you, will not go—But when Chaskele sends you, you have no option but to go."

   "There is no friend or family member or loved one in the game of Chaskele." This adds fun and humour to the game, showing that everyone is equal while playing.

CULTURAL VALUES AND PURPOSE OF CHASKELE

Chaskele is more than just a traditional Ghanaian game; it symbolises cultural values that reflect the social and communal life of the people. Key cultural values associated with Chaskele include:

Table 3.1: Cultural Values and Purpose of Chaskele

Creativity and Resourcefulness	Chaskele demonstrates how communities create enjoyable games using locally available materials like empty cans, sticks and buckets. It reflects the innovative spirit of Ghanaian children and youth, turning simple objects into exciting play tools. *Example:* Children and young people repurpose old tins and sticks to make bats and targets, showing how games can emerge from everyday items.
Community and Togetherness	The game fosters strong social bonds as it is often played in groups within neighbourhoods or in schools. It encourages cooperation, teamwork and interaction among peers. *Example:* Children and young people from different households come together after school or farm to play Chaskele, building friendships and social cohesion.

Discipline and Fair Play	Chaskele teaches respect for rules, turn-taking and sportsmanship, which are important moral values in Ghanaian society. *Example:* Children and young people playing the game must strictly follow the rules to avoid penalties of being taken out of the game. This builds discipline and honesty from a young age.
Physical Fitness and Active Living	The game promotes active lifestyles and physical development, enhancing coordination, agility and strength through running, throwing, defending and shooting or batting. *Example:* Playing Chaskele regularly helps children and young people to build strength, coordination and endurance.
Skill Building	Chaskele develops motor skills such as throwing accuracy, striking technique, and strategic thinking. *Example:* players practice aiming and timing their throws or hits, improving precision and control.
Preservation of Cultural Heritage	Playing Chaskele helps pass down indigenous games from one generation to another, preserving Ghana's rich cultural identity. *Example*: Parents and elders often teach children how to play Chaskele, maintaining the tradition and history of the local games.

Mathematical Concept of Chaskele

The game of Chaskele has several mathematical concepts embedded in it. While the players have fun, they also consciously or subconsciously learn various mathematical concepts. These concepts include:

Table 3.2: Mathematical Concept of Chaskele

Geometric	That is, angles, the path of the object after it has been kicked with the bat can be described using geometrical concepts such as angles and trajectories. This can help children learn these concepts with ease.
Probability	The probability of hitting a target can be calculated based on the size and position of the target and the skill of the player involved. This can help children and young people in a real-life situation will serve as previous knowledge to the concept of probability.
Logical reasoning	This involves players planning their moves and anticipating the moves of their opponents. These involve reasoning and problem-solving skills, which are important mathematical concepts necessary to every individual.
Angle of depression	The angles at which players stand to throw their object can be used as a basis to teach and learn angles of depression. Since the players have to look down and aim at the opening of the container.

Measurement	The distance between the two designated places used in Chaskele can be measured using standard units of measurement such as metres and feet. This can help children learn about measurement and standard units of length.

While Chaskele may not be directly related to mathematics, it can provide an opportunity for children and young people to learn and practice interactively.

Core Skills in Performing Chaskele

Table 3.3: Core Skills in Performing Chaskele

Throwing Skills	• Accuracy: Players must develop precise throwing techniques to aim the can or object effectively at the target (e.g., bucket or tyre). Judging distance and direction is essential. • Power Control: The strength behind the throw must be regulated. While some situations may require powerful throws, maintaining control ensures the throw remains purposeful and on target. • Spin and Trajectory: Skilled players may add spin or adjust the angle of the throw to influence its flight path, making it more difficult for the defender to anticipate or intercept. • Deception: Varying styles, speeds or angles can confuse opponents and create scoring opportunities.
Defensive Blocking	The bat or stick is also used to prevent the object from entering the container by intercepting or deflecting it.
Batting Skills	• Timing: Successful batting requires hitting the incoming object at just the right moment. • Power Generation: Defenders can strike the object with enough force to redirect it away from the target or into a strategic position. • Placement: Precision in directing the object to specific areas, such as poorly defended zones or a teammate, enhances gameplay.
Hand-Eye Coordination	This is a critical skill for players to be able to accurately track the movement of the can and time their responses to either swing the bat or prepare to throw with precision and speed.

Hitting and Defending

1. Precision and Reflexes: Hitting is central to the game. It demands sharp reflexes and the ability to connect cleanly with the moving can or maize cob.
2. Goal Defence: The defending player's objective is to hit or block the can before it enters the container (e.g., basket or bucket), effectively preventing the thrower from scoring.

3. Preventive Action: A well-timed hit or block can break the speed of the attacking team and shift the game's dynamics.

Activity 3.1 Playing Chaskele

1. **Warm up with a partner**
   a. Start with a jog and stretch. Jog for 3 minutes and follow this up with arm swings, torso twists, wrist and ankle rolls.
   b. Now that you have warmed up, one partner gently tosses a soft object (e.g., paper ball) toward the other's feet. The receiver tries to dodge by jumping or sidestepping quickly. Swap roles after a few turns.
   c. Next, pick up a stick or mimic holding one. Your partner tosses a soft object toward you. Practise blocking or deflecting it using the stick, simulating can defence in Chaskele.
   d. End with a short sprint relay: Take turns sprinting 10 metres and back while holding a stick. Focus on speed, coordination, and balance to get ready for the game.
2. In turns, practise aiming and throwing a crushed can or plastic bottle at an imaginary target. Begin at a short distance and move farther away after each successful hit. Focus on throwing form and precision.
3. With your partner, using light objects like plastic bottles or crushed cans. One partner throws, and the other catches. Switch roles after a few minutes. Concentrate on eye contact, hand positioning, and control.
4. **Stick Taps and Target Defence**

   Tap sticks rhythmically on the ground. Then, practice quick side steps around a central object (e.g., a bucket), pretending to defend it. This builds footwork and readiness.
5. In small groups, take turns throwing crushed cans at targets marked by your teacher. Begin close to the target and increase the distance gradually. Focus on a consistent throwing technique.
6. Pair up. One student stands behind a bucket or box as the defender with a stick. The partner throws a crushed can toward the bucket. The defender blocks the can using the stick, aiming to deflect it sideways, not backwards. Switch roles after 3–5 throws.
7. **Line Skill Relay (Passing and Defence)**

   Set up three marked lines on the ground: Line 1 (thrower), Line 2 (catcher), and Line 3 (defender).

   a. Organise yourself into a group of 5 to 6 people.
   b. One group lines up behind each line.
   c. A bucket is placed on Line 3 to represent the target.

d. On the teacher's signal, the player at Line 1 throws the object to their teammate at Line 2.

e. The Line 2 player catches it, quickly turns, and throws it towards Line 3.

f. The Line 3 player defends the bucket using a stick to hit the object away.

g. Rotate positions so all group members practise each role.

8. **"Defend the Can!" Game (Mini Chaskele)**

   In your group, take turns playing the roles of thrower and defender. The thrower tries to hit the bucket (or can), while the defender uses a stick to block it. After several turns, switch roles so each player gets a chance to throw and defend.

9. **Peer Coaching Circles**

   After each round or drill, gather in small team huddles and discuss:

   a. *What worked well?*

   b. *What do we need to change next time?*

   Use your group reflections to improve your strategies and teamwork.

EXTENDED READING

- "Traditional Games and Culture in West Africa" – Journal of Indigenous Studies
- Visit your local community centre or talk to grandparents about games from their youth.

REVIEW QUESTIONS 3

1. Explain how Chaskele reflects the cultural values and creativity of Ghanaian communities. What does this reveal about the importance of traditional games in society?
2. Evaluate how each of the three main pieces of equipment used in Chaskele contributes to gameplay. How might changing one item affect the nature of the game?
3. Identify two safety rules in Chaskele and explain how each rule prevents injury or ensures fair play. What could happen if these rules are not followed?
4. Chaskele requires players to block or hit a moving can. Describe the motor skills and coordination involved in this action and justify why this skill is essential for success in the game.
5. Discuss the educational and social benefits of including traditional games like Chaskele in the school curriculum. How can playing such games contribute to holistic student development?

SECTION

4

SPORTS PARTICIPATION - PART TWO

PHYSICAL ACTIVITY AND HEALTH

Sports Participation

INTRODUCTION

Tennis is a game that can be enjoyed by individuals of all ages and skill levels. It combines agility, strength, and coordination, making it an excellent way to develop overall athletic ability. Throughout this course, we will cover essential skills such as serving, volleying, and rallying, alongside the rules and etiquette that govern the game. As you engage in practice sessions, remember that tennis is as much about mental focus and strategy as it is about physical prowess. You will learn to anticipate your opponent's moves, make quick decisions, and adapt your tactics on the court. Participation in tennis not only fosters personal growth but also encourages social interaction and sportsmanship. So, let us embrace the spirit of friendly competition and teamwork as we learn and improve together. Prepare to develop your skills, build your confidence, and most importantly, have fun while playing tennis!

KEY IDEAS

- **Tennis** is a racket sport played between two (singles) or four (doubles) players.
- **Grip** is how to hold the racket. Gripping the racket correctly is the foundation of all tennis strokes.
- **Strokes:** These changes depending on the situation. Tennis strokes include the forehand, backhand serve and volley.
- The **service** or **serve** is the stroke used to start each point. It is performed from behind the baseline and involves hitting the ball diagonally into the opponent's service box.
- Where you stand on the court impacts your success in the game. Understanding movement and positioning helps maintain an advantage during play.
- Learning **game formats** (singles, doubles), point scoring, let, fault, advantage, etc. is important for game play.

INTRODUCTION TO TENNIS

SERVICE AND RECEPTION

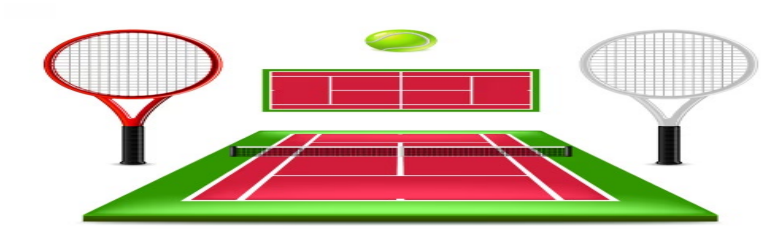


Figure 4.1: Some tennis equipment

What is a Tennis Game?

Tennis is a racket sport played either as an individual or as a team game, where players use a racket to hit a ball over a net into the opponent's court to score points. The game is played on a rectangular court divided by a net, where players use a stringed racket to hit a felt-covered rubber ball across the net. The aim is to strike the ball in a way that it lands within the opponent's side of the court and cannot be returned according to the game's rules. Whenever a player fails to return the ball successfully, the opponent earns a point.

Rules of the Game

Rules are official guidelines that govern how a game is played. Tennis is governed by a set of rules that guide how the game is played, scored and won. Understanding these basic rules is key for both beginners and experienced players to ensure fair play and enjoyment.

SERVING RULES

A tennis match begins with a serve, which must be hit diagonally across the net into the opponent's service box.

1. The serve must clear the net and land within the correct service box (there is no 'kitchen' in tennis).
2. The server has two chances (called first serve and second serve) to make a valid serve.
3. A fault is called if the first serve is out or does not land in the correct service box.
4. If both attempts fail to land in the correct service box, it is a double fault, and the point goes to the opponent.
5. If the serve hits the net but still lands in the correct service box, '**Let**' is called and the server replays the point without penalty.

Once the ball is in play, both players rally by hitting the ball over the net using their rackets. The ball must land within the boundaries of the opponent's court, and players are not allowed to let the ball bounce more than once on their side.

A point is lost if a player:

1. Fails to return the ball before it bounces twice.
2. Hits the ball out of bounds.
3. Hits the net with their racket or body.
4. Or fails to serve correctly.

Table 4.1: Service rule

Start Position	• The server must stand behind the baseline, which is between the centre mark and the sideline (depending on whether the game is singles or doubles). • The server's feet must not touch the baseline or court until after the ball is hit.
Serve Rotation	• The first serve of each game starts from the right side (deuce court). • After each point, the players alternate sides (right to left and so on).
Ball Toss and Hit	The server must toss the ball into the air and strike it before it touches the ground and hit diagonally across the court into the opponent's service box.

Figure 4.2: The Service Execution in Tennis

Figure 4.3: Execution of the Tennis Serve by a Person with Physical Challenges

RECEIVING THE SERVED BALL

Ready Position

The ready position in tennis is a balanced stance that allows players to quickly react to the serve and transition into a return shot effectively.

1. Stand behind the baseline, near the centre mark of the side of the court (this gives equal access to both sides for a forehand or backhand return).
2. Feet shoulder-width apart, knees slightly bent, and weight balanced on the balls of feet. This athletic stance keeps the player light and ready to move in any direction.
3. Racquet held in front of the body around the waist to chest height, using both hands in a neutral grip. Arms relaxed and elbows slightly bent, ready to turn and prepare for either a forehand or backhand return.

Figure 4. 4: Ready Position to Return a Shot in Tennis

The Scoring

Either player or team can score a point, regardless of who is serving or who serves first. The scoring system in tennis is unique. A player must win four points to win a game, and the points are counted as follows: 0 (love), 15, 30, 40 and game. If both players reach 40, it is called deuce. From deuce, a player must win two consecutive points (that is, to lead by a point difference). The first is called advantage, and if the same player wins the next point, they win the game. If the opponent wins the next point, the score returns to deuce.

The scoring system in tennis is unique and quite different from other sports and may seem unusual at first. To win a game, a player must win at least four points, but they must also be ahead by two clear points.

How the Points are Counted

Instead of using 1, 2, 3, 4, tennis uses a unique point system:

0 points is called Love

1 point is 15

2 points are 30

3 points are 40

4 points is a Game (only if the player is ahead by two points).

This means that, if a player wins the first point, the score is 15–0. If the same player wins another point, it becomes 30–0 and so on.

What Happens at 40–40 (Deuce)

When both players reach 40, the score is called 'deuce'. This means that the game is tied, and a player must now win two points in a row to win the game.

The first point after deuce is called 'advantage' (or 'ad' for short).

If the server wins the point, it is called 'advantage in' (or d in').

If the receiver wins the point, it is called 'advantage out' (or ad out).

If the player who has the advantage wins the next point, they win the game.

If the player with the advantage loses the next point, the score returns to deuce, and the process continues until one player wins two consecutive points from deuce.

Example

Player A and Player B both reach 40 - the score is deuce.

Player A wins the next point - score is advantage Player A.

Player A wins the following point - Player A wins the game.

BUT if Player B had won the second point, the score would go back to deuce, and they would continue playing.

Summary on Scoring

The player must win by two points.

At 40 - 40 (deuce), play continues until one player wins two points in a row.

The first of those points is called advantage.

If a player loses the point at advantage, it goes back to deuce.

Faults

Foot fault: Stepping on or over the baseline before hitting the ball when serving.

Net fault: Serve hits the net and does not land in the proper box.

Out: Serve lands outside the correct service box or court.

THE SET

A tennis match is divided into sets, and each set is made up of games. To win a set, a player must win at least six games, but they must also lead by at least two games. For example, a score of 6-4 means the set is over, but if the score is 6-5, the set continues until one player leads by two games (e.g., 7-5). If the score reaches 6-6, a tiebreaker is often played to decide the set. In most casual or standard matches, the winner is the player who wins the best of three sets. This means, whoever wins two sets first wins the match. In professional men's matches at major tournaments (like Wimbledon or the US Open), matches are played as the best of five sets, so the first player to win three sets wins the match.

Figure 4.5: Observing the Service Rule in Tennis

Type of Game

There are two main formats of play in tennis. These are singles and doubles. In singles, the match involves two players (one player against another) competing against each other one-on-one. In doubles, each team consists of two players (two players on each side), requiring coordination and shared strategies. These formats demonstrate that tennis is both an individual sport that demands self-reliance and personal skill and a team sport where effective communication and cooperation are important for success in the game.

Tennis falls under the category of net and wall games, a group of sports characterised by players being separated by a net. The core challenge lies in striking the ball across the net and keeping it in play while preventing the opponent from doing the same. This contrasts with invasion games like football or hockey, where players interact directly and share a common playing space. In tennis, the emphasis is placed on precision, anticipation, consistency and timing, rather than physical contact. The game is played both competitively and recreationally. At the elite level, tennis is a globally recognised sport, featured in prestigious tournaments such as Wimbledon, the US Open, the French Open and the Olympic Games.

These events are governed by international regulations and showcase the highest levels of athleticism and skill. At the same time, tennis is accessible as a recreational activity for people of all ages. It is widely praised for promoting cardiovascular fitness, hand-

eye coordination, mental focus, strategic thinking, quick decision-making, disciplined movement and social engagement. Tennis is also highly adaptable to different settings. It can be played both indoors and outdoors, which makes it suitable for all seasons and climates. Whether played for competition or enjoyment, tennis supports lifelong physical activity and offers meaningful opportunities for personal growth and social interaction.

EQUIPMENT FOR PLAYING TENNIS

To play tennis well and safely, players require specific equipment designed to support their performance, comfort and adherence to the rules of the game. The main pieces of equipment needed include the racket, tennis ball, net, court and appropriate clothing and footwear.

The Racket

The tennis racket is the most important piece of equipment and is used in striking the ball during play. It consists of a handle (grip), a frame, and a stringed surface used to strike the ball. Rackets come in various sizes and weights to suit different age groups and skill levels. Beginners often start with lightweight rackets that offer better control and movability, while advanced players use heavier models that add power and spin to their play. They were originally made from wood. But they are now constructed from advanced materials such as graphite, carbon fibre or composites to enhance their strength, flexibility and performance. These materials offer a balance of power, control and comfort suitable for a wide range of playing styles and skill levels.

Modern tennis rackets usually weigh between 9 to 12.5 ounces (unstrung) and come in various head sizes and frame thicknesses to accommodate different preferences. The standard length of a tennis racket is around 27 inches, although extended versions are available for added reach and leverage. The grip of a tennis racket is designed to be non-slip and comes in different sizes to fit individual hand shapes. The string beds that are made from synthetic or natural gut strings can be strung at different tensions to influence control, power and spin. Some rackets have open string patterns for more spin potential while others have tighter patterns for precision and control.

Figure 4.6: Tennis Rackets

Parts of the Racket

Table 4.2: Parts of the Racket

The Head	This is the top oval or round part of the racket where the strings are located. It is the area used to strike the ball. Larger racket heads offer more power and a bigger sweet spot while smaller heads provide more control.
Strings	This is a network of nylon or polyester fibres stretched across the head which form the hitting surface of the racket. Tight strings give more control, and looser strings provide more power.
Frame	This is the solid outer structure of the racket that supports the strings. It is usually made from materials like graphite or aluminium. The frame gives shape and strength to the racket.
Throat	This is the area just below the head, often where the frame splits into a Y-shape. It stabilises the racket and helps distribute energy when hitting.
Shaft	This is the long section connecting the throat to the handle. It helps with balance and transferring of energy from the hand to the head.
Handle (or Grip)	This is the bottom part of the racket where players hold the racket. It is covered with a rubber or synthetic material to ensure a firm grip and absorb sweat. Grips can be replaced when worn out.
Butt Cap	This is the end of the handle, often with the manufacturer's logo. It prevents the racket from slipping out of the hand during play.

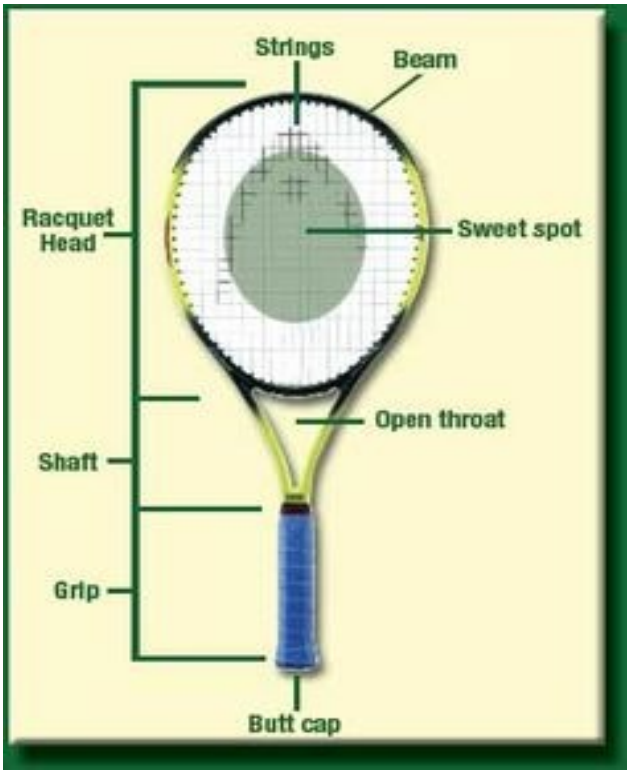


Figure 4.7: A labelled Tennis Racket

Types of Rackets

Table 4.3: Types of Rackets

Power Rackets	Power Rackets are designed for players who want to maximise power with less effort. They mostly have a larger head size (often 105 square inches or larger), a lightweight frame for easier swinging, a longer frame for extended reach and a flexible shaft that helps generate more power on impact. These rackets are ideal for beginners and recreational players who may not have strong strokes but want to hit the ball harder.
Control Rackets	Control Rackets are players who want to focus on precision and control over power. They normally have a smaller head size (often 85 to 98 square inches) that offers a more precise hitting area, a heavier frame for stability and a stiffer shaft that reduces power while enhancing control on shot placement. These rackets are best suited for advanced players who have strong strokes and prefer to dictate play with accuracy.
Tweener Rackets	Tweener Rackets is a hybrid racket that blends elements of both power and control. They have a medium head size (between 98 to 105 square inches), moderate weight for a balance of stability and movability and a useful design that allows players to hit powerful shots while maintaining good control. These rackets are ideal for intermediate players developing their skills who want different options that can be adapted to various playing styles.

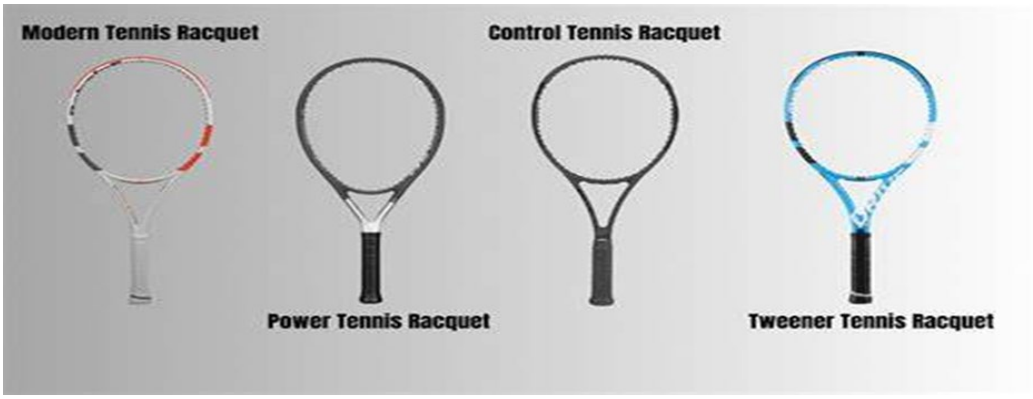


Figure 4. 8: Types of Tennis Rackets

The Ball

The tennis ball is made of a rubber core covered with felt. It is designed to be lightweight and bouncy, which allows it to travel quickly over the net while remaining responsive to different types of shots. While yellow and green are the common colours for professional matches, tennis balls may also come in other colours for high visibility during play. The balls are designed to meet precise specifications with a diameter between 2.57 and 2.70 inches and a weight ranging from 1.975 to 2.095 ounces. When dropped from a height of 100 inches onto a concrete surface, it must bounce between 53 and 58 inches high. These balls are tested and approved by governing bodies such as the International Tennis Federation (ITF) for official play.

Figure 4.9: Tennis balls

Types of Balls

Table 4.4: Types of balls

Pressurised balls	Pressurised balls are balls filled with compressed air, giving them a lively bounce and good performance right out of the can. They are preferred for competitive play and professional tournaments.
Pressureless balls	Pressureless balls are tennis balls that do not have internal pressure. They are often made of a solid rubber core and have a lower bounce and slower speed. They are commonly used for practice and recreational play and last longer than pressurised balls.

Figure 4.10: Pressurised Tennis Balls

Figure 4.11: Pressure less Tennis Balls

The Net

The net stretches across the middle of the court, dividing it into two halves. It is fixed to posts on either side of the court and set at a standard height (3 feet or 0.914m) at the centre. The net is also key for the game, as all shots must pass over it to remain in play.

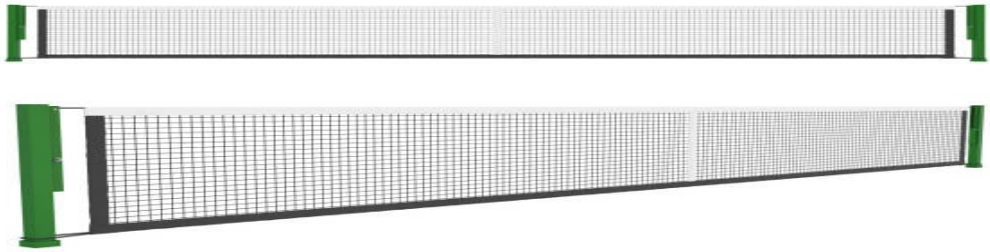


Figure 4.12: A Tennis Net

The Court

The tennis court is a rectangular surface with specific markings to guide play. Courts can be made from a variety of materials that include grass, clay or hard surfaces. Grass courts are made with natural grass or synthetic turf. Clay courts are made from crushed shale, stone or brick, while hard courts are made of either asphalt or concrete with a surface layer of acrylic. Each surface affects ball speed and bounces differently; hard courts offer consistent bounce, clay slows the ball and promotes longer rallies, and grass courts play faster with lower bounces. The markings on the court include a baseline, service boxes, sidelines and a centre service line, which help define the playing area and regulate player positioning during both serves and rallies. A standard tennis court for doubles measures 23.77 metres (78 feet) long and 10.97 metres (36 feet) wide. For singles matches, the width is reduced to 8.23 metres (27 feet).

In tennis, the lines are part of the court. If a ball touches any part of the line, it is considered in, and the shot is valid. Even if just the edge of the ball touches the line, it still counts as a good shot.

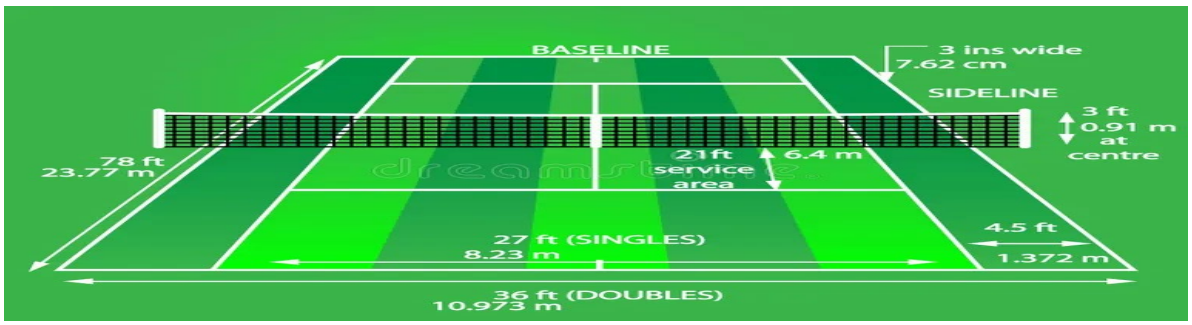


Figure 4.13: The Tennis Court with the Court Dimensions

Figure 4.14: The Tennis Court with the names of the various spaces on it

Players

Players must also wear appropriate clothing that is comfortable and allows freedom of movement. In competitive settings, players often follow dress codes. Proper tennis shoes are equally important because they are designed to support lateral movement, reduce the risk of injury and provide adequate grip on the court surface.

Additional equipment may include wristbands, headbands, caps and water bottles to manage sweat and hydration. Some players also carry a towel, racket bag, and extra grips or strings for convenience during matches or practice. The equipment for playing tennis is carefully designed to ensure safety, enhance performance and uphold the integrity of the game. Having the right gear not only supports learning and enjoyment but also helps players develop good technique and confidence on the court.

Figure 4.15: Samuel Osei Agbesi Antwi, a Ghanaian Tennis Player in his outfit

BASIC TENNIS SKILLS

The core skills in tennis are the grip, the strokes, the serve and footwork.

Grip

This is how to hold the racket. Gripping the racket correctly is the foundation of all tennis strokes. There are several types of grips in tennis, and each type of grip is for a particular type of stroke or shot.

Grip Types

Table 4.5: Grip Types in pickleball

Continental Grip	This type of grip is also called the 'chopper' grip. It is like holding a hammer or shaking hands with the racket and is used for serves, volleys, smashes and slices. This grip allows for quick transition between different strokes without changing grip.
Eastern Grip	This grip is often used for the forehand stroke. It offers a good balance of control and power, and it is suitable for beginners due to its comfort and simplicity.
Western Grip	This is commonly used for topspin-heavy forehands. It is gripped with the palm almost under the racket handle. This hold is ideal for brushing up the ball. Used more in advanced play because it requires better timing and adjustment to low balls.

***Figure. 4.16**: Continental grip in tennis*

Figure 4.17: Eastern grip in tennis

Figure 4.18: Western grip in tennis

Types of Service in Tennis

Table 4.6: Types of service in tennis

Flat Serve This is the most traditional and widely used serve in tennis, especially by beginners and intermediate players. It involves hitting the ball with minimal spin, making it travel in a straight line.	• The ball is tossed into the air and hit at its peak using an overhand motion. • The racket contacts the ball with a flat face, generating minimal spin. • Often used as a first serve to apply pressure with power and speed. • Helps develop proper serving technique, including stance, toss and follow-through, before advancing to more complex serves.
Slice Serve This serve is a progression from the flat serve. A slice serve involves hitting the ball with sidespin, causing it to curve to one side.	• Uses a slightly angled racquet face to brush the ball from the side. • Produces sidespin that causes the ball to curve in the air and skid off the court after bouncing. • Useful for placing the ball wide and pulling the opponent off the court.
Topspin (Kick) Serve A topspin serve in pickleball is a type of serve that imparts topspin on the ball, causing it to dip quickly and bounce higher upon landing	• The racket brushes up the back of the ball to generate topspin. • The ball clears the net with a high arc and kicks up after bouncing. • Often used as a second serve because it is safer and forces a high return from the opponent.

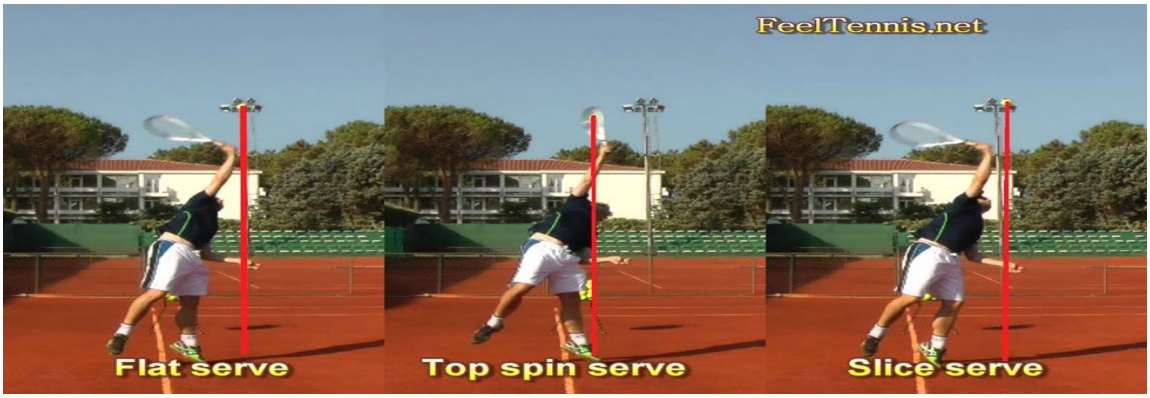


Figure 4.19: The Types of Tennis Serve

Activity 4.1 Service and Reception in Tennis

1. Use the links below to Watch videos on serve and return in tennis, pay close attention as you watch different tennis actions, such as:

a. Underhand serve
b. Toss and catch
c. Racket grip
d. Backhand return

video 1
video 2
video 3

2. Start your tennis warm-up with light jogging to increase heart rate and loosen the body. Follow with dynamic stretches like arm circles, leg swings, torso twists, and high knees. Practise forehand and backhand racket swings, then do shadow serves focusing on toss and follow-through. Add footwork drills such as side shuffles and quick steps.

Four Corner Tennis Movement Drill

3. Organise yourself into groups of 5 to 6 people. Rotate through four fun stations, each designed to improve your tennis footwork and readiness.
   a. Corner 1: Do mini sidesteps, just like when you're moving across the baseline during a match.
   b. Corner 2: Raise those knees high while doing shadow swings, imagine you're returning a fast serve!
   c. Corner 3: Backpedal carefully and tap your racket with your other hand to stay focused and in control.
   d. Corner 4: Use a lateral shuffle, then finish with a pretend swing like you're hitting a winning shot.
      i. Start at any corner with your group.
      ii. Once the music starts, begin the movement for your station.
      iii. After 20–30 seconds, rotate clockwise to the next corner.
      iv. Stay sharp! The teacher might suddenly switch the direction or change the action—listen closely and respond quickly!

Practicing the toss for a tennis serve

4. Start by tossing the ball straight up and catching it at eye level; this helps you develop control and accuracy. Then, holding the racket in your dominant hand toss the ball to mimic the real serve position.
5. Work with a partner throughout the activity. Take turns practising and giving each other feedback. As you observe, focus on three key areas:
   a. Toss height – Is the ball reaching about eye level?
   b. Hand control – Is the toss steady and straight?
   c. Body balance – Is your partner staying centred and stable?

   Support each other by suggesting small improvements. Remember, you're both learning and coaching—help one another build confidence and skill!

Underhand and Overhead Serve to Target

6. With your partner from point 5b above, use the cones or hoops placed in the service box as target areas. Take turns to practise the underhand serve into the target areas. When ready, progress to the overhead serve. Practice tossing and swinging together with attention to rhythm and coordination. focusing on the underhand serve
   a. Proper grip
   b. Stable stance
   c. Smooth swing motion

Return of Serve

7. With your partner, one serves while the other returns using a forehand or backhand stroke.
   a. Start in a ready stance
   b. Use a short backswing
   c. Follow with a controlled swing toward the target area
   d. Take turns serving and returning.
   e. Give each other tips on timing, contact point, and control.

THE FOREHAND AND BACKHAND STROKES IN TENNIS

Now we have looked at the service and reception in tennis, let's shift our focus to the forehand and backhand strokes. We will focus on developing your forehand and backhand groundstrokes, which are essential for effective rallying and overall play. The forehand stroke, performed on the dominant side of the body, will be introduced using the eastern grip with emphasis on starting from a ready position, stepping into the shot, making contact slightly in front of the body and following through over the opposite shoulder. You will practice shadow swings, drop-and-hit drills and forehand rallies to build coordination and consistency.

You will also be introduced to the two-handed backhand stroke, which offers greater control and balance, especially for beginners. You will be guided through the proper swing path, contact point and follow-through.

FOREHAND STROKE

The forehand stroke is performed by swinging the racket across the body on the dominant side (right side for right-handed players and left side for left-handed players) with the palm facing in the direction of the shot. It is usually the more natural and stronger shot for most players.

A good and strong forehand stroke relies on the following key components.

Grip: How to properly hold the racket

Stance: How to correctly stand to serve or receive a served ball.

Contact Point: This is where the racket meets the ball. The ball should be contacted slightly in front of the leading hip (for right-handed players, that is the left hip and for left-handed players, the right hip).

Swing Path: This refers to the direction and shape of the racket's movement as a player moves the racket to hit the ball.

Follow-through: This is the continued motion of the racket and the body after the ball is contacted. An example of a forehand follow through is that the racket continues upward and across the body and ending over the opposite shoulder or across the body.

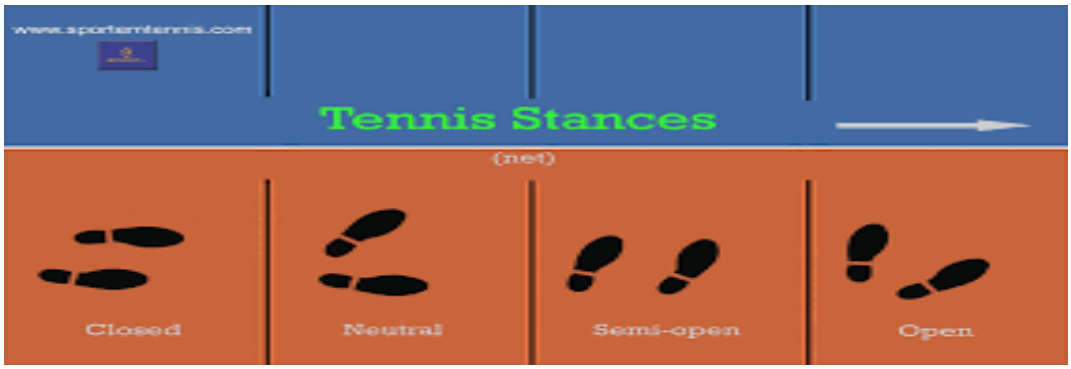


Figure 4.20: Different Stances in Tennis

Importance of the Follow-Through

1. Ensures proper technique: A good follow-through reflects a smooth and complete swing.
2. Controls direction and power: It helps guide the ball accurately and maintain balance after the shot.
3. Reduces injury risk: A relaxed and full follow-through prevents muscle strain.

Types of Forehand Stroke

Table 4.7: Types of Forehand Stroke

Forehand Flat Stroke	This is a shot with little or no spin where the racket face remains moderately flat through till it contacts the ball, sending the ball on a direct or low flight path.
Forehand Drive Stroke	This is a strong and offensive stroke with controlled speed and often a moderate amount of topspin, which combines power, direction and consistency.
Forehand Slice	This stroke involves a chopping motion where the racket face slides under the ball, imparting backspin.

Forehand Topspin	This is executed by brushing the racket upward over the back of the ball, generating forward rotation.
Forehand Volley	This is a stroke that hits close to the net before the ball bounces or touches the ground.

Figure 4.21: The Forehand Flat Stroke

Figure 4.22: The Forehand Drive

Figure 4.23: The forehand slice stroke

Figure 4.24: The Forehand Topspin Stroke

Figure 4.25: Forehand Volley

Forehand Drop Shot (Soft Shot)

This is a lightly hit forehand shot that barely clears the net and lands just inside the opponent's court, with backspin to reduce bounce.

Forehand Groundstroke

This is a fundamental shot played from the baseline after the ball bounces and is used to maintain rallies, build offensive play, or defend.

Forehand Lob

A lob is a high-arching forehand shot hit over an opponent's head, often used when the opponent is at the net.

THE BACKHAND STROKE

The backhand stroke is performed on the non-dominant side of the body. It can be executed with either one hand or two hands. Beginners are usually taught the two-handed backhand because it offers better control and stability.

Types of Backhand Strokes

1. **One-Handed Backhand**

   Using this stroke, players use one hand to hit the ball. Usually, the dominant hand. This stroke is taught to older or more advanced players, usually not beginners.

Figure 4.26: The One-Handed Backhand Stroke in Tennis

2. **Two-Handed Backhand Stroke**

   Performing this stroke requires that players use both hands to hold the racket to hit the ball with the dominant hand at the bottom and the non-dominant hand above or on top. This stroke is the most suitable for beginners and younger players. It provides more control and power.

Figure 4.27: The Two-Handed Backhand Strokes in Tennis

Figure 4.28: The Two-Handed Backhand Strokes in Tennis

Table 4.8: Types of Backhand Strokes

Backhand Flat	A powerful, straight shot hit with minimal spin. It travels fast and low over the net, ideal for quick point finishes.
Backhand Drive	A strong, aggressive shot with moderate topspin. It combines power and control, typically used from the baseline.
Backhand Topspin	This stroke applies topspin to the ball, causing it to dip quickly after crossing the net. It offers consistency and control, especially in rallies.
Backhand Slice	A shot with backspin, causing the ball to stay low and slow after bouncing. Often used to change pace or defend.
Backhand Volley	Executed near the net without letting the ball bounce. It uses short, controlled motion to direct the ball quickly back.
Backhand Drop Shot	A soft, delicate shot that just clears the net and drops close to it, used to surprise opponents and draw them forward.

Backhand Groundstroke	A standard backhand hit after the ball bounces, used in rallies. It can be flat, with topspin, or slice, depending on intent.
Backhand Lob	A defensive or tactical shot hit high and deep over the opponent's head, typically used to counter net approaches.

Figure 4.29: The Backhand Volley

Common Errors Made by Beginners When Learning the Strokes and Their Corrections

Table 4.9: Common errors

Error	Description	Correction Strategy
Incorrect grip	Holding the racket too tightly and tensing the arm muscles, holding the racket too long or too short.	Re-teach the grip using demonstration and hand guidance. Mark handles to guide length. Mark the racket handle with coloured tape or markers to show proper hand placement. Use grip training aids that guide finger positioning.
Late swing and contact	When the movement of the racket is delayed, it causes the ball to be struck later than the ideal point of contact.	Practice early racket preparation and emphasise short backswings. Practice stroke movements without the ball to develop rhythm and muscle memory.
Arm only swing	When the ball is hit using just the arm without involving the rest of the body, especially the shoulders, hips and legs	Teach body rotation drills and encourage body turning. Show videos or demonstrate the difference between an arm-only swing and a full-body stroke. Practice the stroke without a ball, focusing on weight transfer and shoulder rotation. Emphasise turning the shoulders and hips during the swing.

Inconsistent eye contact	Looking up before contact, losing focus on the ball or taking eyes off the ball before contact.	Consistently remind learners to keep their eyes on the ball from the moment it leaves the opponent's racket until after contact. Use bright coloured balls or numbered balls and ask learners to call out the colour or number as they hit.
Hitting too close or too far from the body	Contacting the ball near and not in front of the body, or even behind the body. Contacting the ball with a fully stretched or overreached arm.	Practice shadow swings, target zones or markers to teach ideal distance. Practice footwork drills to help move to the right positions.
Poor footwork	Ineffective or inefficient movement around the court. This includes leading to rushed shots, loss of control and increased injury risk.	Use ladder drills, side-to-side shuffles to improve agility and speed. Use short sprints and positioning games to guide. Practice quick direction changes to build court movement skills. Encourage stepping forward with the front foot when hitting forehands or backhands to maintain balance and power.
No follow-through	When rackets are stopped abruptly from swinging after hitting the ball, instead of continuing the natural motion.	Reinforce complete swings with slow-motion drills and encourage full swings with visual targets. Show learners the full swing motion, emphasising a smooth continuation of the racket after contact, finishing over the shoulder or across the body.

Activity 4.2 Forehand Stroke and Backhand Strokes in Tennis

1. Begin your tennis warm-up with light jogging around the court, followed by dynamic stretches such as arm circles, leg swings, high knees, and torso twists to prepare your muscles for movement. Then, work with a partner to practise gentle serves and returns. Start in a ready stance; one partner serves while the other returns using a short backswing and controlled forehand or backhand swing. Take turns and focus on timing, contact point, and control.
2. **Stroke Practice – Freestyle Rally**

   Practice the forehand stroke and the backhand stroke by tossing and hitting the ball in any direction across the court or field. Focus on your form, aim, and control. Explore different angles, adjust your power, and challenge yourself to serve with accuracy and confidence.

3. **Group Stroke Accuracy Drill**

   In groups, line up behind your group's service line. The first player in each line will: Gently drop the ball from waist height, let it bounce once, then hit it using a forehand or backhand stroke, aiming for the target zone. After your turn, go to the back of your line and get ready for your next shot.

4. **Pair Stroke Practice – Call and Hit**

   With a partner, practise the forehand stroke and the backhand stroke. One of you will gently drop the ball, letting it bounce once before your partner strikes it. The hitter will take 4 turns, then you'll switch roles. Before hitting the ball, call out (mention) the stroke you plan to use (forehand or backhand) to build awareness and confidence. Focus on good timing, clear communication, and helping each other improve as you go!

5. **Serving Practice – Underarm to Overarm**

   With your partner from point 4 above, practise the underarm serve, aiming to land the ball in a target zone. Focus on your technique, control, and accuracy. Once you feel confident, challenge yourself by transitioning to the overarm serve.

6. **Mini Court Rally Challenge**

   Form a pair, use half of the tennis court or any marked playing area, with a mini net or rope to divide the space. At the start of each round, use either a drop-and-hit or underarm serve to begin the rally, aiming to land the ball in your opponent's target zone.

   Round 1: Forehand Rally

   Use only forehand strokes to rally with your partner.

   Round 2: Backhand Rally

   Now switch things up—use only backhand strokes!

   Round 3: Switch Rally

   Time to combine your skills!

   Take turns hitting the ball, alternating between forehand and backhand strokes with each shot. Stay focused on using the correct technique and encourage each other to improve with every round!

Note

- You have now been introduced to the fundamental skills of serving and receiving in tennis. You have practised both underarm and overarm serves, focusing on correct stance, grip, ball toss and follow-through. For reception, you were guided to position yourself correctly and time your return strokes. Emphasis was placed on consistency and control in sending and receiving the ball across the net.
- We then looked at developing your forehand and backhand strokes by practising proper grip, body alignment, swing path and follow-through for both strokes.

- We will now apply all of these skills in a applying the skills in a game situation. The aim is to build tactical awareness and improve performance under game-like conditions. Focus on demonstrating the correct use of forehand and backhand strokes during rallies, serve and receive correctly in a game context, apply movement, positioning and shot selection strategies during play, work cooperatively with your classmates, observe rules and show sportsmanship.

Activity 4.3 Playing a Tennis Game

1. Start your warm-up with light jogging and dynamic movements such as:
   a. high knees.
   b. arm circles.
   c. leg swings.
   d. torso twists.
   e. Shoulder rolls.

   These helps loosen the body and build readiness for movement in all directions.
2. **Shadow strokes**

   Practise forehand and backhand swings without the ball, focusing on footwork and swing control.
3. **Drop-and-hit**

   In pairs, gently drop the ball, let it bounce, and strike with a forehand or backhand. Switch roles after 4 turns.
4. **Serve practice**

   Practise underarm serves into a target zone to build accuracy and control.
5. **Winner Stays Challenge**
   a. Form two groups of 6 to 8 people: Group A and Group B. Choose one player from each group to start the game. Play a short rally (e.g., to 5 or 7 points). The winner stays on the court, and the loser joins the back of their group's line. The first player to win five consecutive matches is crowned the King or Queen of the Court!
   b. Play, another challenge. Let the loser in group A play against the loser in group B. While winners in group A play against the winners in group B.

   Remember to cool down after the challenge.

Reflection

Following the game, reflect on the following questions. Make notes in your workbook:

1. **Skill Use and Justification**

   Which stroke (forehand or backhand) did you use most during the game and why?

   In what situations did you choose the forehand instead of the backhand (or vice versa)? What made it the better choice?

2. **Decision-Making**

   Describe a moment during the game where you had to quickly decide which stroke to use. What influenced your choice?

   Was there a time you felt unsure which stroke to use? How did you handle that?

3. **Effectiveness and Improvement**

   Which stroke helped you win more points? Why do you think it was more effective?

   What stroke do you need to improve based on today's game and how will you work on it next time?

4. **Strategy Awareness**

   Did you notice any patterns in your play (e.g., always returning with forehand)? How did your opponent respond?

   How did you adjust your stroke choices based on your opponent's positioning or movement?

EXTENDED READING

- The Inner Game of Tennis by W. Timothy Gallwey (Book or summary online)
- USTA Player Development resources – www.usta.com
- ITF Coaching Manual – Available through ITF publications
- Essential Tennis (YouTube Channel) – Tutorials on strokes and footwork
- Top Tennis Training (YouTube Channel) – Coaching videos and drills
- Tennis Australia Learning Hub – www.tennis.com.au
- BBC Bitesize: Tennis for Beginners – www.bbc.co.uk/bitesize
- ITF Academy – https://www.itf-academy.com

REVIEW QUESTIONS 4

1. Analyse how the choice of grip (Eastern vs. Western) affects shot performance in tennis.
2. Evaluate a tennis player's performance in a match scenario and suggest improvements in technique or strategy.
3. Design a tennis training drill that targets both forehand consistency and footwork under pressure. Justify how it meets these goals.

SECTION

5

HEALTH AND WELLNESS - PART TWO

PHYSICAL ACTIVITY AND HEALTH

Health and Wellness

INTRODUCTION

Sports injuries are a common challenge for all levels of participants, from casual players to elite athletes. Understanding these injuries is essential for recognising, managing, and preventing them. We will examine the concept of sports injuries, including the differences between acute and chronic types, their causes, and how to identify common signs and symptoms. We will then focus on prevention, where you will have the chance to take part in practical exercises that promote safe practices. These include effective warm-up routines, correct use of protective equipment, and the development of proper techniques. By gaining insight into the causes and prevention of sports injuries, you will be better equipped to protect your own health and safety and that of others in both recreational and competitive physical activities.

KEY IDEAS

- **An injury** is any form of physical harm or damage caused to the body, typically resulting from an accident, impact or excessive strain.
- **Sports injuries** are physical injuries that occur during physical activities, exercise or sports participation either recreationally or competitively.
- There are several types of injury that differ in severity. Common sports injuries include: wounds, sprains, strains, fractures and dislocations.

SPORTS INJURIES

Figure 5.1: An image showing various sports injuries and their location on the body.

WHAT IS AN INJURY?

An injury is any form of physical harm or damage caused to the body, typically resulting from an accident, impact or excessive strain. Injuries can affect various parts of the body, tissues or structures such as muscles, bones, joints, ligaments, tendons, internal organs and the skin. Examples of injuries include sprains, strains, fractures, dislocations, bruises and wounds. Injuries may be visible (like a bruise or cut) or internal (like a torn ligament or a concussion). Injuries can occur suddenly, such as from a fall, collision or awkward movement, or they can develop gradually over time due to repetitive stress or overuse. The severity of an injury can ranges from mild to severe, often leading to pain, reduced mobility, swelling, or loss of function in the affected area.

What is a Wound?

A wound is a break, cut or opening in the continuity of the skin or underlying tissues or membrane of the body, which is usually caused by an external force such as a cut, blow or impact. It occurs when the surface of the skin or mucous membrane is torn, cut, punctured or damaged. This exposes the underly tissue or the tissues beneath and may lead to bleeding, pain and increase the risk of infection. The severity of a wound depends on its depth, size, location and whether it is clean or contaminated. Prompt and proper wound care is important to promote healing and prevent complications like infections or scarring. There are two main types of wounds: open and closed wounds.

Examples of Open Wounds

1. Abrasions (scrapes)
2. Lacerations (cuts)
3. Punctures (stab, nail or needle wounds)
4. Avulsion (tearing away of the skin or tissue)
5. Incisions (surgical wounds).

Examples of Closed Wounds

1. Contusions (bruises)
2. Hematomas (collections of blood under the skin).

Difference Between an Injury and a Wound

The main difference between an injury and a wound lies in their scope and nature. However, because their definitions are so similar, some texts use the terms interchangeably.

Table 5.1: Difference between an injury and a wound

Injury	Injury is a broad term or category that refers to all kinds of physical damage or harm to the body. It includes things like sprains, fractures, concussions and wounds.
Wound	A wound is a more specific type of injury that refers to a break or opening in the skin or mucous membrane caused by cuts, punctures, bruises, or abrasions, which are types of injury.

WHAT ARE SPORTS INJURIES?

Sports injuries are physical injuries that occur during physical activities, exercise or sports participation either recreationally or competitively. They result from overexertion, poor training practices, improper technique, lack of conditioning, lack of proper equipment or accidents such as falls, collisions and sudden movements and can interfere with an individual's ability to continue physical activity**.** Sports injuries may occur suddenly (acute) or develop over time due to repetitive stress (chronic).

Types of Sports Injuries Based on Onset or Timing

Sports injuries are divided into two broad categories, namely acute and chronic injuries. Acute injuries are injuries that occur or happen suddenly, such as when a person falls, receives a blow or twists a joint while playing. Chronic injuries result from overuse of a particular area of the body (repetitive stress or overload) and develop gradually over time.

1. **Acute Injuries**

   An acute injury is a type of injury that occurs suddenly and unexpectedly, usually because of a specific traumatic event such as a fall, blow, collision or improper movement during sports, physical activities or exercise. These injuries usually cause immediate pain, swelling and loss of function in the affected area.

Examples of Acute Injuries

Table 5.2: Examples of Acute Injuries

Fracture (Broken Bone)	A direct blow or fall causing a bone to break, such as a broken arm, leg or finger during a game, training or exercise session.
Dislocated Shoulder	A hard tackle or fall knocks the shoulder joint out of place.
Sprain	Overstretching or tearing of ligaments, often in the ankle or wrist.

Strain	Tearing or overstretching of muscles or tendons, such as a pulled hamstring.
Knee Ligament Injuries (e.g., ACL tear)	Rapid stops, sudden pivoting, turns, collisions or impact causing damage to the ligaments in the knee.
Hamstring Strain	Overstretching or tearing the hamstring muscle during a sudden sprint or kick.
Bruise (Contusion)	Direct impact from a ball, opponent or equipment causing internal bleeding and swelling under the skin.
Cuts and Abrasions	Falling or sliding on a hard surface or contact with rough equipment can cause open wounds or scratches on the skin.
Cramp (in acute form)	A sudden involuntary muscle contraction, often during intense activity.
Nosebleed (from impact)	Bleeding from the nose due to a direct blow to the face.
Groin Pull	Sudden side movements or overstretching while changing direction quickly can stretch or tear the inner thigh or groin muscles.

Key Characteristics of Acute Injuries

a. Sudden onset of pain
b. Obvious cause or incident (e.g., a fall, hit or twist)
c. Visible symptoms such as bruising, swelling or bleeding
d. Immediate functional loss (difficulty walking or using the affected part, etc.)

2. **Chronic Injuries**

Chronic injuries are injuries that develop gradually over time, often due to repetitive stress or overuse of a muscle, joint or tendon. Unlike acute injuries, chronic injuries do not occur suddenly and may persist for weeks, months or even years if not properly treated or managed.

Examples of Chronic Injuries

Table 5.3: Examples of Chronic Injuries

Tennis Elbow (Lateral Epicondylitis)	Pain and inflammation in the elbow are caused by repetitive wrist and arm movements.
Shin Splints	Pain along the shin bone from overuse, often due to running on hard surfaces.
Runner's Knee (Patellofemoral Pain Syndrome)	Pain around the kneecap from repeated stress or improper alignment.

Achilles Tendinitis	Inflammation of the Achilles tendon is caused by repetitive jumping or running.
Rotator Cuff Tendinitis	Shoulder pain caused by overuse of the rotator cuff muscles, common in swimming or throwing sports.
Stress Fracture	Small cracks in a bone due to repeated force, often found in the foot or lower leg.
Plantar Fasciitis	Heel pain due to inflammation of the tissue along the bottom of the foot.
Lower Back Pain	Ongoing pain caused by poor posture, overuse or weak core muscles.
Bursitis	Inflammation of the bursae (fluid-filled sacs) that cushion joints, often in the hip, shoulder or elbow.
IT Band Syndrome (Iliotibial Band Syndrome)	Pain on the outer side of the knee due to friction from a tight band during running or cycling.

Key Characteristics of Chronic Injuries

a. Gradual onset of pain and discomfort
b. Symptoms worsen over time
c. Caused by repetitive motion or overuse
d. Often leads to persistent inflammation or irritation
e. Pain may come and go or increase with activity

Types of Sports Injuries Based on the Type of Tissue Affected

Table 5.4: Types of injuries based on affected tissue

Soft tissue injuries	These are injuries that involve muscles, tendons, ligament and skin. Examples include sprains (ligament injuries), strains (muscles and tendon injuries), contusions (bruises on the skin), tendinitis and lacerations or abrasions.
Hard tissue injuries	These are injuries that involve bones and joints. Examples are fractures (broken bones) and dislocations (bones forced out of position).

Types of Sports Injuries Based on Severity

Table 5.5: Types of Sports Injuries Based on Severity

Mild Injuries	These are injuries that cause minimal damage, slight pain with slight swelling or no swelling. They most of the time do not interfere with performance.
Moderate Injuries	These are injuries that cause partial damage with noticeable pain and swelling and may limit physical activity temporarily.
Severe Injuries	These are injuries with complete tear or break of tissue or bone with significant pain, swelling and the potential for long-term disability.
Overuse injuries	These are injuries caused by repetitive activity without adequate recovery from physical activities engaged in (e.g., tennis elbow from repetitive arm motion).

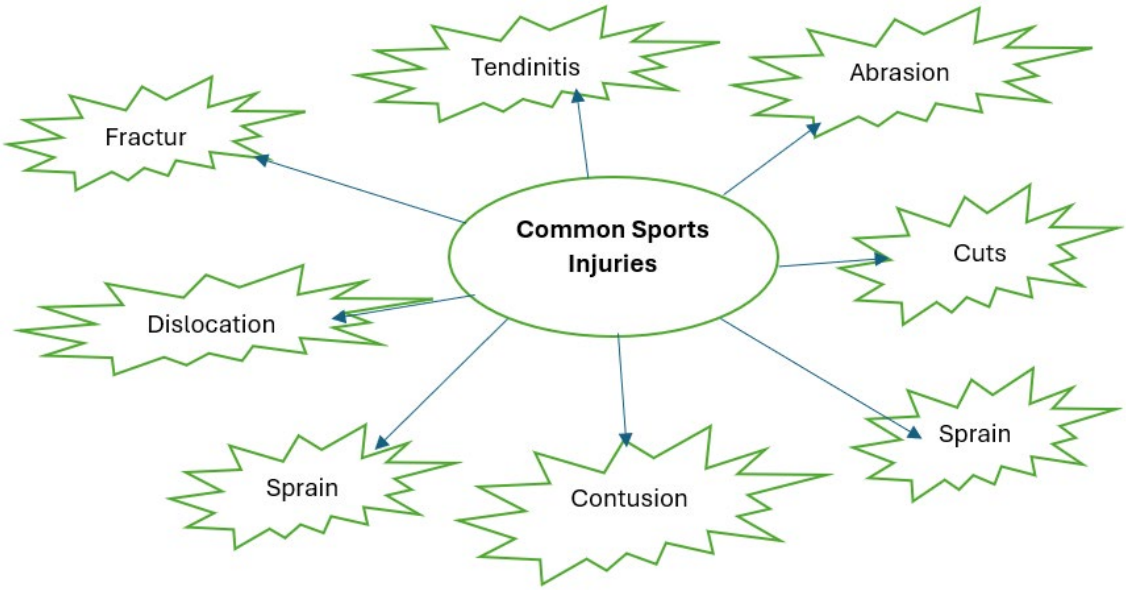
MECHANISMS OF INJURY

Mechanisms of injury refer to the specific ways by which damage or harm occurs to body tissues due to an external force or event. Understanding the mechanisms of injury helps in diagnosing, treating and preventing injuries. These mechanisms can be broadly classified based on the type of force or movement involved. Examples include:

Table 5.6: Injury Mechanisms

Direct Impact (Blunt or Penetrating Trauma)	*Blunt Trauma*: This is caused by forceful impact without penetration (e.g., being hit by a ball or colliding with another player during a game). *Penetrating trauma:* This is caused when an object pierces the skin and underlying tissues (e.g., being stabbed or being pierced by a sharp object during exercise).
Twisting (Turning) Forces	This occurs when one part of the body remains stationary while the other rotates, which is common in ankle sprains, knee ligament injuries (like ACL tears) and spinal injuries.
Overuse or Repetitive Strain	This is caused by repeated stress on a body part over time without adequate rest, leading to injuries like tendinitis, stress fractures or shin splints.
Shearing Forces	This occurs when two opposite forces act in parallel but in opposite directions on a body part. this is common or seen in skin abrasions or ligament tears when joints are forced to slide in unintended ways.
Compression Forces	This occurs when a body part is crushed between two objects, which can result in fractures, contusions or internal bleeding.

Tension (Pulling or Stretching) Forces	This occurs when tissues are stretched beyond their normal capacity or limit, leading to muscle strains or ligament sprains.
Bending Forces	This is a combination of compression on one side and tension on the other, which often results in fractures, especially in long bones.
Axial Loading	A vertical force applied along the axis of a bone or the spine, which is common in diving injuries or falls from height, leading to spinal fractures.



COMMON SIGNS AND SYMPTOMS OF SPORTS INJURIES – HOW INJURIES MANIFEST

Common Signs of Sports Injuries

These are observable or measurable indications of injuries that doctors, and other people can see or observe. Signs include:

Table 5.7: Common Signs of Sports Injuries

Swelling or Inflammation	Swelling occurs as the body's natural response to an injury. It may happen quickly or gradually and can make the injured area appear larger or feel tender. It is an accumulation of blood or fluid at the injury site, which is very common in sprains, strains and closed fractures.
Bruising (discolouration)	This results from bleeding under the skin after a blow or an impact, leading to a change of the skin colour at the injury site to blue, black or purple due to the internal bleeding and may be painful to touch.
Deformity	This is visible misalignment or abnormal shape, suggesting fractures or dislocations.

Redness and warmth	This is an inflammation of tissues due to injury or infection of the injury.
Restricted movement	This is a limited ability to move the affected part. Most common in joint or muscle injuries.
Bleeding (external or internal)	This is seen when there are cuts, openings or abrasions in the case of external bleeding and bleeding into the joints, which may not be immediately visible in the case of internal ones.

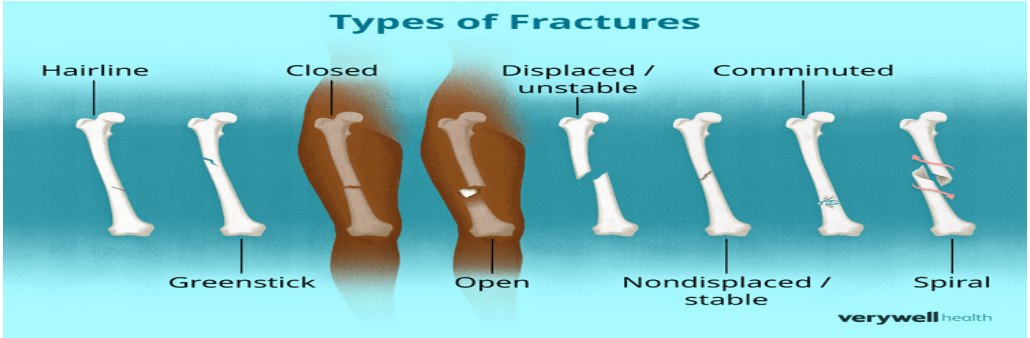


Figure 5.2: Different Types of Fracture

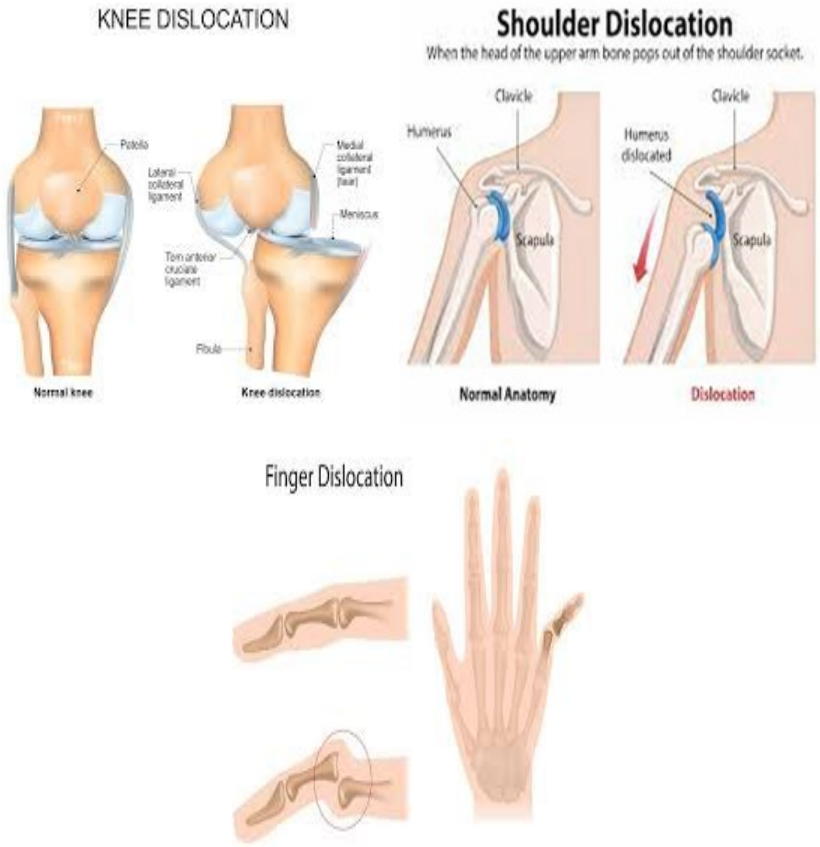


Figure 5.3: Dislocation at different parts of the body (knee, shoulder and finger)

Common Symptoms of Sports Injuries

These are subjective experiences reported by the injured person. They are what the injured person feels and can describe to a doctor or other people. Symptoms are experienced only by the person who has the condition. Some symptoms include:

Table 5.8: Common Symptoms of Sports Injuries

Pain or discomfort	One of the most immediate symptoms is pain. It can be sharp and sudden which signals that something is wrong. This ranges from mild to severe and may be aggravated by movement of the affected part.
Stiffness	This is the feeling of tightness or difficulty moving a joint or muscle.
Numbness of tingling	This is the loss or reduction of sensation at the affected part, or a prickling or pins and needles sensation at the injured place. These feelings are often associated with nerve-related injuries or pressure on the nerves.
Weakness or instability	This is when the muscles or joints affected are unable to support normal movement.
Throbbing or pulsing sensation	This is a type of pain or discomfort that feels like a rhythmic beat that is similar to the pulsing of the heartbeat in the injured or inflamed part of the body.
Loss of function	This is the inability to use the affected limb or part of the body normally.

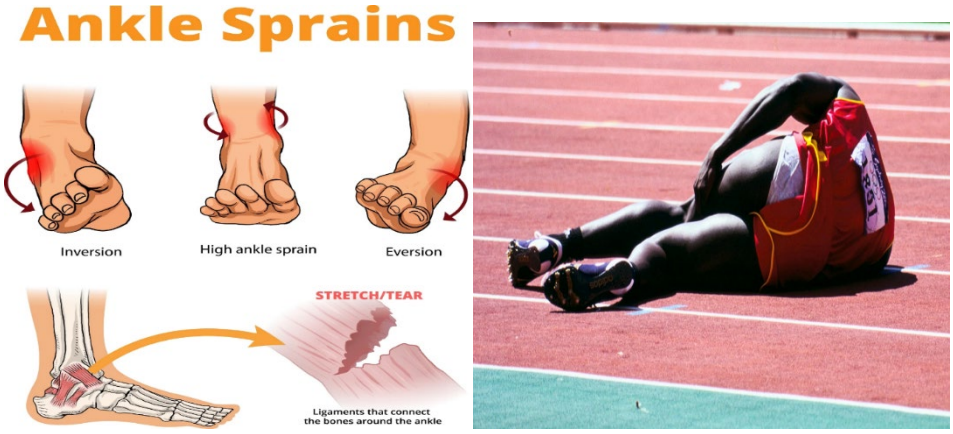


Figure 5.4: An Ankle Sprain and a Hamstring Strain

Activity 5.1 Sports Injuries and Their Common Signs and Symptoms

Visual Observation

1. Organise yourself into groups of 3-5 people.
2. Use the internet to search for sports injuries. Watch short video clips or view images of athletes in non-graphic injury moments (e.g., falling, limping, collisions).

3. In your groups, discuss what happened in each scene from point 1 activity. Answer these questions:
   a. What just happened?
   b. Which part of the body may be affected?
   c. What action or movement led to the injury?
   d. What signs or symptoms can you see?
   e. If you were there, how would you help?
4. Share your thoughts with the class

Injury Identification

5. Organise yourself into a new group of 4-5 people.
6. Your teacher has prepared a display of different sports injuries. Walk around the classroom to read posters or cards showing these various sports injuries, their descriptions, and visuals. At each station, talk about:
   a. Which body part is affected?
   b. What causes the injury?
   c. What signs or symptoms might the athlete feel?

Class discussion

7. After you have finished looking at each injury, discuss with your class:
   a. What is the difference between a wound and a sports injury?
   b. What types of injuries are common in sports you know or play?

Body map creation

8. Organise yourself into a group of 3-5 people. In your group draw a body map showing where sports injuries happen and what they look like.
9. Present your body map to your class. Remember to ask questions and offer positive feedback following other groups' presentations.

Impacts of sports injuries and preventive measures

Building on your understanding of how sports injuries happen and what they look like, we will now shift the focus to factors or causes of sports injuries, their impact and how to prevent them.

FACTORS OR CAUSES, IMPACT AND PREVENTION OF SPORTS INJURIES

FACTORS OR CAUSES

Factors or causes of sports injuries refer to the various conditions, behaviours, or circumstances that increase the likelihood of an athlete or individual getting hurt during physical activity, training, or competition. To better understand them, these causes are generally grouped into two main categories, namely intrinsic (internal) and extrinsic (external) factors or causes.

Intrinsic (Internal) Factors

These are personal and physical characteristics that come from within the individual and can put them at risk of injury. This includes:

Table 5.9: Internal factors or causes of sports injuries

Poor Physical Fitness	When an athlete or an individual lacks general or specific physical conditioning, their body may not be strong or flexible enough to withstand the demands of an activity. For example, weak muscles are more likely to tear or strain, and tight joints may be more prone to sprains or dislocations.
Previous Injuries	Areas of the body that have been previously injured may not fully recover their strength, flexibility or stability. Scar tissue or weakness in these areas can increase the risk of re-injury, especially if rehabilitation was inadequate.
Inadequate Warm-Up or Cool-Down	Skipping a proper warm-up can leave muscles and joints stiff and less responsive, making them more vulnerable to sudden movements. Similarly, failing to cool down can hinder muscle recovery and increase the risk of soreness or delayed injuries.
Poor Technique or Body Mechanics	Using improper movement patterns, especially in skill-based sports, can place undue stress on certain muscles or joints. For instance, poor running posture can lead to knee injuries, and incorrect lifting technique can cause back strain.
Muscle Imbalances	When one group of muscles is significantly stronger or more flexible than its opposing group (e.g., quadriceps vs hamstrings), it can lead to uneven strain during movement, increasing the chance of overuse injuries or muscle tears.
Overtraining or Fatigue	Training too often or intensely without allowing the body enough time to rest and recover can lead to chronic fatigue, decreased performance and a higher likelihood of injury due to poor coordination or reaction time.
Mental and Psychological Factors	Mental stress, anxiety, low motivation or lack of concentration can result in poor judgment or delayed reactions, increasing the chances of making errors that lead to injury.

Extrinsic (External) Factors

These are environmental and equipment-related causes that come from outside the body and affect how the sport is played. Examples include:

Table 5.10: Extrinsic (External) Factors or causes of injury

Improper Equipment or Clothing	Wearing the wrong type of footwear, using worn-out gear or not wearing protective equipment (e.g., shin guards, helmets) can expose athletes to unnecessary risk. For example, playing football with inappropriate boots can cause ankle injuries.
Unsafe Playing Surfaces	Uneven, wet, slippery or overly hard surfaces can increase the risk of falls, slips and impact injuries. Potholes, poorly maintained courts or tracks are common hazards.
Poor Coaching or Supervision	Athletes who are not properly taught how to perform skills or who are not adequately monitored during training are at a higher risk of making mistakes that lead to injury.
Type of Sport or Activity	Contact sports such as rugby, boxing or football naturally carry a higher risk of injury due to frequent physical contact. In contrast, non-contact sports like swimming or tennis usually have lower injury rates but may still cause overuse injuries.
Environmental Conditions	Extreme temperatures, high humidity, or poor lighting can increase the risks in sports. For example, excessive heat can cause dehydration or heat stroke, while poor lighting might lead to misjudgements and falls.
Lack of Protective Gear	Failure to wear appropriate safety gear (e.g., mouthguards, wrist guards, helmets, shin guards) increases the risk of injury, especially in high-contact or high-risk sports like cycling, hockey or skateboarding.
Aggressive or Dangerous Play	Players who act recklessly or break the rules (e.g., late tackles, pushing or intentional fouls) can cause injuries to themselves and others. Intense competition without discipline can lead to unnecessary collisions or falls.

IMPACTS OF SPORTS INJURIES ON ATHLETES AND INDIVIDUALS

Sports injuries can meaningfully affect various aspects of an athlete's or active individual's life and affect beyond just the body. These impacts are commonly grouped into five main categories. These are physical, psychological, social, educational or occupational and financial.

Physical Impacts

Physical impacts are the direct effects injuries have on the body and its ability to function normally. It includes pain, loss of movement and reduced athletic ability and reduced function.

Examples of Physical Impacts

Table 5.11: Examples of physical impacts of injury

Pain and discomfort	Injuries often cause immediate or lasting pain. A sprinter who pulls a hamstring will experience sharp pain that prevents normal walking or running.
Reduced performance	An injury may limit strength, endurance or flexibility. A footballer recovering from an ankle sprain may not be able to run, change direction, or shoot as effectively as before.
Loss of fitness	Long rest periods during recovery can reduce overall physical fitness. A basketball player who is bedridden or inactive for weeks after knee surgery may lose muscle strength and cardiovascular endurance.
Permanent disability	Serious injuries might lead to lasting or irreversible physical damage. A spinal cord injury from a rugby tackle could result in partial or complete paralysis, making it impossible to walk again.
Risk of re-injury	Returning to sport too soon increases the chance of injuring the same area again. A volleyball player who returns to training too soon after a wrist fracture may re-injure the same wrist during blocking or spiking.

Psychological Impacts

This refers to how an injury affects a person's mental and emotional state or the emotional and mental challenges that arise from being injured. It includes feelings like sadness, anxiety, fear, hopelessness, loss of confidence in going back and performing as before or how the injury influences the injured person's thoughts and behaviours.

Examples of Psychological Impacts

Table 5.12: Examples of psychological impacts of injuries

Depression and anxiety	Being unable to train or compete may cause emotional distress. A track athlete who has trained for years but misses a major competition due to injury may feel deeply disappointed, sad, or anxious about the future.
Fear of re-injury	Some athletes may become overly cautious or hesitant to return to sport. A gymnast may become overly cautious or hesitant when attempting a move that previously led to injury, affecting their performance.
Loss of identity	Athletes who define themselves by their sport may feel lost or uncertain. A retired footballer who was known for their athletic achievements might struggle to find purpose or self-worth without sport due to retiring too early because of injury.
Reduced self-esteem	A lack of performance or activity may lower confidence levels. A student-athlete who once excelled but now sits on the bench due to injury may feel unimportant or less valued.

Social Impacts

These are changes in how an injured person interacts with others or participates in social life, or how the injury affects the individual's relationships and interactions with others, such as teammates, friends or family.

Examples of Social Impacts

Table 5.13: Examples of social impacts of injuries

Isolation	Not being able to attend training or matches may lead to loneliness. A netball player on crutches may be unable to join teammates for training or team bonding activities, leading to feelings of exclusion.
Reduced social interaction	Time away from the sports environment can limit daily contact with peers. A swimmer undergoing daily physiotherapy may have little time or energy for social events, resulting in loneliness.
Strained relationships	Mood swings or dependency during recovery can affect relationships. A parent or partner might feel overwhelmed if they have to care for the injured person, possibly causing tension or conflict.

Educational/Occupational Impacts

These are the effects an injury has on a person's learning, academic progress, training, job and career or work life due to an injury.

Examples of Educational/Occupational Impacts

Table 5.14: Examples of educational/occupational impacts of injuries

Missed school or academic delay	Injured student-athletes may miss classes or exams due to treatment and recovery. A student-athlete who breaks a leg might miss weeks of school, fall behind in lessons, and perform poorly in exams.
Work disruption	Individuals may be unable to work or perform duties at their job. A physical education teacher with a torn ligament may be unable to demonstrate or participate in activities, limiting their teaching effectiveness.
Career uncertainty	A severe injury can end a sports career or require the person to change professions. A promising boxer who suffers repeated concussions might be forced to retire early and consider a new and unrelated career path.

Financial Impacts

These involve all costs related to treatment and managing the injury, as well as the potential loss of income due to inability to work or perform.

Examples of Financial Impacts

Table 5.15: Examples of financial impacts of injuries

Medical expenses	Injuries often require money for treatment, surgery or physiotherapy. A football player who tears an ACL may require surgery, physical therapy and medication which could cost thousands of cedis or dollars.
Loss of income	Professional athletes may lose salaries, bonuses or endorsements. A professional basketball player who is injured may miss a season and lose contract bonuses or endorsement deals.
Need for assistive devices	Long-term injuries may require costly equipment like braces or wheelchairs. A hockey player with a permanent knee injury might need to purchase a brace, crutches or even a wheelchair, depending on the severity of the injury.

Prevention of Sports Injuries

Prevention of sports injuries refers to all the measures and strategies taken before, during and after participation in sport or physical activity to reduce the risk, frequency or severity of injuries.

Categories and Their Preventive Strategies

In sports injury prevention, categories and their strategies simply mean organising different ways to prevent injuries into main focus areas. Each area includes practical steps or methods (strategies) that help reduce the risk of injury.

These key areas are:

1. **Proper Warm-Up and Cool-Down**

   Warm-up and cool-down are two key parts of any physical activity or sports session. They help prepare the body for exercise and then help it recover afterwards, reducing the risk of injuries and improving performance. Skipping a warm-up increases the risk of pulled muscles or joint sprains.

   Warm-up

   A warm-up is a series of light physical activities and stretches done before the main exercise or game. Its purpose is to gradually increase heart rate, blood flow, and body temperature, and to prepare and loosen muscles and joints for more intense movements.

   Benefits of Warming Up

   a. Reduces risk of injury (e.g., muscle strains, ligament sprains)
   b. Improves muscle performance and flexibility
   c. Prepares the heart and lungs for action
   d. Enhances mental focus and readiness

Examples of Warm-up Activities

a. General warm-up: Light jogging, jumping jacks, skipping, high knees, butt kicks, fast walking and marching on the spot.

b. Dynamic stretches: Arm circles, leg swings, hip circles, lunges with a twist, torso rotations and ankle and wrist rolls.

c. A football team jogs around the field, does jumping jacks and then stretches before starting drills.

Figure 5.5: Football Players Jogging to Warm-up before a Match

Cool-down

A cool-down is a group of light exercises and stretches done after the main activity. It helps the body gradually return to its resting state, reducing muscle soreness and aiding recovery.

Benefits of Cooling Down

a. Helps prevent dizziness or fainting

b. Removes waste products (like lactic acid) from muscles

c. Reduces muscle stiffness and soreness

d. Helps the heart rate and breathing return to normal

Figure 5.6: Learners Performing Light Jogging to cool down after a Physical Education Practical Class

Examples of Cool-Down Activities

a. Low-intensity activity: Slow walking or jogging, side steps at a relaxed pace and heel walking.
b. Static stretching
c. Upper body: Shoulder stretch or rolls, triceps stretch, neck stretch (gentle side-to-side moves).
d. Lower body: Touching toes to stretch hamstrings, quad stretches, calf stretch and hip flexor stretch.
e. Deep breathing and relaxation: Inhale deeply through the nose and exhale slowly through the mouth with eyes closed, breathing slowly and focusing on relaxing the muscles.
f. After a netball match, players walk slowly for a few minutes and then stretch all the muscles they used during the game.

Figure 5.7: Learners Stretching after a Physical Education Practical Class

2. **Use of Correct Technique**

Using the right method or form when performing skills or exercises reduces strain on muscles, joints and ligaments. Incorrect techniques often increase the chance of chronic injuries like tendonitis or stress fractures, and also strains, sprains and long-term damage.

Examples

a. A football player learning the right tackling technique to avoid knee injuries.
b. A weightlifter practising proper lifting method or form to protect the spine.
c. A swimmer using the correct breathing and arm stroke rhythm.
d. Learning the correct landing technique in basketball to avoid knee injuries.
e. Using the right posture when lifting weights.

3. **Wearing Appropriate Equipment**

   Using protective gear and the right attire for sporting activities minimises or reduces risk and prevents injuries during contact or falls. Worn-out shoes or missing gear often result in preventable injuries.

   Examples

   a. Helmets in cycling and rugby to prevent head injuries.
   b. Mouthguards in boxing or hockey to protect teeth and jaw.
   c. Shin guards in football to prevent shin injury.
   d. Non-slip shoes for netball or tennis to avoid ankle sprains.

4. **Fitness and Conditioning**

   Building strength, endurance, flexibility and coordination help the body cope with the demands of sport. Athletes with poor conditioning are more prone to fatigue and injury, and unfit or tired athletes are more likely to make mistakes or overstretch muscles.

   Examples

   a. A basketball player doing strength training to support the knees.
   b. A runner doing balance exercises to prevent ankle sprains.
   c. A dancer working on flexibility to reduce muscle strain.
   d. Pre-season strength and endurance training for rugby players to prevent sprains and strains.
   e. Balance and core stability drills for gymnasts to prevent dislocations, strains and sprains.

5. **Environmental Awareness**

   Being aware of the surroundings and conditions can help avoid accidents and slips because environmental hazards can lead to avoidable injuries. Poor surfaces, bad lighting or unsafe weather increase the risk of injury.

   Examples

   a. Inspecting a netball court for wet spots or uneven surfaces.
   b. Checking the field for holes, stones or water before a football match.
   c. Avoiding play during extreme heat, heavy rain or thunderstorms.
   d. Ensuring indoor courts are clean and dry to prevent falls.

6. **Regular Medical Check-Ups and Screening**

   Early detection of potential health risks can prevent injury or worsening of conditions. Routine health assessments identify medical or physical issues that may put athletes at risk. Ignoring small health issues can lead to serious or permanent injuries.

   Examples

   a. A pre-season medical exam to check for heart or joint problems in athletes.

b. A physiotherapist evaluating a volleyball player's posture and muscle imbalances.

c. Regular check-ins for athletes with previous injuries.

7. **Adhering to Rules and Fair Play**

Dangerous play or rule violations often lead to injuries. Hence, following the rules and maintaining sportsmanship avoids reckless actions and unnecessary contact leading to injuries. Most serious injuries in contact sports come from illegal or dangerous moves.

Examples

a. Avoiding aggressive or illegal tackles in football.

b. Respecting referees' decisions and opponent safety.

c. Following age-appropriate game rules for younger athletes.

d. Not raising the stick dangerously above shoulder height in hockey.

8. **Rest and Recovery**

Giving the body enough time to recover between training and exercise sessions and after injury is vital to prevent overuse and fatigue-related injuries. Muscles and joints need time to repair; overusing them is a major cause of injury. Overtraining is a leading cause of burnout and long-term injury.

Examples

a. Taking rest days during training schedules.

b. Allowing 6 weeks to fully recover from a sprain before returning to sport.

c. Getting enough sleep for muscle repair and mental focus.

d. Following a rest period after injury, before returning to play.

9. **Nutrition and Hydration**

A well-balanced diet and regular hydration support energy levels, muscle repair and overall health. Good nutrition strengthens the body while dehydration leads to or can cause muscle cramps, confusion, fainting or blacking out and heat stroke.

Examples

a. Eating enough protein and carbohydrates for energy and recovery.

b. Drinking water before, during and after sports activities.

c. Eating protein-rich meals after training to repair muscles.

d. Drinking water and electrolytes to avoid cramps in hot weather.

e. Avoiding junk food that may lead to poor performance or slow recovery.

10. **Psychological Readiness**

Being mentally and emotionally prepared is just as important as physical readiness. Stress, fear or distraction can affect decision-making, leading to poor judgment, risk-taking and coordination. Athletes who are distracted, anxious or fearful are more prone to accidents during activities.

Examples

a. A gymnast using breathing techniques to calm nerves before competition.

b. A player not returning to competition until mentally confident after injury.

c. Providing counselling or support for injured athletes.

d. Psyching athletes before major competitions.

Preventing sports injuries requires a holistic approach, which includes physical preparation, mental readiness, a safe environment and the use of proper gear and observing the rules governing each game or activity. By following these measures, athletes and active individuals can enjoy longer, safer and more successful participation in sports and physical activity.

Activity 5.2 Injury Prevention

1. Your teacher has labelled one side of your classroom as 'safe' and the opposite side as 'unsafe'. Listen to your teacher read our statement regarding a sporting activity. Decide if this is 'safe' or 'unsafe'. Move to the side of the room to match your decision.
2. Organise yourself into groups of 4-6 people. In your group, choose two warm-up and two cool-down exercises that you find effective and enjoyable.
   a. Think about why they might be beneficial.
   b. Lead a short demonstration for the class.
   c. Share your choices and explain your reasons.
3. For each explanation remember to include
   a. Which part of the body does it target
   b. Whether it is a warm-up or cool-down
   c. How it helps prevent injury or aids recovery
4. With your class, discuss and write down the possible consequences of not doing warm-ups or cool-downs. Make notes of your classmate's ideas in your workbook.

Scenario Discussion

5. Organise yourself into groups of 3-5 people. Read the scenarios below:
   a. Ama is playing volleyball on a wet and slippery court.
   b. Kwame forgot to wear shin guards during his interclass football match.
   c. Esi started running without doing any warm-up.
   d. Yaw ignored pain in his knee and continued training.
   e. Akosua wore worn-out trainers during her sprinting event.
6. Now answer the following questions for each scenario:
   a. What type of injury could occur in the above scenarios?
   b. What preventive measures should have been taken?
   c. What should the person do differently next time to avoid injury?

7. In your group, choose one of the scenarios and present your shared thoughts to your class.

   The use of safety equipment to prevent sports injuries

8. Organise yourself into a group of 3-5. Look at the equipment or images prepared by your teacher or search for images of the following
   a. Helmets
   b. Mouthguards
   c. Knee pads
   d. Elbow pads
   e. Shoulder pads
   f. Ankle braces
   g. Ankle tape
   h. Shin guards
   i. Gloves
   j. Proper footwear
   k. Braces
   l. Faceguards
   m. Groin protectors
   n. Headgear
   o. Hand wraps
9. In your group
   a. Identify what each item is used for and describe how it protects the body and prevents injury.
   b. Identify one sports specific injury that the item is designed to prevent.
   c. Share your groups' thoughts for one of the pieces of safety equipment with your classmates.

Extended Reading

- Ghana Education Service Curriculum for SHS PEH
- WHO: Guidelines on Sports Injury Prevention.
- CDC Sports Injury Fact Sheets
- https://www.mayoclinic.org
- https://kidshealth.org/en/teens/sports-injuries.html

REVIEW QUESTIONS

1. Injury Scenario Analysis

   A student playing football suddenly trips and twists the ankle, resulting in swelling and pain.

   Task:

   a. Analyse the type of injury sustained and the body part affected.
   b. Explain how this injury could have been prevented.
   c. Propose two safety precautions that should be followed before engaging in similar physical activity.

2. Compare and evaluate acute injuries (e.g. sprains, fractures) and chronic injuries (e.g. tendinitis, shin splints) in terms of:

   a. Causes
   b. Symptoms
   c. Prevention strategies

3. Your PE class is preparing for an inter-school athletics competition. The teacher wants you to help plan how to keep everyone injury-free.

   Task:

   a. Create a 3-step injury prevention plan that focuses on:

      Warm-up and stretching

      Safe use of equipment

      Hydration and rest

   b. Justify how each step contributes to injury prevention in sports.

4. Some students ignore pain or discomfort during sports activities and continue playing until their condition worsens.

   a. Explain why this behaviour increases the risk of complicated injuries.
   b. Suggest two responsible actions learners should take when they feel pain or discomfort during PE.
   c. Justify your suggestions using examples from school or community sports.

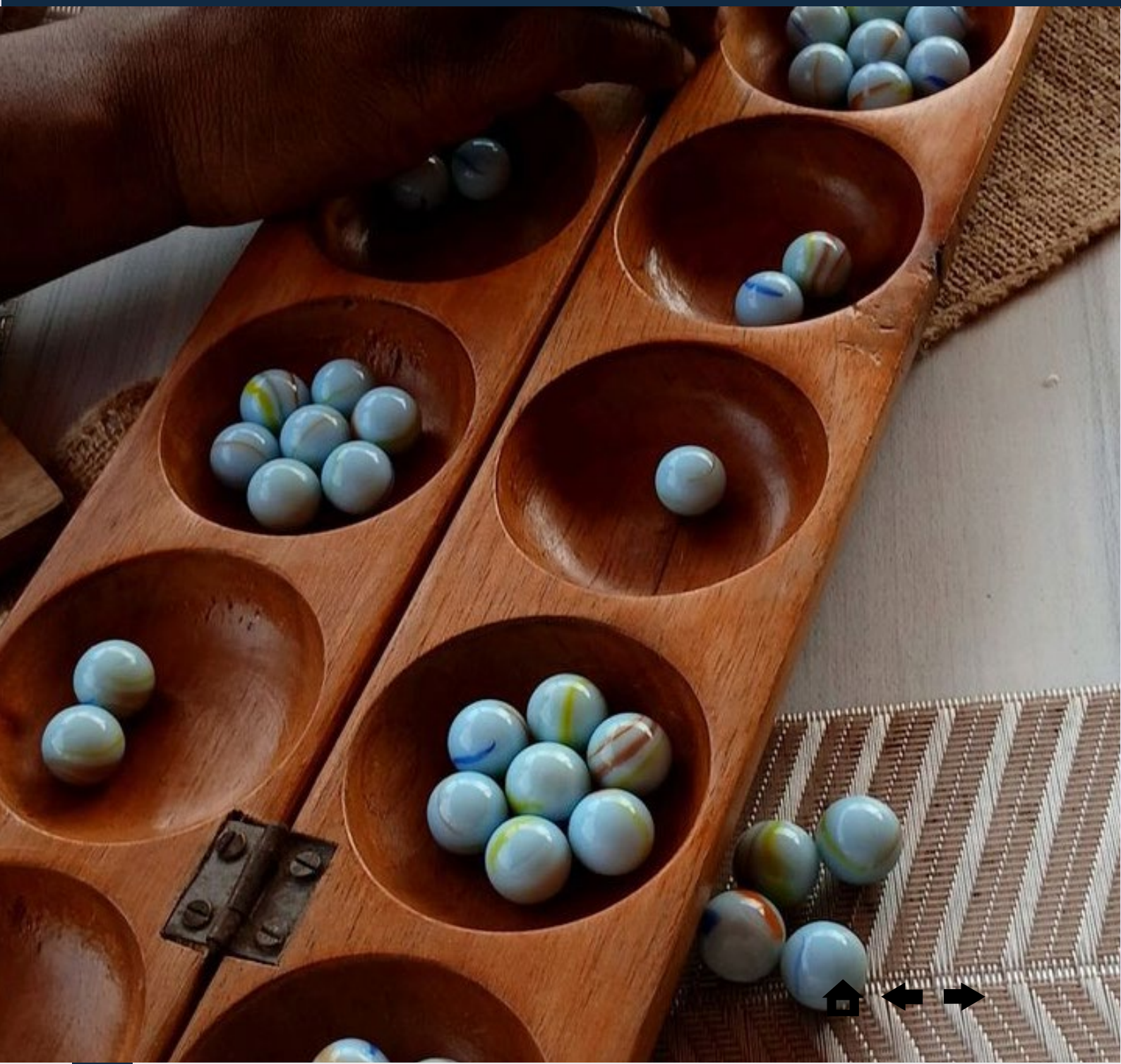
5. Match each term in Column A to the best definition in Column B. Then, justify your match by briefly explaining why the definition fits the term or how it would apply in a real sports scenario.

Column A		Column B
Fracture	Your Match: _____ Reason: _____	A. A stretching or tearing of ligaments
Concussion	Your Match: _____ Reason: _____	B. A plan to avoid getting hurt during physical activities
Sprain	Your Match: _____ Reason:_____	C. A break in a bone
RICE	Your Match: _____ Reason: _____	D. A blow to the head causing dizziness or memory loss
Injury Prevention	Your Match: _____ Reason: _____	E. A method involving rest, ice, compression, and elevation

SECTION

6

TRADITIONAL GAMES - PART TWO



PHYSICAL ACTIVITY AND HEALTH

Traditional Games

INTRODUCTION

Tumatu is a traditional game with cultural significance in many African communities, especially in Ghana. It provides both entertainment and opportunities for physical activity and social interaction. Played with simple materials, Tumatu is accessible to people of all ages and abilities. The game involves hopping on one foot through numbered squares while retrieving a marker (or 'stone') without stepping on the lines or losing balance. It requires teamwork, strategy, and helps develop coordination, agility, and quick thinking. In this section, we will cover the rules, techniques, and essential skills needed to play Tumatu successfully.

KEY IDEAS

- **Tumatu**: A traditional Ghanaian hopping game similar to hopscotch, played by tossing a marker and hopping through a series of numbered squares.
- **Grid/Court**: A marked layout of squares (usually 8 to 10) drawn on the ground, used as the playing field for Tumatu.
- **Marker**: A small object (e.g., stone, bottle cap, twig) thrown into the squares of the Tumatu grid to start each round of the game.
- **Turn**: A player's opportunity to toss the marker and complete the hopping sequence in the correct order.
- **House/Home**: A square claimed by a player after successfully tossing into it and completing the course; opponents must skip it in future turns.
- **Missed Turn**: A loss of chance due to stepping on a line, landing in the wrong square, or falling during play.

EXPLORATION OF TUMATU

Background

Tumatu is a local variant of hopscotch. Tumatu is played by children in various parts of Ghana. It is one of the numerous indigenous games that reflect the culture, creativity and communal lifestyle of Ghanaian society. Though the game can be played by both sexes, it is usually played by girls; however, open to all children and sometimes even adults in community gatherings. Tumatu consists of a grid or a court with boxes and requires the players to throw an object into one of the boxes and hop through the boxes to retrieve the object.

The word Tu-ma-tu means 'jump and let me jump' or 'hop and let me hop', reflecting the game's core activity of hopping through a series of marked spaces on the ground. The objective is to complete the course without stepping on lines or losing balance. Successfully navigating the grid allows a player to claim the square they throw the object or the marker in before navigating the rest of the boxes or spaces as their 'home' or 'house', which other players must then avoid or jump over. The game continues with players attempting to claim as many squares or boxes as possible, making it increasingly challenging for opponents to complete the course without stepping into claimed territories. The game can be played alone or with multiple people.

Materials for Creating or Drawing the Grid or Court

1. Chalk or charcoal (for concrete surfaces)
2. Stick or stone (for drawing on dirt surfaces)
3. Masking tape (for indoor/classroom versions)

How to Draw a Tumatu Game Grid or Court?

In order to play the game, the first thing to do is to draw out the grid or court. The traditional way to do this is to either draw it on a concrete pavement using chalk or charcoal, or by drawing it out on the sand using a stick. In places such as a school playground, the grid or court is drawn permanently with paint. The traditional tumatu grid or court comprises a series of 8 or 10 squares in a linear format. In the pattern, 'square 1' is followed by 'square 2' and 'square 3' in a parallel manner. After which comes 'square 4', followed by 'square 5' and 'square 6' drawn in parallel. This continues with the next squares, with 'square 10' being the home square. In another variant, there is a square next to square number 10 that is considered to be the home square.

Many variants of the game have circles or rectangles instead of squares and have more or fewer than 10 squares. The measurement of the court is usually decided by the players, depending on their age of the players. The smaller the children are, the smaller the squares are to make it easy for them to hop through. To determine who starts or begins play, players agree on who plays first (often by counting rhyme, mutual agreement or tossing a coin or any small object that has different sides.

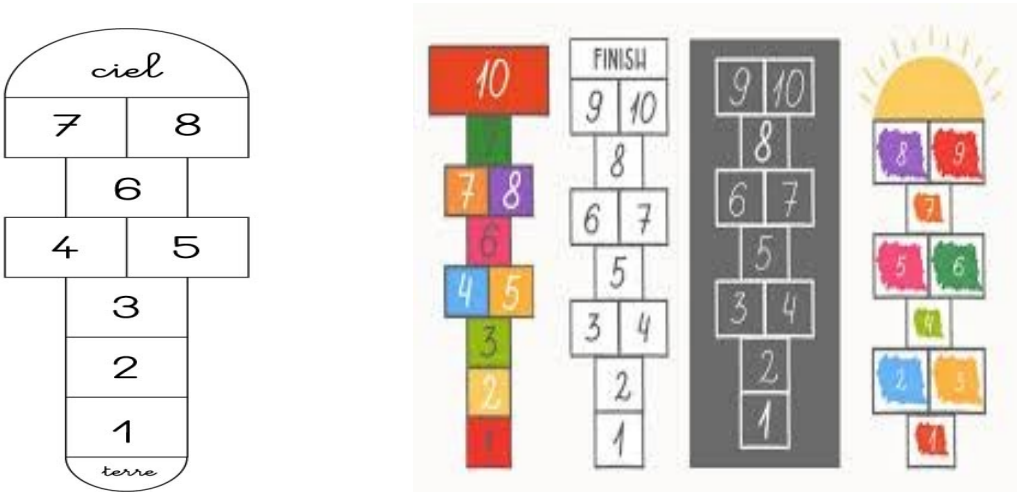


Figure 6.1: The Tumatu grid or court.

Tumatu Game Rules

1. If a player throws the object in the wrong square, they will miss their chance, and it will be the next player's turn to play.
2. If a player steps on the line, enters the wrong square, loses their balance, misses a square or steps into a single square with both feet in, they lose their turn.
3. If a player loses their chance, on their next turn, they will have to repeat from the same number they stopped at before they lost their chance.
4. Whoever manages to finish the sequence by throwing the object in all the squares wins the game.

Items used to play tumatu

Tossable objects such as a stone, bottle cap, twig or pebble

HOW TO PLAY THE TUMATU GAME

There are many variations of Tumatu. But the basic rules and playing strategy remain pretty much the same for all the variations. The game involves three elements mainly- a court, a marker and a player or players. The game involves hopping over lines, or in this case, shapes.

The game utilises a small object which might be anything ranging from a stone to a bottle top or coin. The player tosses the object into the first square, making sure the object lands within the square. Then, the player hops through the squares, skipping the square with the object in it. Depending on whether the square is single or side-by-side, the player hops on a single leg or can use both their legs.

The player continues this until they reach square 10 or 'home' square. Then the player turns around and retraces their journey, hopping through squares until they reach the square with the object in it. The player stops before the square with the object and retrieves the object without stepping into the square.

Upon successfully retrieving the object, the player continues the game by throwing the object into the second square and repeating the game. In the case of multiple players, every player gets a chance to throw the object and loses their chance only if they break any of the rules.

Figure 6.2: Children playing Tumatu in the sand

Figure 6.3: Some gentlemen engaging in Tumatu on a pavement

Sequential Steps Involved in Playing Tumatu

Table 6.1: Sequential Steps Involved in Playing Tumatu

Draw the Hopscotch Diagram	• Use chalk, charcoal, or a stick to draw the Tumatu grid, court or layout on the ground. • Number the squares sequentially (usually from 1 to 8 or 10). • Ensure the layout includes both single squares (hopped on one foot) and double squares (hopped on with both feet).
Select a Marker	Each player chooses a small object (e.g. stone, a bottle cap, a shell) as their marker or 'tossing stone.'
Decide the Order of Play	Players agree on the playing order, often by using a counting rhyme or tossing method.
Start the Game	• The first player tosses their marker into square 1. • The marker must land entirely inside the square without touching any lines or bouncing out.
Hop Through the Course	• The player hops through the squares in the correct order, skipping the square that contains the marker. • Single squares are hopped on one foot. • Side-by-side squares are landed on with both feet (one foot in each square).
Pick Up the Marker	• When returning, the player pauses just before the square with the marker. • While balancing, the player bends to pick it up without stepping outside the lines or losing balance. • The player then completes the course and returns to the start.

Continue to the Next Number	• If the player succeeds, they toss the marker into the next square (e.g., square 2) and repeat the process. • This continues until the player completes the entire sequence (e.g., from 1 to 8 or 10).
Losing a Turn	• A player's turn ends if they • step on a line. • land in the wrong square. • miss the correct square with the marker. • lose balance or fall. • The next player then takes their turn
Winning the Game	The first player to complete all the numbered squares successfully wins the game.

ROLES OF PLAYERS DURING THE GAME

Active Player (the tosser)

The player currently taking a turn tosses the marker and completes the Tumatu path. They try to pick up the marker while maintaining balance and following the rules. (Other players are waiting for participants.)

Waiting participants wait for their turn patiently and observe the game. They:

1. Act as informal referees, ensuring rules are followed.
2. Encourage fair play and correct mistakes when necessary.
3. Take their turn when the active player makes a mistake or completes a round.

Teacher or Game Leader (if applicable in class settings)

1. Explains the rules and ensures fair play.
2. Provides support, feedback, and modifies the game for inclusivity or learning focus.

Health Benefits, Educational Values and Cultural Relevance of Tumatu

The game of Tumatu, though traditionally associated with early childhood, also holds significant health and educational values and cultural importance for senior high school learners, particularly when integrated into physical education. The health and educational values include:

Table 6.2: Benefits of playing Tumatu

Physical Development and Fitness	• Balance and Coordination: Encourages controlled movement, single-leg balance, and coordinated hopping, which are key to physical agility. • Endurance and Muscle Strength: Repetitive hopping helps build lower-body strength and cardiovascular endurance. • Motor Skills Refinement: Supports the maintenance and enhancement of gross motor skills during adolescence.
Cognitive Development	• Focus and Concentration: The need for players to pay close attention to avoid stepping on lines or missing squares enhance attention and keen attentiveness. • Memory and Sequencing: The requirement to remember the order of squares and actions promotes cognitive engagement. • Problem-Solving and Strategic Thinking: Learners think critically about how to progress through the game with minimal errors.
Social and Emotional Learning	• Teamwork and Collaboration: When played in groups or pairs, hopscotch fosters communication and cooperation. • Sportsmanship and Fair Play: Encourages respect for others, turn-taking, and adherence to rules. • Self-Esteem and Confidence: Successful participation boosts confidence and a sense of achievement.
Socialisation	• The game serves as a platform for socialisation, allowing players to engage with peers and build lasting relationships. It is often associated with childhood memories and community identity.
Mental Health and Wellbeing	• Offers Emotional and Stress Relief: The game provides a joyful, screen-free break that promotes mental well-being. Playing with friends and engaging in fun physical activity reduces stress and elevates mood, which is a healthy outlet for stress and emotional release. • Mindfulness: The focus required during play promotes mindfulness and a break from academic pressures.
Life Skills Development	• Skill Development: Players develop various skills such as strategic thinking, teamwork and motor coordination. Tumatu challenges players to navigate the game thoughtfully, enhancing cognitive and physical abilities. • Resilience and Perseverance: Mistakes during the game teach learners to try again and keep improving. • Decision-Making: Learners must decide how best to move through the course efficiently and tactically. • Goal Setting: Encourages learners to aim for improvement and mastery through practice.

Academic Integration (educational value)	• Mathematics: Reinforces number sequencing, spatial awareness, and basic arithmetic (e.g., scoring and counting turns). • Language and Communication: Develops oral communication skills through explaining rules, giving feedback, and reflecting on performance. • Creative Arts: Learners are tasked with designing the Tumatu layouts, incorporating visual design and creativity.

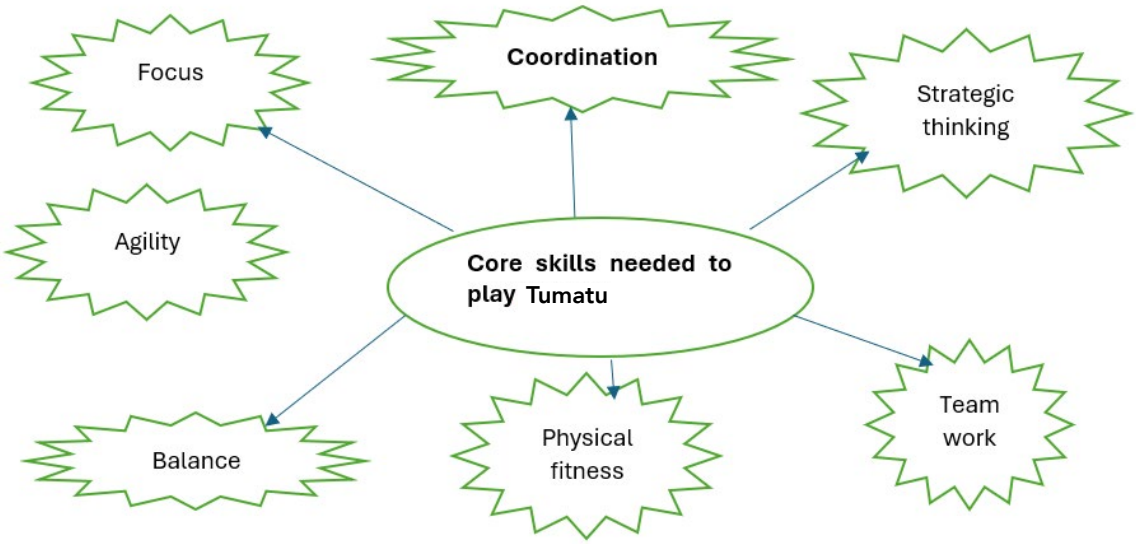
Cultural Appreciation

Table 6.3: Cultural Benefits of the Tumatu Game

Community Bonding	Tumatu fosters social interactions and strengthens community ties. It brings people together during gatherings, promoting friendships and a collaborative spirit among participants.
Preservation of Indigenous Games	Playing Tumatu connects players with their cultural heritage and promotes pride in traditional Ghanaian recreational practices and activities.
Cultural Diversity and Identity	Tumatu provides opportunities to explore how similar games are played in other regions or countries, enhancing intercultural understanding.

In summary, playing Tumatu is not just a playful break but a multidimensional learning tool. When used purposefully, it enhances physical fitness, cognitive function, social skills, and cultural appreciation.

Core Skills Needed to Play Tumatu



1. Coordination: Players need good hand-eye and foot coordination to navigate the grid effectively.
2. Balance: Maintaining balance while jumping and landing on different squares is very important.
3. Agility: Quick movements and the ability to change direction rapidly enhance playing and enjoying the game.
4. Strategic Thinking: Players must plan their moves and anticipate opponents' actions to gain an advantage.
5. Teamwork: Collaborating with teammates and communicating effectively is important in team play.
6. Physical Fitness: Overall fitness helps players perform better, as the game involves running and jumping.
7. Focus: Staying concentrated helps players make accurate throws and land successfully.

Developing these core skills enhances the overall enjoyment and effectiveness in playing Tumatu

Activity 6.1 Participate in the Tumatu Game

1. Organise yourself into groups of 4–6 people. Each team member will move through four stations in sequence:
   a. Station 1: Run to the cone, lifting knees as high as possible, then return.
   b. Station 2: Shuffle sideways to the cone and back, keeping your body low.
   c. Station 3: Run backwards to the cone and return, focusing on balance.
   d. Station 4: Perform 5 jumping jacks at the cone, then return.
2. After completing all stations, tag the next teammate. Continue until all team members have finished.
3. Organise yourself into a group of 6 people to watch a video showing Tumatu. Pay key attention to:
   a. Origin and cultural relevance of Tumatu.
   b. Items needed to play.
   c. Basic rules.
   d. Step-by-step demonstration of the game.
4. Discuss your observations with one other group.
5. With your group from point 2 above, draw a Tumatu grid on the ground. Number the squares in the correct order.
6. Take turns to:
   a. Play the sequence of the game.
   b. Observe others as they play.

   c. Rotate so **everyone** gets a turn as both player and observer.
7. In pairs, assign roles: one is the "teacher", the other is the "learner."
   a. The "teacher" explains and demonstrates how to play Tumatu step-by-step.
   b. After 5 minutes, switch roles.
8. In your group, change **2–3 rules** or add a new challenge. Examples:
   a. Hop backwards on the return trip.
   b. Include a riddle to solve in each square.
9. Player 1 starts by tossing the marker into Square 1, hopping through the grid while skipping the marker square, turning, and picking it up on the return.
10. Player 2 repeats for Square 2, Player 3 for Square 3, and so on.
11. Continue until all group members have completed their turn.

EXTENDED READING

- Beyond the Mine: Suriname Sustainability Highlights (2019). Newmont Corporation. Provides a summary of sustainability initiatives in Suriname, including Tumatu infrastructure projects and community programs.
  https://s24.q4cdn.com/382246808/files/doc_downloads/sustainability/regional/2019BeyondtheMine.SurinameOperations.pdf

- Merian Social Impact Assessment (SIA) – 2024 Update. Newmont Suriname. A comprehensive assessment of Tumatu I and II covering social, environmental, and infrastructural conditions.
  https://operations.newmont.com/_doc/operation/merian/2025/2024%20Merian%20Social%20Impact%20Assessment.pdf

- Merian-TR-12312018 Environmental Permit & Social Impact Documentation. Includes the 2016 Pamaka Community Cooperation Agreement and early ESIA data referencing Tumatu's infrastructure and governance.

  https://minedocs.com/20/Merian-TR-12312018.pdf

- Rapid Social Assessment: Suriname SCSD Project. (2019). World Bank & Government of Suriname. Baseline assessment of Maroon and Indigenous communities, including Tumatu, for social development planning.

REVIEW QUESTIONS 6

1. Describe the correct way to hop through the Tumatu grid and pick up the marker.
2. Explain two ways in which Tumatu helps improve physical fitness.
3. Imagine a classmate keeps losing balance while playing Tumatu. What advice would you give to help them improve their balance and coordination?
4. Compare Tumatu to another traditional or modern game you know. How are the rules, movement, or cultural importance similar or different?
5. Design your version of Tumatu by altering at least three elements (such as grid shape, rules, or movement). Describe how your modifications would impact gameplay and the skills they foster.

SECTION 7

HEALTH AND WELLNESS - PART THREE

NO DRUGS

PHYSICAL ACTIVITY AND HEALTH

Health and Wellness

INTRODUCTION

Understanding substance use and misuse is crucial for promoting healthy lifestyles among young people. Substance use involves consuming items like alcohol, tobacco, or prescription drugs for medical or recreational purposes. Misuse happens when these substances are taken in harmful ways or in amounts exceeding recommended limits, leading to serious health and social issues. In this section we will examine the causes and risk factors of misuse, including peer pressure, curiosity, emotional stress, and social or family influences. We will also look at the consequences of misuse, such as physical and mental health problems, academic challenges, and strained relationships.

KEY IDEAS

- **Addiction:** A strong physical or psychological need to use a substance regularly
- **Gateway Drug:** A less harmful substance (e.g., alcohol, tobacco) that can lead to the use of more dangerous drugs
- **Rehabilitation:** A recovery process to help people stop using harmful substances
- **Substance Misuse:** Misusing a drug or substance in excess
- **Substance Use:** The act of taking legal or illegal drugs or alcohol
- **Tolerance:** The need for increased amounts of a substance to get the same effect

SUBSTANCE USE

SUBSTANCES

Substances are drugs that, when taken into the body, affect how the body functions either physically, mentally or both. They can be used for medical purposes (to prevent or treat diseases) or non-medical purposes (such as recreational use or to alter mood or behaviour). Substances or drugs can also be categorised into four groups. These are medicinal drugs, recreational drugs, illegal drugs and socially accepted drugs.

Figure 7.1: Different substances

MEDICINAL DRUGS

Medicinal drugs are chemical substances used to diagnose, treat, manage, cure, or prevent diseases and medical conditions in humans. These drugs are developed through scientific research and clinical trials to ensure they are safe and effective when used appropriately.

Categories of Medicinal Drugs

Medicinal drugs can be grouped in several ways based on their function or how they are obtained.

1. **Prescription Drugs**

   These are drugs usually prescribed by a licensed medical professional (e.g., doctor, dentist). They are used to treat more serious or specific health conditions, and examples include antibiotics (e.g., amoxicillin), antihypertensive medications (e.g., atenolol), and antidepressants (e.g., fluoxetine).

   Risks of Misusing Medicinal Drugs

   a. Overdose can lead to poisoning or death.
   b. Overuse may lead to drug resistance, especially with antibiotics.
   c. Overuse may lead to drug dependency and addiction, particularly with painkillers or sleeping pills.
   d. Some may have serious side effects or may interact with other drugs to harm the individual.

Figure 7.2: Some prescribed drugs.

2. **Over-the-Counter (OTC) Drugs**

   Over-the-Counter (OTC) medicines are those available for purchase without a prescription. They are considered safe and effective for public use when taken as directed on the label. OTC drugs are used to treat minor ailments such as headaches, colds, fevers, stomach upsets, and allergies. Examples include ***paracetamol***, ***ibuprofen***, ***antacids***, and ***cough syrups***. They are easily accessible and can be found in pharmacies, supermarkets, and shops, with clear instructions for use provided on the packaging or in the leaflet. It is essential to follow the dosing instructions and directions carefully to minimise the risk of side effects or harm.

   Cautions for using OTC medicines

   a. Though OTC drugs are safe, misuse or overuse can lead to side effects or health risks.
   b. Always read and follow the label instructions.
   c. Do not mix with other medicines without advice.
   d. Ask a pharmacist or doctor if you are unsure.

3. **Generic Drugs**

   Generic medicines contain the same active ingredient, strength, dosage form, and intended use as a brand-name drug, but are typically sold under a different name and at a lower cost. They offer the same quality, safety, and effectiveness as the original branded version. They are approved by health authorities (e.g., the Food and Drugs Authority in Ghana and the FDA in the U.S.A.). Example: ***Loratadine (Claritin), Acetaminophen (Tylenol)***

4. **Herbal or natural medicines**

   These are products derived from plants, plant parts, or natural substances used to prevent, treat, or manage illnesses and health conditions. These medicines are made from leaves, roots, seeds, bark, or flowers of plants and are utilised in traditional or alternative medicine systems (e.g., ***African traditional medicine, Chinese medicine, Ayurveda). They typically come in the form of teas, powders, capsules, oils, or creams and are used to promote healing, boost immunity, or enhance overall well-being.***

   Risks and cautions for using Herbal or Natural Medicines

   a. Not all herbal medicines are safe for everyone.
   b. May interact with other drugs and cause adverse effects on the individuals.
   c. Some may cause allergic reactions or side effects.
   d. Always best to consult a health professional before use, especially if already taking other medications.

5. **Recreational Drugs**

   Recreational drugs are substances that people take for pleasure, enjoyment, or to alter their mood or feelings, rather than for medical reasons. These drugs are often used socially or to relax, but they can be harmful and addictive. Recreational drugs are consumed without medical advice and frequently affect the brain and behaviour, producing temporary feelings of happiness, excitement, or relaxation. Many of them are illegal or regulated by law due to their harmful effects. Examples: ***Alcohol***, ***Ketamine***, ***Crystal methamphetamine (meth).***

   Dangers of Recreational Drugs

   a. They are addictive or can lead to dependence.
   b. They can cause health problems such as liver damage, lung disease, and mental health issues.
   c. They can impair judgement, leading to accidents or risky behaviour.
   d. They can lead to legal consequences (e.g., fines or imprisonment).

6. **Illegal Drugs**

   Illegal drugs are substances that are banned by law because they are considered dangerous to health, highly addictive, and harmful to society. It is against the law to produce, sell, possess, or use these drugs in most countries. These drugs have no legal or approved medical use in many places and can cause serious physical, mental, and social problems. Because of this, they are often used in secret or unsafe environments. Examples: ***Cocaine, Heroin, MDMA.***

   Dangers of Illegal Drugs

   a. Addiction and dependence.
   b. Damage to organs (e.g., heart, brain, liver).
   c. Mental health problems (e.g., depression, anxiety, paranoia).
   d. Increased risk of accidents, violence, or crime.
   e. Arrest, fines, or imprisonment.

7. **Socially Accepted Drugs**

   Socially accepted drugs are substances that are widely used and accepted in society, even though they can affect the body and mind. These drugs are legal and often used in social or cultural settings, but they can still be harmful when misused or overused. Example: ***Alcohol, nicotine, caffeine.***

   Key Features of Socially Accepted Drugs

   a. Legally available for adults in most countries.
   b. Commonly used in social events, traditions, or relaxation.
   c. Regulated by governments (e.g., age restrictions, warnings).
   d. Can lead to health risks if abused or taken excessively.

Possible Risks

a. Alcohol: Liver damage, poor judgment, addiction.
b. Tobacco: Lung cancer, heart disease, addiction.
c. Caffeine: Anxiety, poor sleep, dependence.

Types of Substances (with their Use and Effects on the Body)

Substances are grouped based on how they affect the brain or the mind and body, especially the brain. Substances are grouped into types to help understand their effects (e.g., calming, energising, mind-altering), to know the risks and dangers, to guide safe use (for medicinal substances) and to prevent misuse or abuse.

Main Types of Substances (By Effect)

Table 7.1: Types of substances by effects

Depressants	Slow down brain activity and body functions (e.g., alcohol, sleeping pills).
Stimulants	Speed up the brain (e.g., caffeine, cocaine).
Hallucinogens	Distorts reality and senses or alters perception, thoughts, and feelings (causing hallucinations). Seeing or hearing things that are not there and causing.
Narcotics/Opioids	Strong painkillers (e.g., morphine, heroin).
Inhalants	Vapours inhaled for a high which cause light-headedness, dizziness, nausea (e.g., glue, petrol).
Cannabis	A drug with mixed effects (can calm, stimulate, or alter senses).

SUBSTANCE USE

Substance use is the correct, legal, and appropriate use of a drug or chemical substance, often for medical or accepted social purposes. This can be occasional or regular and may not necessarily lead to negative consequences.

Figure 7.3: Alcohol misuse

Substance Misuse or Abuse

Substance misuse or abuse refers to the harmful or hazardous use of substances, including legal, illegal, or prescription drugs, in a way that damages a person's health, mind, or behaviour. This includes:

1. Using drugs without a doctor's advice.
2. Taking too much of a drug or using it too often.
3. Using drugs to get high or escape problems.
4. Using illegal drugs or misusing legal ones like alcohol, tobacco, or prescription medicine.
5. Using a substance in higher doses than prescribed, using someone else's prescription, or using illegal drugs.

Figure 7.4: Commonly misused or abused substances

Substance Addiction

Substance addiction is a chronic, long-term, or recurring use of a particular substance marked by an uncontrollable urge to seek out and use the substance even when it is harming their health, relationships, or life.

People with addiction may experience

1. intense cravings.
2. withdrawal symptoms when not using the substance.
3. loss of control over substance use.
4. significant disruption in their life.

Figure.7.5*:* A victim of substance abuse

The Difference Between Misuse or Abuse and Addiction

Table 7.2: difference between substance misuse and substance addiction

Feature	Substance Misuse/Abuse	Substance Addiction
Frequency	Often, occasional or irregular use	Constant and compulsive use
Control	Can stop if they choose	Cannot stop even when they want to
Dependence	No strong craving or withdrawal	Strong craving and withdrawal symptoms
Harm	May lead to problems	Always causes serious problems
Help Needed	May not need treatment	Usually needs professional help

Factors Influencing Substance Misuse Among Adolescents

Drug misuse among adolescents is influenced by a combination of personal, social, environmental, and psychological factors. This includes:

Table 7.3: Factors Influencing Substance Misuse Among Adolescents

Peer Pressure	Friends who use drugs may encourage others to try them. Adolescents may misuse drugs to feel accepted or "fit in." Fear of being left out or mocked.
Curiosity and Experimentation	A desire to try new experiences can lead young people to misuse drugs. Trying drugs just to see what it feels like. Many adolescents believe trying drugs once or twice is harmless.
Family Influence	Adolescents from homes where drug use is common may see it as normal. Lack of parental supervision or poor communication can increase risk.
Emotional and Psychological Stress	Stress from school, relationships, or family issues may lead adolescents to use drugs as an escape. Conditions like anxiety, depression, or low self-esteem also contribute.
Media and social media	Movies, music, and influencers may glamorise drug use. Social media can expose adolescents to risky behaviours and drug culture.

Availability and Accessibility	Easy access to drugs (e.g., from homes, peers, or street vendors) increases the chance of misuse. Some adolescents misuse over-the-counter medicines like cough syrups and painkillers.
Lack of Education or Awareness	Many young people do not fully understand the dangers and long-term effects of drug misuse. Misconceptions like "natural drugs are safe" can lead to risky behaviour.
School Environment	Poor academic performance, bullying, or lack of engagement in school activities can increase the risk of drug misuse. A school culture that does not discourage drugs may also contribute.
Socioeconomic Challenges	Poverty, unemployment, and poor living conditions can push adolescents toward drug misuse as a coping strategy.
Cultural and Community Norms	In some communities, certain drug use (e.g., alcohol or tobacco) may be socially accepted, increasing exposure to and normalising misuse.

Ways to Avoid Being Influenced into Substance Use among Adolescents

This is how a person can protect themselves from being convinced, tempted, or forced into using substances they do not want to use.

Table 7.4: Ways to Resist or Avoid Being Influenced into Substance Use among Adolescents

Say 'No' with Confidence	Learn to firmly and politely say 'No' when offered drugs. Practice refusal skills in different situations. Example: 'No thanks, I do not do drugs, I care about my health.'
Choose the Right Friends	Stay close to friends who share positive values and do not use drugs. Avoid peer groups that encourage risky behaviour.
Get Involved in Positive Activities	Join clubs, sports teams, religious groups, or volunteer organisations to keep you busy, build self-esteem, and reduce boredom.
Talk to Trusted Adults	Speak with a parent, teacher, counsellor, or religious leader if you are feeling pressured. Adults can offer advice and protection.

Set Personal Goals and Values	Decide what kind of person you want to be. Think about how drug use can ruin your future and health.
Learn About the Dangers of Drugs	Educate yourself on the harmful effects of substance use and abuse. Attend school programmes or health talks.
Avoid Risky Places and Situations	Stay away from parties or areas where drugs are likely to be used. Leave immediately if you find yourself in a risky environment.
Build Self-Confidence	Believe in your ability to make smart and healthy choices. Practice saying 'no' in role-play situations to gain confidence
Handle Stress in Healthy Ways	Use sports, music, talking, or journaling to deal with emotions. Do not turn to substances for comfort or escape.
Be a Role Model to Others	Help friends make better choices and speak out against drug use. Be part of the solution in your peer group or community.

Activity 7.1 Exploring Substance Use, Misuse, and Prevention

1. Organise yourself into a group of 4-6 people. In your group discuss the following questions about the list of substances:
   a. Painkillers
   b. Alcohol
   c. energy drinks
   d. cough syrup
   e. Glue
   f. herbal tea
   g. tramadol
   h. cigarettes.

   Questions

   i. What do you notice about these items?
   ii. What do they all have in common?
   iii. Are they good, bad, or something else?
   iv. Have you heard or seen any of these being used?

2. Share your thoughts in a class discussion.
3. In your groups, research the meaning of the following:
   a. Substance Use
   b. Substance Misuse
   c. Substance Addiction
   d. Categories of substances
   e. Effects-based types of substances
4. Share your definitions with the group next to you. Do you agree? Can you come up with a common definition for each?
5. Still with your groups, choose a real-world cause of substance misuse (e.g., peer pressure, media influence, emotional struggles). Write and act out a short skit showing:
   a. How the situation unfolds.
   b. The decision the person makes (good or bad).
   c. What could help change the outcome.
6. Present your skit to your class. Accept feedback and answer any questions from your classmates.
7. In your group, discuss ways to avoid being influenced into substance misuse. Share your ideas with your class.

CONSEQUENCES OF SUBSTANCE USE

What are the consequences of substance use?

Consequences of substance use refer to the negative effects or outcomes that result when a person improperly or excessively uses drugs, alcohol, or other harmful substances. These consequences can impact various aspects of a person's life, including their physical health, mental and emotional well-being, academic or work performance, and relationships.

For instance: A student who smokes marijuana regularly may begin failing in school (academic consequence), fighting with parents (social consequence) and later develop memory problems (health consequence).

SOME CONSEQUENCES OF SUBSTANCE USE

Physical Consequences of Substance use

Physical effects are the harmful effects that substance use has on the body's organs and physical health.
Examples are: Dizziness, confusion, vomiting, poor judgment, addiction, organ damage, and mental disorders.

Physical consequences of substance use can be short-term and long-term

Table 7.5: Short-term physical consequences of substance use

Short-term effects	Examples include	Real-life examples
These are the immediate or temporary physical, emotional, or mental changes that occur shortly after using a substance. They often appear within minutes or hours and may last for a short period.	Drowsiness or dizziness, nausea and vomiting, confusion or poor judgement, mood swings or aggression, slurred speech and loss of coordination.	• A student who uses cough syrup may feel sleepy and struggle to focus during class or while crossing a road, increasing his or her risk of an accident. • A student attends a party and consumes a large amount of alcohol in a short period. A few hours later, she becomes confused, starts talking to herself and loses balance, falling and injuring her ankle. Her friends must take her to the hospital, and she misses an important test the next morning at school.

Table 7.6: Long-term physical consequences of substance use

Long-term effects	Examples	Real-life Scenarios
These are serious and lasting health or life problems that result from misusing substances continuously or over a long period. This chronic use can lead to organ damage such as liver cirrhosis (from alcohol), lung damage (from smoking), and brain damage (from inhalants or substances like cocaine).	Addiction or dependency on the substance, liver, lung, or brain damage, mental health disorders like depression or anxiety, poor performance in school or at work and damage to relationships with family and friends.	• Kofi, a 16-year-old boy, began drinking alcohol and smoking cigarettes and marijuana with friends on weekends. After several months, he started experiencing stomach pain and vomiting blood. Doctors diagnosed him with liver and lung damage caused by alcohol, cigarette and marijuana use. • A young adult who smokes and uses inhalants like glue, cocaine, paint thinners and solvents daily over many years starts struggling with memory problems, becomes addicted, drops out of school and finds it difficult to keep a job.

Table 7.7: Psychological and emotional effects of substance misuse

Psychological and emotional effects	Examples	Real-life Scenario
This refers to the negative impact that substance use has on a person's mental health, thought patterns, feelings, and the ability to control moods and emotions. These are changes in how a person thinks, perceives reality, and makes decisions.	Increases risk of depression, anxiety, fear, sadness, anger, mistrust and hallucinations, serious mood swings, suicidal thoughts and weakens or reduces the ability to handle stress or relate positively to others.	Kwesi started misusing tramadol to feel confident, glue to feel high, alcohol and weed to belong. Over time, he became anxious, easily angry, and even started seeing things that were not there or real (hallucinations). He was later diagnosed with drug-induced **psychosis**.

Psychosis

This is a serious mental condition in which a person loses touch with reality. This means they may have difficulty distinguishing between what is real and what is not.

Key Features of Psychosis

Table 7.8: Key features of psychosis

Hallucinations	Seeing, hearing or feeling things that are not there (e.g., hearing voices no one else hears).
Delusions	Strong beliefs that are not true and are not based on reality (e.g., believing someone is out to harm them when it is not true).
Disorganised thinking	Difficulty organising thoughts, leading to confused speech or behaviour.
Lack of insight	The person may not realise that they are unwell.

Real-Life scenario

A university student who feels overburdened by exams and family pressure begins drinking heavily, smoking, taking painkillers and stimulants like caffeine to feel calm, relaxed, confident, and undistracted every evening. At first, he or she feels better temporarily, but over time, they become anxious, withdrawn from friends, and begin experiencing hallucinations. They struggle to concentrate in class, start missing classes, feel tired during the day, and need more alcohol, weed or cigarettes, painkillers and stimulants to feel calm. Eventually, their grades and health suffer, and they struggle to stop drinking, smoking and relying on the substances they have been misusing.

Figure 7.3: Psychological Implications of Substance Use

Academic and Cognitive Consequences

Academic and cognitive consequences are the negative effects that substance use can have on a person's ability to learn, think, remember information, and perform well in school or academic settings.

Examples include: Loss of concentration and memory, lack of interest in learning, poor performance in class and school, frequent absenteeism, increased disciplinary issues, difficulty progressing to higher levels of education, suspension, or dropping out of school.

Table 7.9: Academic consequences of substance use

Academic consequences	Examples	Real-life examples
These are problems related to school or educational performance that arise due to substance use.	Poor grades due to lack of focus or missed classes, school absenteeism because of hangovers or disciplinary issues, and dropping out of school due to academic failure or expulsion.	• Before using alcohol, marijuana or cocaine, Kojo was a bright student. After starting drugs, he struggled to remember lessons and eventually dropped out in SHS 3 due to poor performance and truancy. • ii. Emefa, a senior high school student, started using substances recently. She begins to skip classes, her grades drop, and she eventually fails her final exams.

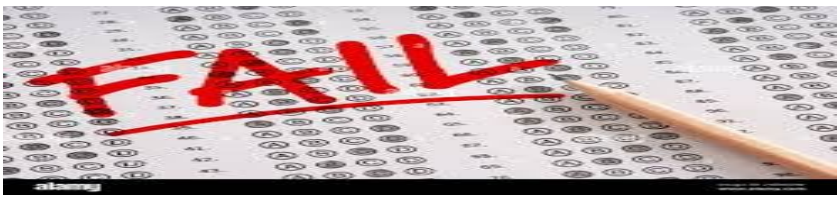


Figure 7.4: Academic implications of substance use

Table 7.10: Cognitive Consequences of Substance Use

Cognitive Consequences	Examples	Real-life examples
These refer to the effects of substance use on mental abilities, such as memory, concentration, reasoning, and decision-making.	Memory loss or forgetfulness, difficulty concentrating on lessons or tasks and slow thinking or poor decision-making.	• A senior high school student who uses prescription pills struggles to focus during lessons and forgets assignment deadlines, leading to repeated academic drawbacks. • Yaw and Fati were known for their athletic performance during inter-school and super zonal competitions. But after they began misusing substances, they took longer to understand their coaches' instructions and often sat quietly, unable to keep up with the pace of the training session. They started reacting more slowly to gun for their favourite 100m and 200m races and lost their form and usual first positions during competitions.

Social and Relationship Issues

These are problems that affect how a person interacts with family, friends, and society. When someone uses a substance, it often affects the way they communicate, behave, or relate to others. Most of the time leads to loss of trust, arguments, violence, or emotional distance in relationships.

Examples are: Arguments and fights with family or peers, becoming isolated or rejected due to behaviour changes, losing trust and breaking important relationships.

Table 7.11: Social and family issues about substance use

Family Conflicts: Constant arguments with parents or siblings due to behavioural changes, stealing, or staying out late	Example: A teenager who begins drinking regularly becomes aggressive at home, leading to tension with parents and siblings.
Loss of Friendships: Friends may distance themselves if they feel unsafe or uncomfortable around someone who uses substances.	Example: A student who uses drugs starts neglecting friends and behaving recklessly, causing friends to avoid them.
Relationship Breakdown: Substance use can lead to dishonesty, emotional neglect, or abuse in non-romantic or romantic relationships.	Example: A young adult's drug dependency causes them to lie, and break promises to their partner, resulting in a breakup.
Social Isolation: The person may become withdrawn or rejected by others due to strange or risky behaviour.	Example: A boy who abuses inhalants becomes withdrawn, loses interest in social activities, and stops attending group events.

Real-life scenarios

1. Abena started using glue as an inhalant. Her behaviour became strange and unpredictable. Her parents found it difficult to relate to her, and her friends stopped talking to her out of fear.
2. A group of students were caught using hard substances and misbehaving in their hostel and were suspended. The news reached their parents, who felt disappointed and betrayed. This led to frequent arguments, withdrawal of financial support and emotional distance between them and their parents. Upon return to school, classmates tease and avoid them, and some teachers treat them with suspicion, thinking they are troublemakers.

Legal and Criminal Consequences

These refer to the punishments faced when someone breaks the laws governing the use of substances. These penalties involve police actions, court cases, fines, arrests, or imprisonment, depending on the severity of the offence. When people use illegal drugs, drive under the influence, or engage in criminal behaviour while under the influence of substances, they face legal action. This means they are held accountable by law, which affects their future opportunities, such as employment or travel. These consequences are serious and long-lasting, affecting a person's record and limiting their chances of getting a job, travelling, or continuing education.

Examples include: Getting arrested for possession or dealing in illegal drugs, serving jail time or getting a criminal record and being denied opportunities such as travel, employment, or education.

Legal issues with real-life examples

1. Arrest for possession or use of illegal drugs: A young adult is caught with cocaine in their backpack and is arrested for drug possession.
2. Imprisonment for drug trafficking or dealing: A man selling marijuana without a licence is caught and sentenced to prison under Ghana's Narcotic Control Commission Act.
3. Fines or court appearance for underage drinking: A teenager is caught drinking alcohol at a public event and is fined or made to appear in juvenile court.
4. Revocation of driver's licence or jail time for drunk driving: A woman drives under the influence of alcohol, causes an accident, and is charged with reckless driving.

Real-life scenarios

1. Kpowa, a senior high school student, is caught in possession of cannabis during random police check in his neighbourhood while on his way to school. He was arrested and sentenced to 3 years in prison, losing his schooling, future job prospects and reputation among his peers in his neighbourhood, schoolmates and parents.

2. Abubo is addicted to substance use and starts stealing laptops, mobile phones from classmates, dorm mates and friends to sell and buy drugs. He is caught on CCTV and handed over to the police.
3. A group of students begin transporting small quantities of substances between towns for dealers in exchange for money and free drugs. They were arrested on a bus at a police checkpoint and jailed.

Figure 7.5: Legal implications of substance use

Economic and Employment Effects

These are financial losses and difficulties keeping or finding a job due to substance use. These effects can impact both the individual and society. At a national level, it increases public healthcare costs, law enforcement expenses, and reduces economic output due to an unproductive workforce. These effects show how substance use can drain personal finances, disrupt employment, and create long-term economic hardship.

Examples are: Wasting money on substances instead of basic needs, losing jobs due to poor performance or absenteeism, difficulty finding or keeping employment, reduced productivity at work, affecting income and opportunities and becoming financially dependent on family or others.

Economic and employment issues with real-life examples

1. Job loss due to substance use: A factory worker repeatedly reports to work under the influence of alcohol and is eventually fired for endangering safety and reducing productivity.
2. Financial strain from addiction: A man addicted to tramadol spends most of his money on the drug, fails to pay rent, and is evicted from his home.
3. Difficulty getting hired: A young woman with a criminal record for drug possession finds it hard to get employed even after rehabilitation.
4. Economic burden on family: A student drops out of school due to drug-related health issues, forcing the family to spend heavily on treatment and losing future earning potential.

Real-life scenarios

1. Akosua, a mother of two, spent most of her salary on alcohol and other drugs. She was frequently late to work and eventually got fired. Her children were forced to drop out of school due to a lack of funds.
2. A skilled technician loses multiple jobs due to ongoing substance addiction. After several firings, he is unable to find employment due to the unwillingness of employers to take the risk of hiring him again.

Accidents and Injuries

These are the harmful or dangerous events that happen because of substance use, often leading to physical damage to the user or others. When someone uses drugs or alcohol, it affects their judgment, coordination, reaction time, and awareness of danger. This makes them more likely to fall, get into road accidents, burn or cut themselves, or cause harm to others unintentionally. These accidents can happen at home, school, workplace, or on the road and may result in minor injuries or even death.

Examples include: Increased risk of car crashes, falls, burns and drowning.

Real-life scenarios

1. Burn injury at home: A teenager under the influence of glue (inhalant) forgets to turn off the gas while cooking and causes a fire.
2. Workplace accident: A mason drinks heavily before work, falls from a ladder due to poor balance, and breaks his arm.
3. Accident while walking: A girl using tramadol stumbles into traffic and is hit by a motorbike. Etico took some alcohol at a party and insisted on riding a motorbike home. He lost control and crashed, suffering a broken leg and head injury.

Addiction and Dependency

This is a condition where a person becomes physically or psychologically reliant on a substance. This means they feel a strong, often uncontrollable, urge to keep using the substance despite knowing it is harmful. Over time, they may need increasing amounts of the substance to feel the same effect (tolerance), and stopping use can lead to withdrawal symptoms like anxiety, sweating, or nausea.

Key Features of Addiction

Loss of self-control and increased craving, needing larger amounts to feel the same effect, and physical and emotional dependence on the substance.

Real-life scenario

Nana started taking codeine syrup to help with sleep. Months later, he could not function or sleep without it and began stealing money to buy more bottles. This shows both dependency (needing the drug regularly) and addiction (loss of control over use).

Impact on Family and Community

This refers to the negative effects that a person's substance use has not only on themselves but also on their family members and the wider community. When someone uses drugs or alcohol, it causes emotional, financial, and social strain on those close to them. It also increases crime, reduces productivity, and weakens community safety and trust. This means substance use not only affects the user but also affects their loved ones and the larger society.

Examples include: Increases school dropouts, teenage pregnancy, disrupts family harmony, domestic violence and divorce rates, causes children to suffer emotionally and academically, leads to child neglect and broken homes, affects neighbours and community peace, increases crime and causes fear in the community and leads to police involvement and public shame.

Real-life scenarios

1. Ama, a 35-year-old mother in Sunyani, began misusing drugs after losing her job. With time, she became aggressive at home, often neglecting her children's needs and getting into frequent arguments with her spouse. Her children started missing school, and her husband had to work extra hours to care for the home. Neighbours began to avoid the family because of loud fights and disturbances. In the end, Ama was arrested for publicly abusing her children, further damaging the family's reputation in the community.
2. In a neighbourhood in Kasoa, frequent drug use by some young people led to high theft and indiscipline cases in the area. Many families moved away due to insecurity.

Death or suicide

This is the ultimate and most severe outcome of prolonged or intense substance use, loss of life through accidental overdose, long-term health failure, or intentional self-harm (suicide). Substance use can severely affect brain function, decision-making, and emotional health, which may lead to fatal mistakes or suicidal thoughts, especially when combined with mental health challenges like depression or hopelessness.

Examples include: Substance-related deaths, suicidal behaviour due to worsening mental health, emotional impact on families and communities,

Real-life scenarios

1. Kwame, a 28-year-old man in Accra, started misusing tramadol to cope with work stress. He developed a high tolerance and began taking larger doses. One evening, he took an unusually high dose and collapsed at home. By the time his family found him, he had passed away from an overdose.
2. Esi, a university student in Ho, struggled with loneliness and academic pressure. She began misusing alcohol and marijuana to feel better. These substances worsened her depression and impaired her thinking. Feeling hopeless and unable to cope, she took her own life. Her friends and family were shocked, unaware of how deeply she was struggling.

WAYS TO PREVENT THE CONSEQUENCES OF SUBSTANCE USE

Table 7.12: Ways to prevent the consequences of substance use

Education and Awareness	Prevention begins with knowledge. When individuals like adolescents and young people are well-informed about the harmful effects of substance use, they are better equipped to make safer choices. Education fosters awareness of the physical, psychological, academic, legal, economic, and social consequences of substance and alcohol abuse. With this understanding, young people are more likely to recognise the risks involved and avoid experimenting with harmful substances. Informed adolescents are also more capable of resisting peer pressure and making independent decisions. Substance education plays a key role in correcting dangerous myths, such as the belief that taking substances enhances academic performance, makes one more confident in social settings, or serves as a quick fix for stress and emotional pain. When students understand that substances like tramadol, marijuana, cocaine, alcohol, and even inhalants can lead to addiction, poor mental health, imprisonment, broken relationships, and even death, they are more cautious and less likely to fall into use. To ensure sustained impact, drug education should not be a one-time lesson. Schools should integrate it into their regular programmes. For example, holding monthly substance awareness sessions can create a continuous learning experience. During these sessions, students can watch real-life documentaries that feature testimonies from recovering addicts, families affected by drug use, or communities battling drug-related violence. These stories make the dangers of substance use more relatable and real.
Strong Family and Peer Support	A stable, loving family environment and a supportive group of peers are among the most powerful protective factors that guard adolescents and young people against substance use. When individuals grow up surrounded by care, trust, discipline, and open communication, they develop the confidence and moral foundation needed to make healthy, informed decisions when faced with pressure to experiment with harmful substances. Parents and guardians play a central role in shaping the attitudes and behaviours of young people. When parents are actively involved in their wards' lives by checking in regularly, helping with schoolwork, setting clear expectations, knowing their wards' friends, monitoring how they spend their leisure time, and having honest conversations about the risks of substance and alcohol use, they create a strong emotional bond that promotes responsible behaviour. These consistent acts of involvement give children a sense of belonging, accountability, and direction. That is, being surrounded by positive, like-minded peers can reinforce good choices. Peer groups that value academics, healthy living, and personal growth create a safe space where young people are less likely to feel pressured into engaging in harmful behaviours.

Engagement in Positive Activities	One of the most effective ways to prevent substance use among adolescents is by encouraging the constructive use of time. When young people are meaningfully engaged in activities that interest and challenge them, such as hobbies, sports, music, volunteer work, entrepreneurship, or creative arts. They are less likely to be drawn toward negative behaviours like substance or alcohol use. Engaging in positive activities keeps adolescents or young people occupied, leaving less idle time for boredom or peer pressure to take root. Young people who discover their talents and strengths through these outlets feel more confident in themselves and less likely to seek temporary highs or acceptance through substance use. This helps them build self-esteem and a sense of purpose. For example, adolescents involved in school clubs such as the choir, drama team, or debate society, or those participating in community sports teams like football, volleyball, or athletics, often devote their afternoons and weekends to practice, rehearsals, matches, and competitions. Their time is filled with goal setting, collaboration, and personal development. As a result, they spend less time in environments where they could be exposed to drugs or alcohol. In addition, participating in volunteering or social initiatives like taking part in a community clean-up nurtures a sense of responsibility, belonging, and service.
Access to Counselling and Mental Health Services	Many individuals who use substances or alcohol do so as a way of escaping emotional pain, unresolved trauma, stress, depression, or anxiety. When these psychological challenges are not identified and addressed early, people, especially adolescents and young adults, may turn to harmful substances for temporary relief or to feel a sense of control or pleasure. By promoting mental health awareness and providing access to counselling, therapy, and support groups, individuals can be helped to manage their emotions in healthy, non-destructive ways. Schools, workplaces, religious groups, and community centres can all play a role by having trained professionals or referral systems in place. Encouraging open conversations about mental health also helps to reduce stigma, allowing more people to seek help before their situation worsens.
Effective Law Enforcement and Policies	Establishing and enforcing clear laws against the illegal production, distribution, and use of harmful substances will play key roles in preventing substance use. These laws act as a deterrent by imposing penalties such as fines, imprisonment, or closure of businesses that violate regulations. Law enforcement agencies like the police, drug control commissions, and regulatory bodies must work actively to monitor pharmacies, schools, entertainment spots, and communities where substance use may occur. When laws are strictly applied and supported by regular public education, it becomes harder for harmful substances like tramadol, cocaine, marijuana, glue, or alcohol to reach vulnerable groups, especially adolescents and young adults. The presence of visible law enforcement and publicised arrests or clampdowns sends a strong message that drug use is not tolerated in society.

Community-Based Prevention Programmes	Preventing substance use is most effective when the entire community collaborates. It is not the sole responsibility of schools or families; rather, it requires a joint effort among various stakeholders, including schools, religious organisations (churches, mosques), health clinics, non-governmental organisations (NGOs), law enforcement agencies, and community leaders. Each of these groups plays a unique and valuable role. Schools provide structured education on the harmful effects of substances, teach life skills, and foster supportive peer relationships. Religious institutions offer moral guidance, counselling, and spiritual support, and can organise youth empowerment programmes that discourage substance use. Health clinics can provide early screening, counselling, and rehabilitation services for individuals at risk or already affected by substance use. NGOs often have the resources and expertise to run awareness campaigns, peer mentorship programmes, and support groups. Local authorities and law enforcement help maintain a safe environment by enforcing laws against drug trafficking and underage drug use. When these community arms unite, they create a protective network around young people, offering support, guidance, and positive alternatives to substance use. One of the most impactful examples of this is when communities establish youth-friendly centres that can serve as safe havens for young people.
Strengthening Religious and Moral Values	Moral and spiritual teachings play a significant role in shaping the attitudes, values, and behaviours of young people. These teachings, often delivered through religious institutions such as churches, mosques, and traditional belief systems, emphasise core values such as discipline, self-respect, responsibility, honesty, compassion, and the sanctity of life. By instilling these values early in life, young people are better equipped to make informed and ethical decisions, such as the ability to resist the lure of substances and other harmful behaviours. Spiritual guidance often teaches that the body is a sacred gift that should be nurtured and protected. Many faiths strongly discourage behaviours that cause harm to oneself or others, including substance use. For instance, religious texts and sermons may highlight how substances can destroy not only physical health but also relationships, productivity, and one's purpose in life. This moral foundation helps individuals develop a strong sense of identity and self-worth, which reduces the likelihood of seeking escape or validation through drugs.
Providing Life Skills and Vocational Training	Many young people, especially those living in under-resourced or disadvantaged communities, turn to substances out of a sense of hopelessness, frustration, or lack of direction in life. When individuals feel they have no purpose, no opportunities, or no future to look forward to, they may be more prone to experimenting with substances as a form of escape or a way to numb emotional pain.

	Teaching practical life skills such as effective communication, decision-making, conflict resolution, emotional intelligence, and goal-setting can help build confidence and resilience. These skills help individuals navigate peer pressure, solve problems in healthy ways, and make informed choices. At the same time, vocational training and entrepreneurship education provide young people with hands-on abilities that can be turned into careers, such as carpentry, fashion design, baking, tiling, hairdressing, computer skills, or bead-making. These skills not only keep them occupied but also provide a sense of achievement, financial independence, and purpose.

Developing Refusal and Decision-Making Skills

Many adolescents and young people are introduced to substance use not out of curiosity, but due to peer pressure. The strong influence of friends or social circles to engage in behaviours that may be harmful or risky. Often, these individuals do not know how to refuse such offers confidently or fear being rejected, laughed at, or labelled as 'old-fashioned' if they say no.

This lack of confidence, combined with the desire to fit in, makes them vulnerable to trying alcohol, tobacco, or other drugs. To address this, adolescents and young people should be taught the skills and confidence needed to resist peer pressure. When adolescents are equipped with strategies to say 'no' well and without guilt, they become more empowered to make safer, healthier decisions, even in difficult social situations.

One of the best ways to do this is through peer pressure education and refusal skills training, such as organising peer pressure workshops. In these workshops, students should be taught to recognise when they are being pressured and are given practical, respectful phrases they can use to decline substance offers, such as;

'I am not into that.'

'I have better things to do.'

'No thanks, I am good.'

'That is not how I want to live my life.'

'I promised myself I would not.'

The sessions should also include role-play activities, where participants can practise these phrases in realistic scenarios, such as being offered other substances or alcohol at a party or pressured by friends to skip school to use substances. Practising these situations in a safe classroom environment will help students build the confidence and muscle memory needed to stand their ground in real life. Also, teaching adolescents to set personal boundaries and understand the consequences of substance use will further strengthen their ability to walk away from risky situations without regret.

Early Intervention For At-Risk Individuals

Timely help for individuals who are beginning to use substances is one of the most effective ways to prevent addiction, long-term health problems, and destructive life outcomes. When signs of use are identified early, support can be provided before the behaviour becomes deeply rooted or causes serious harm. Early intervention not only protects the individual but also benefits families, schools, and the broader community. Substance use often starts slightly with small changes in behaviour, mood, or academic performance.

These signs can include sudden withdrawal from activities, declining grades, loss of interest in hobbies, increased violence or secrecy, or hanging out with a new peer group involved in risky behaviours. If these warning signs are noticed early by parents, teachers, friends, or community members, the young person can be guided towards support services before addiction takes hold. Support may include:

1. Counselling: Trained professionals can help the individual explore the reasons behind their drug or alcohol use and develop healthier coping mechanisms.
2. Mentoring: A trusted adult or peer mentor can provide guidance, emotional support, and positive role modelling.
3. Support groups: Peer support or recovery groups offer a safe space where individuals can talk about their challenges and learn from others with similar experiences.
4. Referral services: Schools and clinics may refer the individual to health professionals or rehabilitation services if needed.

Activity 7.2 Exploring the Consequences of Substance use

1. By yourself, what do you think is the answer to the following riddle?

   'I can give you a quick high,

   But take away your future in a twinkle of an eye.

   You might think I am fun or cool,

   But I turn the wise into a fool.

   What am I?'

   Share your ideas in a class discussion.
2. Organise yourself into a group of 3-5 people and discuss the following questions:
   a. Why do you think something people try for fun can become so harmful?
   b. Can one wrong decision change a person's future? In what ways?
   c. Can something that feels good in the moment end up causing long-term harm? How?

3. Your teacher has set up stations around the classroom, each with a scenario relating to substance use. With your group, move around the classroom. Your teacher will tell you when it is time to move on to the next station.
4. At each station, read the scenario and answer the questions provided. Make notes so you can provide feedback to your classmates.
5. Choose one of the scenarios, identify and write down the real-life consequences of substance use your chosen scenario.
6. Choose another scenario and discuss how the situation in the scenario could have been avoided. Present your group's findings to the whole class.

EXTENDED READING

- Appiah, R., Danquah, S., & Adjei, P. (2017). *Youth and drug use in Ghana: Emerging trends and implications for health education*. Accra: University of Ghana Press.
- Ghana Education Service. (2020). *Curriculum for Physical Education and Health Education (PEH), SHS Levels*.
- National Institute on Drug Abuse (NIDA). (2023). *Drugs, brains, and behaviour: The science of addiction*. https://nida.nih.gov/

- UNODC (United Nations Office on Drugs and Crime). (2022). *World Drug Report*. https://www.unodc.org/unodc/en/data-and-analysis/wdr2022.html

- World Health Organisation. (2018). *Global Status Report on Alcohol and Health*. Geneva: WHO. https://www.who.int/publications/i/item/9789241565639

REVIEW QUESTIONS 7

1. How might peer pressure and media influence a teenager's decision to try substances such as alcohol or drugs? Propose a strategy you would use to resist these influences.
2. Compare two common substances (e.g., alcohol and marijuana) in terms of their short-term effects on physical and mental health. Based on your comparison, argue which poses a greater risk for senior high school students and why.
3. Think of a real or imagined story where someone at your age used drugs or alcohol. Analyse how the substance use affected their relationships, health, and future opportunities. What could have been done differently to avoid those consequences?
4. Evaluate the short-term and long-term consequences of substance use on a student's academic performance. How might continue use create a cycle of failure, and what steps could a school take to help prevent this?

SECTION

8

RECREATIONAL ACTIVITIES – PART ONE

PHYSICAL ACTIVITY AND HEALTH

Recreational activities

INTRODUCTION

Welcome to the exciting world of recreational activities! As you enter this new phase of your education, it is essential to understand the importance of engaging in activities that are not only enjoyable but also beneficial for your physical, mental, and social well-being. Recreational activities provide a unique opportunity to relax, develop new skills, and build lasting friendships. In this section, we'll explore various types of recreational activities, their benefits, and how you can incorporate them into your daily life.

KEY IDEAS

- **Recreational activities** can be classified into indoor and outdoor, active and passive, and individual or group activities. Understanding these categories will help you choose activities that suit your interests and preferences.
- Engaging in regular recreational activities improves cardiovascular health, enhances strength and flexibility, and helps maintain a healthy weight. Physical fitness is crucial for overall well-being and academic performance.
- Recreational activities reduce stress, anxiety, and depression. They promote positive emotions and improve mood, contributing to a more balanced and fulfilling life.
- Participating in recreational activities fosters teamwork, communication, and the formation of friendships. These social connections are vital for emotional support and can enrich your school experience.
- Recreational activities can improve focus, memory, and problem-solving skills. Engaging in stimulating activities helps sharpen your mind, which is beneficial for academic success.
- Recreational activities encourage discipline, responsibility, and time management. By setting goals and planning your participation, you learn valuable life skills that extend beyond the classroom.

ANALYSING RECREATIONAL ACTIVITIES

RECREATIONAL ACTIVITIES

Recreational activities are enjoyable and voluntary actions that individuals choose to engage in during their free or leisure time. These activities are not imposed or required but are done for personal satisfaction, relaxation, enjoyment, and overall well-being. People participate in recreational activities to refresh their minds, reduce stress, enhance social interaction, and improve their physical and mental health. Examples include sports, dancing, singing, playing games, walking, storytelling, drawing, and

other creative or physical pursuits. Recreational activities play an important role in promoting a balanced lifestyle, building confidence, and developing social and teamwork skills.

Leisure Time

Leisure time refers to the period when a person is free from work, school, or other obligations or responsibilities and can choose how to spend their free time. In short it is one's free time. It is time available for rest, relaxation, hobbies, or recreational activities, based on one's personal interests. Leisure time is not structured or compulsory unlike school or job hours. It allows individuals to revitalise, have fun, or learn new things. People may use leisure time to play games, watch movies, exercise, read, listen to music, or spend time with family and friends. For example, if school closes at 2:00 PM and a leaner or teacher has no homework or chores until dinner at 6:00 PM, the time in between can be considered their leisure time. They can choose to play football, read a comic book, or relax watching TV during that period.

The Difference Between Leisure Time and Recreational Activities

Table 8.1: The difference between leisure time and recreational activities

Leisure Time	Leisure time is the free time a person has outside of work, school, or daily responsibilities, during which they are not obliged to do any specific task. It is simply unstructured or unscheduled time. Example: A Saturday afternoon with no chores or school work to do. Leisure time is time-based not an activity itself, but the opportunity to do what you enjoy.
Recreational Activities	Recreational activities are the enjoyable and purposeful things people choose to do during leisure time to relax, refresh, or entertain themselves. These activities can be physical, mental, social, or creative. Example: Playing football, dancing, reading, painting, or hiking. It is activity-based something one does during leisure time. Hence, leisure time is the opportunity while recreational activities are how that opportunity is used.

Figure 8.1: Recreational activities engaged in during leisure time

TYPES OR CATEGORIES OF RECREATIONAL ACTIVITIES

Indoor and Outdoor Activities

Indoor Activities

Indoor recreational activities are activities carried out within enclosed spaces such as homes, school halls, gyms, or community centres. They are often organised in controlled environments, making them suitable regardless of weather conditions.

Examples

1. Board Games: Playing games such as chess, ludo, oware, dame or draught, monopoly and card games in an enclose areas like the gym, classroom, church or community centres.
2. Arts and Crafts: This is an engaging creative activity like painting, drawing, colouring, cutting, gluing, moulding, bead-making, weaving or making any decorative items for fun, relaxation and self-expression rather than for commercial purposes.
3. Dancing: This is moving the body rhymical to music for fun and social enjoyment rather than for professional performances or competition. Participating may engage in structured dance classes or social dancing.
4. Cooking/Baking: This is preparing food or baked items like bread or snacks for fun, creativity and enjoyment or experimenting with new recipes or cuisines.
5. Reading: This is reading books, novels, short stories, poetry, magazines, and non-fiction materials for pleasure, entertainment, or personal enrichment rather than for academic or work-related purposes.
6. Video Gaming: This is playing electronic games on a computer, console, tablet or smartphone for fun and entertainment but not for monetary gains.

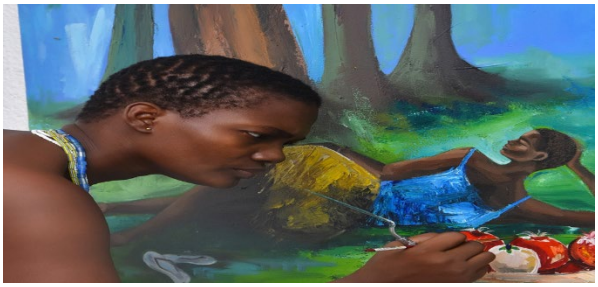


Figure 8.2: Expressing thoughts in painting

Figure 8.3: Relaxing by enjoying reading

Outdoor Activities

Outdoor recreational activities are activities that take place in open-air environments such as school fields, parks, beaches, or neighbourhoods. They usually involve more movement and space and are often social in nature.

Examples

Table 8.2: Outdoor recreational activities

Hiking or nature walk	This involves walking in a natural environment, often along trails, paths or a natural landscape such as forests, hills, mountains or parks for enjoyment or fun.
Camping	This is staying or spending a time outdoor, most often overnight in a temporary shelter such as a tent, camper or cabins in natural settings like forests, parks, mountains and beaches.
Fishing	This is catching fish for pleasure, relaxation, sport or leisure rather than for commercial purposes.
Biking	This is riding a bicycle for fun, fitness or for recreation rather than for transportation.
Sports	This is engaging in fun games or athletic activities social interaction rather than for professional competition or monetary gain.
Swimming or surfing	This is engaging in water-based activities in pools, rivers, lakes or ocean or sea for enjoyment, fun, relaxation, and exercise.
Photographing	Taking pictures for fun, relaxation and personal satisfaction than for professional or commercial purposes.

Lime on spoon	A fun and joyous game where participants race while balancing lime or lemon on a spoon, usually held in the mouth or hand.
Musical chairs	A group game where participants walk or dance around a circle of chairs while music plays. When the music stops, everyone tries quickly find a chair to sit on. Normally the chairs are less person and the one who did not get a chair to sit on is out of the game and one chair is taking out.
Fill my cup	A fun and engaging game where participants race to fill a cup or a container with water using a small tool such as a spoon, sponge or a cup with holes.
Sack race	A playful and energetic game where participants place both legs inside a sack (usually cocoa sacks) and hop or jump forward towards a finish line.
Picking pebbles	A simple fun game where participants collect or pick up pebbles or small objects from the ground, often under specific rules such as time limits, using only one hand or while blindfolded.
Pick and act (charades)	A fun and interactive game where participants randomly pick a card, paper slip or object that has a word, phrase, action, or character written on it and then act it out without speaking.
Tug of War	A physically engaging game where two teams pull on opposite ends of a rope, trying to drag the other team across a central line or marker.

Figure 8.4: Photographing as a recreational activity

Figure 8.5a: Canopy walk at Kakum National park

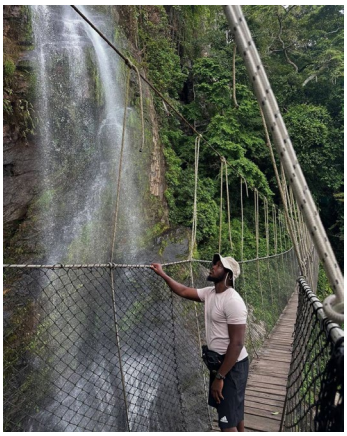


Figure 8.5a: Canopy walk at Amedzofe Falls

Figure 8.6: Camping as a recreational activity

Active and Passive Recreational Activities

Active Recreational Activities

Active recreational activities are those that involve physical movement or exertion. These activities are often done for fun, fitness, and relaxation but still require the participant to be physically engaged. These activities are often used to promote physical fitness, improve motor skills, and teach cooperation.

Examples

1. Dancing
2. Swimming
3. Cycling
4. Hiking
5. Playing football or basketball
6. Skipping rope

Passive Recreational Activities

Passive recreational activities are those that do not require significant physical effort. They are mostly relaxing, quiet, and mentally refreshing rather than physically demanding.

Examples

1. Reading
2. Watching movies or plays
3. Listening to music
4. Bird watching
5. Playing board games
6. Drawing or painting
7. Storytelling

Individual and Group Recreational Activities

Table 8.3: Individual and group recreational activities

Type of Recreational activity	Description	Examples
Individual	These are recreational activities that a person does alone. They focus on personal enjoyment and self-improvement. The individual is responsible for their own pace, effort, and progress.	• Jogging or walking • Swimming alone • Reading • Yoga or meditation • Painting or drawing • Skipping rope
Group or social	These are recreational activities done with others either in pairs, small groups, or large teams. They promote social interaction, cooperation, and teamwork.	• Football or volleyball • Dancing in a group • Hiking with friends • Drama or music groups • Board games or card games • Playing 'Ampe' or other traditional games

Figure 8.7: Riding for Leisure

Figure 8.8: Recreational cooking

Activity 8.1 The Different Types of Recreational Activities

1. Ask the person next to you 'What do you do for fun?
2. With your partner, use the internet and search for the meaning of recreational activity and leisure.
3. Share your findings with the whole class.
4. List as many different types of recreational activities as you can.
5. Categorise your listed recreational activities into:
   a. Indoor / Outdoor
   b. Active / Passive
   c. Individual / Group
6. Present your categorised results to the whole class.

NEXT: Explore Community Recreational Activities

1. With a partner, design 4 to 5 survey questions to find out the most preferred recreational activities in your community.
2. Conduct a mini survey in your community using your questions to collect responses.

3. Analyse the survey results to identify the most popular recreational activities.
4. Discuss the possible health and social benefits of the popular activities identified.
5. Prepare a 1-page summary report of your findings for class discussion next week.

PARTICIPATION IN RECREATIONAL ACTIVITIES

Participation in recreational activities refers to the active involvement of individuals in various leisure or non-obligatory activities that are done during one's free time for enjoyment and personal satisfaction. These activities are usually self-chosen and may include both physically engaging as well as less physically demanding ones. Participation can be done individually or in groups. It may take place indoors or outdoors. Participating in a variant of recreational activities helps them discover their interests, build lifelong habits of active living, and reflect on how such engagements affect their mood, body, and social interactions.

DESCRIPTION OF HOW TO PERFORM SOME RECREATIONAL ACTIVITIES

Description and Material Needed

Table 8.4: Description and material needed for some recreational activities

Game	Description	Material needed	Game procedure
Lime on spoon	This a fun balancing and coordination game where each participant walks or runs a set distance while holding a spoon with a lime (or any small round object like a marble or lemon) in it. The challenge is to complete the course without dropping the lime.	Tablespoons (one for each player), Limes (or small balls/marbles of similar size), Cones or markers to define the starting line and finish line. Stopwatch or timer (optional)	i. Mark a clear start and finish line about 5 to 10 metres apart (adjust distance for age group). ii. If playing as a relay, divide learners into teams and place them behind the starting line.
Musical Chairs	This is a classic group game that combines movement, music, quick thinking, and friendly competition. Players move, walk or dance around a set of chairs arranged in a circle or oval while music plays.	Chairs (one less than the number of participants), Music player (phone, speaker, music box, etc.),	i. Arrange chairs in a circle with the seats facing outward. The number of chairs should be one less than the number of learners.

	The chairs are always less one person (that is if the learners are 10, the chairs should be 9. So, that one person will remain standing after all others are seated, and the one standing is out of the game). When the music stops, everyone must find and sit in a chair. After each round, one chair is removed, and the game continues until only one chair and two learners remain. The last learner to sit wins the game.	Open space for setting up the chairs, and Someone to control the music (teacher or facilitator).	ii. Ensure enough space around the chairs for learners to move safely in a circle.
Fill My Cup	This is a team-based relay game where learners use a sponge, cup, or small container to transfer water from a source container to a target container placed at a certain distance away. The team that fills their target cup to a set level within the shortest time or before time runs out wins	Large bucket or container filled with water (source), Small sponge, plastic cup, or ladle (one per team), Empty measuring cup or plastic cup or plastic bottle (target container – one per team), Stopwatch or timer (optional), Cones or markers to define the playing area, and Towel or mop (for cleanup)	i. Divide learners into equal-sized teams (6 learners per team is ideal). ii. Place each team's source bucket at the start line. iii. Place the empty target cup at a set distance away (e.g., 5–10 metres, depending on the space). iv. Provide each team with one sponge or a perforated small cup. v. Mark a fill line on the target cup using a marker or tape.
Picking Pebbles	This is a fast-paced, fine motor skills game in which learners race against time to pick up as many small items (like pebbles, beads, buttons, or bottle caps) as possible and transfer them to a container. It promotes dexterity, focus, coordination, and quick decision-making.	Small objects (e.g., pebbles, marbles, beans, paper balls, seeds, bottle tops) about 50-100, One container per learner (to drop into), Timer or stopwatch, and Flat surface (table or floor)	i. Shatter the pebbles or small objects at one end of the playing area. ii. Provide each learner with an empty bowl or cup placed at a distance away (about 4 to 5 metres away). iii. If using a table, place the empty bowl on the opposite side of where the objects are shattered.

Storytelling	Storytelling is an engaging oral activity where participants share real-life experiences, folk tales, fictional stories, or imaginative narratives with others. It can be played as a fun recreational group activity or used as part of learning in a Physical Education.	Chairs arranged in a semi-circle (optional), Talking stick or storytelling object (optional – used to signal the storyteller), Timer or stopwatch (optional) Story prompt cards (optional).	i. Have participants sit in a comfortable circle or semi-circle, which creates a relaxed and inclusive atmosphere. ii. Choose who goes first – this could be random, by drawing lots, or a volunteer.

How to Perform the Recreational Activities

Table 8.5: How to perform some of the recreational activities

Game	Explain the objectives	Playing the game	Variations	Rules of the game	Skills and Values Developed
Lime on Spoon	Learners must walk or speed-walk from the starting line to the finish line while holding a spoon with a lime in it. Again, the lime must not fall off the spoon, and players cannot touch the lime with their other hand.	Each learner holds the handle of the spoon with the lime resting in the bowl of the spoon. On the teacher's or referee's signal (Ready, Set, Go), players begin walking carefully toward the finish line. If the lime falls, the learner must go back to the starting line, place the lime back on the spoon, and begin again. The first person (or team) to complete the course successfully without dropping the lime wins.	Use a relay format where team members take turns. Introduce obstacles (e.g., cones to walk around) for advanced levels. Time the activity and challenge learners to beat their personal best.	Learners must hold the spoon with one hand only. Learners cannot use the other hand to steady or touch the lime once the game begins. If the lime drops, the player must restart from the starting line. Running is discouraged (unless the level is advanced); encourage careful movement or walking. The lime must stay on the spoon throughout the race until the learner crosses the finish line. The winner is the first learner (or team) to finish without dropping the lime.	Balance and coordination Patience and focus Fine motor control Sportsmanship and fun competition

Musical Chairs	Learners must move, walk (or dance) in a circle around the chairs while the music is playing. When the music stops unexpectedly, learners must quickly find and sit on a chair. The learner without a chair is eliminated, and one chair is removed for the next round.	Have all participants stand around the circle of chairs. Begin playing the music. learners start walking in a clockwise direction around the chairs. Randomly stop the music after a few seconds. learners must immediately find a chair and sit. The learner left standing is eliminated from the game. Remove one chair and repeat the process. Continue until only one learner is left sitting and that learner is the winner.	Use themed music (e.g., cultural, seasonal) to increase engagement Add a rule that learners must perform a short action (e.g., clap, jump, or spin) before sitting.	Learners must walk or dance around the chairs while the music plays, no hovering or touching chairs early. Learners must not push, shove, or block others from sitting. Only one person is allowed per chair. Once a learner is eliminated, they must not interfere with the remaining rounds The music controller should stop the music randomly and fairly to keep the game fun and unpredictable.	Alertness and quick reaction Listening and focus Speed and agility Fair play and respect Emotional control (handling elimination with sportsmanship)
Fill my Cup	**Safety and Clean-Up** Ensure the playing area is safe and free of sharp objects or slippery surfaces. Have towels or mops ready to clean spills. Encourage learners to wear non-slip shoes if possible	The first learner dips the sponge or cup into the source bucket, filling it with as much water as possible. They rush to the target cup and squeeze or pour the water into it. They run back and hand over the sponge or cup to the next teammate in line. The process continues in relay fashion.	**Obstacle version** Add cones to weave through. **Blindfold version** The water carrier is blindfolded and guided by teammates **Reverse relay**	Only one learner moves or runs at a time. Learners must use only the sponge or cup provided, no hands allowed for scooping or carrying water. Learners must not spill or intentionally pour water outside the target container. Teams must take turns, no skipping of learners.	Teamwork and cooperation Motor coordination and balance Patience and turn-taking Strategic thinking (e.g., how to carry water efficiently) Hydration and water conservation awareness (optional discussion point)

		The game ends when; One team reaches the fill line on the target cup first, or A set time (e.g., 5 minutes) has elapsed, and the team with the most water in their cup wins.	After filling the cup, teams try to transfer water back to the source.	Running is allowed, but no pushing or interference with other teams.	

Figure 8.9: Young People engaging in Lime on Spoon Game

Figure 8.10: Musical Chairs Game

Figure 8.11: Pebble picking

How to play Picking Pebbles

Game Procedure (Step-by-Step)

Table 8.6: How to perform picking pebbles as recreational activity

Starting Position	• Each learner stands or kneels behind the starting line where the pebbles are • On the teacher's signal (Ready, Go), players begin the race. • learners must pick up one pebble at a time using only one hand and transfer it to the empty container at the finish spot (e.g., table edge or floor mark). • They must walk or speed-walk to the drop point, deposit the pebble, return, and repeat.
Time Limit	• The round continues for a fixed time (e.g., 30 seconds to 1 minute). • When time is up, learners stop immediately and count how many pebbles they transferred successfully.
Winning	The learner with the highest number of pebbles collected in their bowl at the end of the round is the winner. Rules of the Game • Learners must pick only one pebble at a time. • No running unless the teacher allows it as a variation. • Learners must use only one hand to pick and transfer the pebbles. • Dropped pebbles must be left until the end (or a 5-second penalty can be imposed). • The pebble must land inside the bowl to count; dropped pebbles outside do not count.
Variations	• Use chopsticks or tweezers for an extra challenge. • Make it a team relay (learners take turns picking pebbles). • Add an obstacle (e.g., step over a rope or crawl under a desk). • Vary the size or shape of the objects for difficulty.
Skills and Values Developed	• Fine motor skills and hand-eye coordination • Speed and concentration • Teamwork and fair play (in relays) • Counting and data recording (math integration)

Story Telling as a Recreational Activity

How to Play: Step-by-Step Procedure

Table 8.7: How to tell story as a recreational activity

Introduction to the Game	• Explain to learners that storytelling is about creatively sharing stories aloud. Emphasise that there are no right or wrong stories, and all ideas are welcome. • Let them know the story can be real, imagined, cultural, or humorous.
Starting the Storytelling	• The first person stands or sits with a 'story stick' or other symbolic object to show it's their turn to speak. • The storyteller shares a story within a 2–3-minute limit (adjust as needed depending on age). • Encourage expression through gestures, tone, and movement.
Taking Turns	• After the first story, pass the storytelling object to the next person in the circle. • Continue until everyone who wants to has had a turn.
Optional Variations	• Chain Storytelling: One person starts a story, and others continue it one by one. • Theme-based Storytelling: Give a theme (e.g., 'a lesson I learned', 'a magical adventure, 'my funniest day'). • Prompt Cards: Prepare slips with story prompts (e.g., 'Tell a story about a talking animal' or 'A time you got lost') to help learners who feel shy or stuck.
Rules of the Game	• Only the person with the storytelling object (or the one chosen) may speak. • Listeners must be respectful and quiet during others' turns. • Stories should be appropriate for all listeners. • No interrupting or correcting the storyteller. • Participation is encouraged but can be optional for shy learners.
Skills and Values Developed	• Listening skills: Encourages full attention and active listening. • Imagination and creativity: Promotes original thinking and fantasy creation. • Verbal expression: Enhances vocabulary, voice projection, and storytelling techniques. • Cultural awareness: Learners can share stories from their homes or traditions. • Confidence and empathy: Sharing builds confidence; listening promotes understanding.

Figure 8.12: By the Fire Side, Storytelling by Maame Dokonor

Activity 8.2 Participate in Recreational Activities

1. **Follow the leader**

   Organise yourself into a group of 6 people. Form a line with each person standing behind a classmate. The first person performs simple, fun movements such as:

   a. Jogging on the spot
   b. Skipping
   c. Jumping jacks
   d. Dancing steps
   e. Walking on tiptoes
   f. Pretending to dribble a ball or row a boat

   After **30 seconds**, change the leader so each group member has a chance to lead and express themselves.

2. **Recreational Circuit Challenge**

   With your group from point 1 above, move through eight different circuit stations, performing:

   a. Skipping Rope Challenge
   b. Storytelling Circle
   c. Lime on Spoon Relay
   d. Musical Chairs
   e. Pebble Pick-Up
   f. Tug of War
   g. Read and Reflect Zone

h. Mini Target Toss

You will find instructions for each activity at the station. If you are unsure, remember to ask your teacher for help.

3. **Record Your Participation**
   a. List the activities you completed during the recreational sessions.
   b. For each activity, write one benefit it offers (physical, mental, or social)
4. Share your findings with the whole class and discuss the overall benefits of participating in recreational activities. Present your group's ideas to the class.

EXTENDED READING

- Adolescent leisure reading and its longitudinal association… (2023). *Scientific Reports*. Retrieved from https://www.nature.com/articles/s41598-023-35346-7

- A Systematic Review of Wildland Recreational Activities Outcomes. (n.d.). *Journal of Outdoor Recreation, Education, and Leadership*. Retrieved from https://js.sagamorepub.com/index.php/jorel/article/view/8382

- Developmental participation in outdoor recreation and perceived well-being. (2021). *Journal of Outdoor Recreation and Tourism*. Retrieved from https://www.sciencedirect.com/science/article/pii/S221307802100061X

REVIEW QUESTIONS 8

1. Discuss the importance of engaging in both active and passive recreational activities for adolescents. How do these activities contribute to overall well-being?
2. Evaluate the role of social interaction in recreational activities. How does it affect adolescents' development and relationships?
3. Examine the barriers that may hinder adolescents from participating in recreational activities. What strategies can be implemented to overcome these challenges?
4. Analyse how the development of personal recreational activity plans can benefit adolescents in managing their time and improving their health.
5. Discuss the significance of incorporating traditional recreational activities into the curriculum. How do they contribute to cultural awareness and community building among adolescents?

SECTION

9

HEALTH AND WELLNESS - PART FOUR

PHYSICAL EDUCATION AND HEALTH

Health and Wellness

INTRODUCTION

In our daily lives, injuries, illnesses, and other health conditions can sometimes affect how we move, think, feel, or carry out normal activities. Fortunately, rehabilitation offers a pathway to recovery and regaining independence. Over the next three weeks, you will explore the essential role rehabilitation plays in restoring health and functionality after setbacks caused by injury, illness, disability, or substance misuse. In this section, you will explore the importance of rehabilitation in helping individuals recover after injury, illness, disability, or substance misuse. Rehabilitation aims to restore physical strength, mental health, and the ability to return to daily activities such as school, work, or social life. We will look at the meaning and types of rehabilitation, such as physical, psychological, occupational, and social rehabilitation. You will learn how these support individuals in recovering physical strength, mental stability, communication skills, and the ability to return to work, school, or daily routines.

KEY IDEAS

- **Rehabilitation** is a set of interventions designed to optimise functioning and reduce disability in individuals with health conditions in interaction with their environment.
- Rehabilitation aims to restore an individual's physical, emotional, and cognitive capabilities and improve quality of life following illness, injury, or substance misuse.
- Rehabilitation helps restore mobility, manage pain, rebuild skills, overcome substance dependency, and improve emotional resilience.
- **Professionals involved in rehabilitation** include physiotherapists, occupational therapists, psychologists, speech and language therapists, nurses, doctors, social workers, and rehabilitation counsellors.
- Common barriers include stigma, cost, distance to care centres, lack of trained personnel, and poor awareness.

REHABILITATION

Figure 9.1: A man undergoing rehabilitation

DESCRIPTION OF REHABILITATION

Rehabilitation is the process of helping individuals restore their physical, mental, and emotional abilities after an illness, injury, or surgery. It aims to regain lost functions, improve quality of life, and support a return to daily activities through structured therapy, exercise, and medical care. Rehabilitation encompasses various types of treatments and support services, including physical therapy, occupational therapy, speech therapy, counselling, and medical care, tailored to everyone's specific needs. It can also involve learning how to care for oneself, using walking aids (such as crutches or wheelchairs), and preventing future injuries. A team of health professionals, including doctors, nurses, physiotherapists, and social workers, usually works together to create a care plan suited to the person's situation.

Rehabilitation can take place in hospitals, clinics, specialised centres, or even at home. Ultimately, rehabilitation is not just about healing but a process that helps people regain their independence, live with dignity, and participate in everyday life with confidence.

Importance and Purpose of Rehabilitation

Table 9.1: Importance and Purpose of Rehabilitation

Restores Function and Independence or Helps People Get Better	Rehabilitation plays an important role in helping individuals regain abilities that were reduced due to injury, illness, surgery, or disability. Through targeted therapies such as physiotherapy, occupational therapy, or speech therapy, people can relearn skills like walking, dressing, speaking, or eating. This empowers them to meaningfully do things independently at home, school, or work and reduces their dependence on others.

Improves Quality of Life or Makes Life Better	When people recover their physical abilities and learn how to manage their condition, they experience less pain, stress, and discomfort. Rehabilitation can help them return to activities they enjoy, maintain relationships, and feel more confident in their capabilities. This contributes to emotional well-being and a better overall life experience.
Promotes Recovery and Healing or Helps the Body Heal Faster	Rehabilitation supports the natural healing process. Rehabilitation uses special exercises and treatments to help the body heal. It helps people feel better quickly and avoid more problems. Techniques such as muscle strengthening, joint mobilisation, mental health counselling, and cognitive exercises are used to help the person speed up recovery after surgery, strokes, fractures, or mental health crises. For example, early physical therapy after surgery can reduce stiffness and muscle wasting.
Prevents Complications and Relapse or Stops Problems from Getting Worse	Rehabilitation teaches individuals how to care for their condition and avoid behaviours or situations that might worsen their health. For instance, people recovering from a stroke may learn exercises to improve balance and prevent falls. Those recovering from substance misuse may receive counselling and support groups to reduce the chance of relapse or going back to their old behaviour that led to the addiction.
Supports Mental and Emotional Well-being	Adjusting to a new physical condition or trauma can be emotionally challenging. Rehabilitation offers psychological counselling and emotional support to help individuals accept changes, manage stress, build resilience, and regain self-esteem. It also provides coping strategies for dealing with anxiety, depression, or trauma.
Enhances Participation in Society or Helps People Join Everyday Activities Again	Rehabilitation enables people to return to their daily routines, such as education, employment, family life, and community involvement. It helps remove physical and psychological barriers, ensuring people can live meaningful and productive lives, even after major health challenges or disabilities.
Reduces Long-term Healthcare Costs or Saves Money Over Time	By preventing future health problems and hospital re-admissions, rehabilitation saves money for individuals, families, and healthcare systems. Teaching self-care techniques, proper use of assistive devices, and healthy lifestyle habits reduces the need for continuous medical attention.

Causes or Conditions That Require Rehabilitation

Rehabilitation is needed when someone has a health problem or condition that affects how their body or mind works. These conditions may be sudden or long-term and can affect a person's ability to move, think, communicate, or do everyday activities. Some common causes or conditions that require rehabilitation are:

1. **Injuries**

   People who have been hurt in accidents or during physical activities may need rehabilitation after healing to regain the use of the affected parts.

   Examples include: broken bones (fractures), sprains or torn ligaments, burns, spinal cord injuries, brain injuries and post-surgical recovery (e.g., knee or shoulder surgeries)

2. **Stroke**

   A stroke happens when the blood flow to the brain is cut off, which causes damage to the body. This can affect a person's ability to walk, talk, or use their hands. Rehabilitation helps stroke patients regain lost abilities and learn new ways to do things.

3. **Surgeries**

   After certain surgeries, especially on the bones, joints, or muscles, people may need post-recovery rehab to get back their strength and movement.

   Common surgeries include: Joint replacements (e.g., hip or knee), back or spine surgery and heart surgery

4. **Chronic diseases**

   These are long-term illnesses that can slowly affect the body over time. People with these diseases may lose strength or the ability to do certain tasks. Examples include: diabetes, arthritis, heart disease and lung diseases (e.g., asthma, COPD)

5. **Neurological conditions**

   These affect the brain, nerves, or muscles, and can make movement, speech, or thinking difficult. Examples include: Parkinson's disease, Multiple sclerosis (MS), cerebral palsy and epilepsy

6. **Mental health conditions**

   Rehabilitation can also support people with mental or emotional challenges to improve their daily functioning. Examples include: depression, anxiety and substance use disorder (e.g., alcohol or drug addiction)

7. **Amputations**

   People who have lost a limb may need rehabilitation to learn how to move again, use artificial limbs (prosthetics), and adjust to new ways of living.

8. **Hearing or vision loss**

   Rehabilitation can help people with hearing or vision impairments learn how to communicate, use assistive devices, and stay independent.

Types of Rehabilitation

Rehabilitation can take many forms, depending on the person's health condition and what part of the body or mind needs support. The main types of rehabilitation are:

Table 9.2: Types of Rehabilitation

Types of rehabilitation	Description	Purpose in PE and sports and other health conditions	Examples in practice
Physical rehabilitation (Physiotherapy)	Physical rehabilitation in sports and physical education refers to the systematic process of helping injured athletes or learners regain their physical abilities and return to active participation in sports or physical activity. It focuses on restoring strength, flexibility, endurance, coordination, and functional movement.	• To restore physical function after injury or surgery. • To prevent further injury by correcting movement patterns or muscle imbalances. • To enhance performance through targeted rehabilitation exercises. • To build confidence and mental readiness to return to sports or physical activity.	• A football player rehabbing a knee injury through controlled squats and leg presses before rejoining the team. • A PE learner with a shoulder injury performing resistance band exercises and shoulder stabilisation before doing overhead movements again. • A volleyball player recovering from an ankle sprain by progressing from balance board exercises to jumping drills. • A person regaining leg strength after a car accident. • A stroke patient learning to walk again.
Occupational Rehabilitation (Occupational Therapy)	This type of rehabilitation helps individuals perform daily tasks (occupations) and return to their usual roles at home, school, or work. It also involves adapting the environment and using assistive devices.	• Fine motor skill training • Home safety adaptations • Energy conservation techniques	• A learner who broke an arm is helped to write, carry items, and dress again. • An athlete recovering from a concussion is gradually helped to think clearly and follow routines. • A learner who had surgery is supported to return to PE classes by learning how to move safely.

			• Teaching a person how to use adaptive cutlery after hand surgery. • Supporting an individual with arthritis to dress independently.
Speech and Language Rehabilitation	This is a type of therapy that helps individuals improve their ability to communicate effectively and understand language. It also helps those who have difficulty speaking, swallowing, or expressing themselves due to injury, illness, or developmental issues.	• Speech articulation exercises • Language comprehension activities • Swallowing therapy • Voice therapy	• A learner who had a head injury and now finds it hard to speak gets help to communicate with the team again. • A learner who stammers is supported to give instructions during games confidently. • A learner recovering from a stroke is helped to follow PE instructions and express when they feel tired or in pain.
Cognitive Rehabilitation	Cognitive rehabilitation is a type of therapy that helps individuals recover or improve their thinking and mental abilities after an injury, illness, or condition that affects the brain. These mental abilities include memory, attention, problem-solving, planning, reasoning, and understanding.	• Memory training strategies • Task planning and organisation • Computer-based brain exercises	• A learner who has difficulty following game rules is supported with visual aids and simple instructions. • A learner recovering from a concussion receives help remembering sequences of movement or drills. • PE teachers adjusting tasks to allow more processing time and support during team sports.

Psychosocial or Mental Health Rehabilitation	Psychosocial or mental health rehabilitation is a process that helps individuals with mental or emotional challenges (such as depression, anxiety, trauma, or other psychiatric conditions) to recover, cope effectively, and function well in daily life, such as school, relationships, work, and recreation.	• Counselling and psychotherapy • Life skills training • Social integration activities • Substance abuse recovery support	• A learner who has returned to school after struggling with depression is gradually encouraged to participate in team games to build confidence. • PE teachers use non-competitive activities to reduce anxiety. • Coaches giving emotional support and encouragement to a learner returning to school after substance rehab.

Figure 9.2: An Athlete Undergoing Physical Rehabilitation

Key Professionals Involved in Rehabilitation

The main professionals involved in rehabilitation, especially in the context of physical education, health, and sports, are:

Table 9.3: Key professionals involved in rehabilitation

Physiotherapist (Physical Therapist)	• Helps people regain movement, strength, and function after injury or surgery. • Common in sports settings for treating sprains, fractures, and muscle injuries.
Occupational Therapist	• Assists individuals in relearning or adapting to perform everyday tasks, like dressing, writing, or using sports equipment, after injury or disability. • Helps with returning to school or physical activity after injury.

Speech and Language Therapist	• Supports individuals who have difficulty speaking, swallowing, or understanding language after injury or illness (e.g., stroke or head injury). • Important for learners who need help with communication in sports and classroom settings.
Psychologist or Mental Health Counsellor	• Provides emotional and psychological support. • Helps individuals cope with stress, anxiety, or trauma related to injury, illness, or performance pressure.
Rehabilitation Nurse	• Delivers ongoing care and education to support the recovery process. • Monitors health conditions and coordinates care between different rehabilitation professionals.
Medical Doctor (e.g., Sports Physician or General Practitioner)	• Diagnoses the condition or injury. • Refers patients to other specialists and monitors medical progress during rehabilitation.
Social Worker	• Assists individuals and families with resources, emotional support, and planning. • Helps reintegrate learners back into school, sports, and community activities.
Nutritionist or dietitian	• Guides healthy eating to support healing and recovery. • Especially useful for athletes or learners recovering from injury, surgery, or illness.
Special Education teacher or learning support coordinator	• Works with learners who have long-term physical or cognitive challenges to help them participate fully in school and PE activities.
Coaches and physical education teachers	Play a supportive role by adapting physical activities and encouraging safe participation. Help learners rebuild confidence and skill as part of their recovery.

Activity 9.1 The Purpose, Types, and Key Professionals of Rehabilitation

1. Organise yourself into groups of 4 people. Discuss and define rehabilitation in your own words.
2. List at least three actions athletes take to recover after an injury.

3. Choose two examples of rehabilitation you consider most important (e.g., physical therapy, psychological support).
4. Prepare any of the following showing how these help an athlete recover.
   a. A short demonstration
   b. A role-play/skit
   c. A simple class explanation
5. With your group from point 1 above, discuss why rehabilitation is important and what could happen if an athlete skips it. Record your answers in your workbook.
6. Share your group's examples and reasons with the whole class.

Case Study: The School Sports Festival Injuries

Read the scenario below carefully and discuss it with your group.

During the annual Schools and Colleges' Sports Festival, four students experienced different challenges:

a. ***Kofi*** *was sprinting in the 200m race when he slipped and fell, twisting his knee. He complained of pain but tried to keep walking on it.*

b. ***Ama*** *was a top netball player but developed severe anxiety after colliding with an opponent in a previous game. She is now afraid to train or participate.*

c. ***Yaw*** *suffered a shoulder dislocation during a football match and went to the hospital for treatment. After a few days, he refused to do the recommended exercises because he feared the pain.*

d. ***Akosua*** *witnessed her friend's sports accident and became emotionally distressed, refusing to attend practice and isolating herself.*

With your group from point 1 above, discuss the following:

1. What type(s) of rehabilitation does each student need?
2. Which profession would be involved in helping them recover?
3. What risk might occur if each student does not follow their rehabilitation plan?

PRINCIPLES, FACTORS AND HINDRANCES TO REHABILITATION

THE PRINCIPLES OF REHABILITATION

The principles of rehabilitation are the basic guidelines or rules that guide how rehabilitation should be planned and carried out to ensure it is effective, safe, and tailored to the needs of everyone. These principles guide professionals to ensure that recovery focuses on the individual's unique needs, treatment follows clear goals, and care remains consistent and well-organised. The approach also considers the whole

person, addressing not just physical recovery, but also emotional, mental, and social well-being. In simple terms, principles of rehabilitation are the foundation rules that ensure the recovery process is done correctly, respectfully, and effectively to help people regain their health, function, and independence.

Principles of Rehabilitation

1. Individualised treatment: Tailoring care to each person's needs.
2. Goal-oriented approach: Setting short- and long-term recovery goals.
3. Continuity of care: Ensuring consistent support throughout the process.
4. Team-based care: Involving various health professionals in a coordinated plan.
5. Holistic approach: Addressing physical, emotional, mental, and social aspects.
6. Early intervention: Starting rehabilitation as soon as possible after diagnosis or injury.
7. Patient participation and motivation: Encouraging active involvement in their recovery.

Stages of Rehabilitation

Table 9.4: Stages of Rehabilitation

Assessment and Planning Stage	The health professional checks the person's condition to understand their strengths, challenges, and what they want to achieve. Based on this, a special plan is created. This plan includes what type of help or therapy the person will need, what results are expected, and how long it might take.
Early Intervention or Initial Treatment Stage	This stage starts soon after the illness or injury, sometimes while the person is still in hospital. The aim is to begin recovery quickly, reduce pain, and stop the condition from getting worse. Basic movements, pain relief, and education about the condition may begin here.
Active Rehabilitation Stage	This is the main part of rehabilitation where the person takes part in activities and therapies to get stronger and more independent. It may include exercises, learning new skills, speech training, or counselling. The person's progress is checked regularly, and the plan is updated as needed.
Maintenance and Support Stage	At this stage, the focus is on helping the person keep the progress they have made and avoid getting worse again. It may include continuing therapy, healthy habits, using helpful devices, and joining in community life. Support and check-ups may continue.
Discharge and Reintegration Stage	The person finishes full-time rehabilitation and starts returning to normal life, like going back home, to school, or to work. They may get help with job training, support from groups, or care at home to adjust well and stay healthy.

Figure 9.3: A Drug Addict before Rehabilitation

Figure 9.4: The Drug Addict after Rehabilitation

FACTORS AFFECTING REHABILITATION

Factors affecting rehabilitation refer to the conditions, characteristics, or influences that can either support or slow down a person's recovery process. These factors can be positive (helpful) or negative (challenging), but they do not always prevent rehabilitation; they simply affect how easy or hard the process might be. These factors may include:

Table 9.5: Factors affecting rehabilitation

Type and severity of condition or injury	The nature of the condition, whether it is physical (like a broken bone), mental (like depression), or both, and how severe it is, can influence how long and how intensive the rehabilitation will be. A minor injury may need a short rehabilitation period, while a severe stroke may require long-term rehabilitation with multiple specialists.
Age and general health of the individual	Younger people and those in good health usually recover faster than older adults or those with chronic illnesses. Elderly individuals or people with other medical issues (like diabetes or heart disease) may take longer to recover. Good nutrition, fitness, and immunity also help speed up recovery.

Availability of skilled professionals and services	Having access to trained and experienced professionals (like physiotherapists, psychologists, and occupational therapists) ensures that the person receives proper care. Lack of professionals or poor-quality services can delay or reduce the effectiveness of rehabilitation.
Support from family and community	Emotional, physical, and practical support from family and friends can help keep the person motivated and engaged in their recovery. A strong support system can encourage people to attend sessions, follow therapy plans, and stay hopeful.
Socioeconomic Status (e.g., Affordability, Insurance):	People with limited financial resources may struggle to pay for rehabilitation services, equipment, or transport. Having insurance or government support can make rehabilitation more accessible and consistent.
Access to rehabilitation facilities and transport	If rehabilitation centres are far away, difficult to reach, or poorly equipped, it becomes hard for patients to attend regularly. Easy access to facilities and reliable transport increases the chances of successful rehabilitation.
Psychological readiness and attitude towards recovery	A person's mindset, motivation, and willingness to participate in the rehabilitation process matter greatly. Those who are positive, motivated, and ready to change often progress faster than those who are discouraged or unwilling to cooperate.

HINDRANCES TO REHABILITATION

Hindrances to rehabilitation are the obstacles, barriers, or problems that block, delay, or reduce the success of the rehabilitation process. Hindrances are mostly negative influences that interfere with or limit a person's ability to recover fully. These barriers include:

Table 9.6: Hindrances to Rehabilitation

Lack of access to rehabilitation services	This occurs when people are unable to reach or use rehabilitation centres or support due to reasons such as long distances, a lack of transportation, or the absence of services in their area.
Financial difficulties	Rehabilitation can be expensive. People may struggle to afford therapy sessions, medications, equipment, or even transport to the facility, leading to incomplete recovery.
Lack of motivation or poor adherence to treatment	Some individuals may lose interest, feel discouraged, or fail to follow the treatment plan (e.g., skipping exercises or appointments), which can slow down or halt progress.
Stigma or discrimination	People with disabilities, addictions, or mental health conditions may face judgment or rejection from others. This can make them hide their condition or avoid seeking help, which prevents proper rehabilitation.

Shortage of trained professionals	There may not be enough qualified doctors, therapists, or counsellors available. This leads to long waiting times or poor-quality care, affecting recovery.
Delayed or lack of access to rehabilitation services	If rehabilitation does not start early or if access is completely unavailable, a person's condition may worsen, and recovery becomes more difficult or slower.
Poor adherence to rehabilitation plans (e.g., skipping therapy)	When individuals do not follow the prescribed plan, such as missing sessions or ignoring instructions, it can lessen the effectiveness of treatment and slow down recovery.
Limited financial resources or lack of insurance	Without money or health insurance, individuals may not afford regular sessions, specialised care, or medications, forcing them to stop treatment prematurely.
Stigma associated with disability, addiction, or mental health	Negative beliefs about these conditions may cause individuals to feel ashamed or fear rejection, leading them to avoid seeking rehabilitation or participating fully.
Language or cultural barriers	If patients and professionals do not speak the same language or understand each other's cultural beliefs, it may cause miscommunication, reducing the quality of care.
Lack of awareness about the importance of rehabilitation	Some individuals might not recognise the advantages of rehabilitation or consider it unnecessary, leading them to refuse participation, postpone treatment, or withdraw prematurely.

Ways to Overcome the Barriers to Rehabilitation

Table 9.7: Ways to overcome the barriers to rehabilitation

Barrier	How to overcome
Lack of Access to Rehabilitation Services	• Increase the number of rehabilitation centres, especially in rural areas. • Use mobile rehabilitation teams or tele-rehabilitation (online services). • Partner with community health workers to provide basic rehabilitation support.
High cost of treatment or lack of insurance	• Provide government subsidies or social health insurance. • Include rehabilitation services in national health coverage. • Offer community-based and low-cost services. • Encourage NGOs and charities to support patients financially

Shortage of skilled professionals	• Train more rehabilitation professionals (physiotherapists, occupational therapists, etc.). • Provide ongoing professional development. • Offer incentives to professionals to work in underserved areas. • Integrate rehabilitation training into general healthcare education.
Low motivation or poor adherence to therapy	• Set realistic and personalised goals with the patient. • Offer counselling and mental health support. • Involve the patient's family and community to encourage. • Celebrate small improvements to build confidence.
Stigma or discrimination	• Educate the public to reduce stigma around disability, mental illness, or addiction. • Promote inclusive policies and positive role models. • Train staff on cultural sensitivity and anti-discrimination practices.
Poor transportation or inconvenient locations	• Provide transportation services or transport vouchers. • Offer home-based rehabilitation. • Build rehabilitation units within existing health facilities.
Language or cultural differences	• Use interpreters and culturally appropriate materials. • Employ rehabilitation professionals from diverse backgrounds. • iRespect and incorporate cultural beliefs into care planning.

Activity 9.2 What is Rehabilitation?

1. Organise yourself into to a group of 3-6 people. You have 3 minutes to write down as many key points as you can recall about:
   a. What rehabilitation is.
   b. The types of rehabilitation.
   c. The importance and purpose of rehabilitation.
   d. Causes or conditions that require rehabilitation.
   e. Key professionals involved in rehabilitation.
2. Read your lists to your class and add any new ideas from other groups to your list.

Activity 9.3 Principles and Processes of Rehabilitation

Organise yourself into a group of 3-5 people. Using digital devices, identify two principles of rehabilitation (e.g., safety, gradual progression).

1. Applying Principles to Real-Life Cases: In your groups from point 1 above, give two sports injuries and two mental disorder examples, showing how each principle is applied.
2. Read and Discuss the Scenario Below

   Kwame ignores his physiotherapy schedule because he feels fine.

   Esi attends therapy but refuses to do home exercises.

   Yaw tries to resume football training immediately after an ankle sprain.
3. Analyse the scenario by discussing the following:
   a. Which principles of rehabilitation are being ignored?
   b. Which stages of rehabilitation should each athlete follow?
   c. What factors are supporting or hindering recovery?
   d. What should each athlete do differently to ensure full recovery?
   e. How could ignoring principles or stages affect full recovery?
4. Group Presentation: Present your recommendations for proper recovery to the class and share your solutions.

AVENUES AVAILABLE FOR REHABILITATION

REHABILITATION AVENUES

Rehabilitation avenues refer to the various places, systems, services, or pathways through which individuals can receive rehabilitation support and care to recover from illness, injury, disability, or addiction. In simple terms, avenues of rehabilitation are the different ways or places a person can get help to recover and live well again.

Types of Rehabilitation Avenues

Table 9.8: Types of rehabilitation avenues

Type	Examples
Health facilities: These are formal medical centres that offer professional rehabilitation services.	• Hospitals and specialised rehabilitation centres: Provide inpatient and outpatient care with physiotherapists, doctors, and specialists for physical and neurological rehabilitation. • Outpatient clinics: Offer regular therapy sessions or consultations without requiring hospital admission. • Community-based rehabilitation (CBR) programmes: Bring rehabilitation services into local communities, especially in rural or low-resource areas.

Social and community-based avenues: These are local organisations and community groups that support recovery and reintegration.	• Faith-based and NGOs: They offer physical, emotional, and sometimes financial support for rehabilitation. • Community health outreach programmes: They bring health education and basic rehab services to local populations. • Peer support and mentorship groups: They encourage and share experiences from people who have gone through similar situations. • Social workers and community rehab workers: They offer case management and emotional/social support within the community.
Home-based rehabilitation services: These services allow people to receive care and support at home.	• In-home physiotherapy or nursing care: Therapists or nurses visit the patient's home for treatment. • Family and caregiver support: Relatives play a key role in supporting recovery, especially for elderly or disabled individuals. • Tele-rehabilitation: Virtual (online or phone) therapy sessions, medical advice, or follow-up consultations.
Vocational and occupational rehabilitation centres: These avenues focus on helping people return to work or education.	• Skills training and retraining institutions: Teach new skills or help regain old ones after injury or illness. • Job placement and work-readiness programmes: Prepare individuals for re-entry into the workforce. • Support for return-to-work or educational transitions: Assist people in adjusting to work or school after recovery.
Substance abuse rehabilitation centres: These are specialised centres for people recovering from drug or alcohol addiction.	• Rehabilitation facilities: Provide detox, therapy, and recovery programmes. • Detox and counselling centres: Help with withdrawal symptoms and offer emotional support. • Reintegration support: Assist recovering addicts in resuming normal life with skills and social support.
Correctional and re-entry programmes: These help individuals who were imprisoned or involved with the justice system.	• Prison rehabilitation services: They offer education, therapy, and skills training inside prisons. • Reintegration programmes: Support former inmates with housing, jobs, and emotional recovery. • Psychosocial and vocational support: Help ex-convicts cope with life outside prison and find employment.
Psychological and mental health support services: These focus on mental and emotional rehabilitation.	• Mental health hospitals and clinics: Treat conditions like depression, anxiety, trauma, or schizophrenia. • Counselling centres and helplines: Offer one-on-one or group therapy and crisis support. • Trauma and grief therapy: Help individuals cope with loss, accidents, violence, or abuse.

Government and policy-driven avenues: These are services provided or supported by the government.	• National rehabilitation policies: Frameworks that ensure access to rehabilitation services. • Disability and social welfare offices: Provide financial support and access to assistive services. • Insurance and support schemes: Cover costs of rehabilitation through health insurance or subsidies.

Figure 9.5: Faith-based Rehab Centre - A Social and community-based avenues

Figure 9.6: Trauma and grief therapy hospital - Psychological and mental health support avenue

The Importance of Knowing Where to Get Help

Knowing the available avenues for rehabilitation is important because it:

1. ensures early and appropriate care: Early access helps improve outcomes.
2. helps people find the right type of service.
3. empowers families and patients: They can make informed decisions about where to go for help.
4. reduces barriers: Knowing local or free options helps those with financial or mobility challenges.
5. promotes continuous care: Follow-up and long-term support become easier when people know where to go.

Factors to Consider When Choosing a Rehabilitation Avenue

1. **Cost**

   It is advisable to find out if the individual with the issue or the family of the person can afford the service or if there are free or subsidised options through NGOs, public facilities, or community programmes. It is good to choose affordable options to avoid treatment dropout.

2. **Distance or location**

   Find out if there is a facility close to the home, school, or work of the person if the person can travel easily and safely to the location, since nearby options improve regular attendance and recovery.

3. **Type of condition**

   It is good to find out if the avenue provides care for the specific need the person is having (e.g., speech therapy, addiction recovery, physical rehab) because some centres may specialise in certain conditions and choosing the right type ensures better results.

4. **Cultural sensitivity**

   This is finding out if services provided at a particular centre respect the individual's beliefs, language, and values and whether staff there are trained in working with diverse groups. Knowing these things increases trust, comfort, and willingness to participate or access their services.

5. **Level of support needed**

   Find out if follow-up and long-term monitoring are available since matching support to need ensures consistent progress.

How to Access Rehabilitation Avenues

1. **Referral systems**

   This is a formal recommendation by a healthcare provider, teacher, or social worker to access specialised rehabilitation services.

   Example: A doctor refers a patient to a physiotherapist after a leg injury, or a teacher refers a learner with learning difficulties to school-based therapy. This ensures appropriate care and often aids faster access to specialised services.

2. **Walk-in or appointment-based services**

   Walk-In: This is where the one with a problem goes directly to some health centres or clinics without an appointment.

   Appointment-based: This is where one must book an appointment ahead of time to see a specialist.

   Both services are suitable for both emergency and routine rehab needs, and can help manage time and resources at facilities

3. **Awareness and self-advocacy**

   Awareness: Knowing what services exist, where they are located, and what they offer.

   Self-Advocacy: Being able to speak up, ask for help, or seek services for yourself or a loved one.

   This helps empower individuals and increases access, especially where formal referral is not available

Barriers to Accessing Rehabilitation Avenues

These are challenges that prevent people from getting help. They are;

1. **Geographical location:** long distance or lack of facilities in rural areas.
2. **Financial:** Cost of services may be unaffordable.
3. **Cultural and stigma-related:** Social shame or lack of understanding may discourage people from seeking help.
4. **Lack of awareness:** People may not know what services are available or how to access them.

Activity 9.4 Rehabilitation Avenues in Ghana

1. With a partner, search (using dictionaries or digital tools) for the meaning of *"rehabilitation avenue."*
2. Organise yourself into a group of 5-6 people, list and discuss the different types of rehabilitation avenues.
3. **Scenario Discussion: Making the Right Choices**

   Ama sprains her wrist during a netball match and only rests at home without seeing a professional.

   James suffers a knee injury and seeks help at a physiotherapy centre.

   Akua injures her back and goes to a community health clinic for advice.
4. With your groups from point 2 above, discuss the following:
   a. Which avenue of rehabilitation did each person choose?
   b. Which avenue would have been most effective in each case?
   c. Why is choosing the right avenue important for full recovery?
5. Present your group's solutions and reasoning to the class.
6. With your group from point 2 above, describe how to access rehabilitation avenues and discuss how individuals can reach or use these avenues (e.g., hospitals, clinics, therapy centres).
7. Still with your group, discuss possible barriers to accessing rehabilitation avenues. Share your groups' ideas in a class discussion.

EXTENDED READING

- 5 Phases of Rehabilitation In Sport - SRA Sports Therapy

- Employ the seven principles of rehabilitation – Human Kinetics

- Community-based rehabilitation - Wikipedia

- 9789240087392-eng.pdf

REVIEW QUESTIONS 9

1. Evaluate the importance of combining physical and psychological rehabilitation in ensuring full recovery for injured athletes.
2. Compare the stages of rehabilitation to identify at which stage a lack of motivation can most negatively affect recovery and explain your reasoning.
3. Explain how barriers to accessing proper rehabilitation avenues can influence the long-term outcomes of recovery, using examples from the scenario.

SECTION

10

RECREATIONAL ACTIVITIES – PART 2

PHYSICAL ACTIVITY AND HEALTH

Recreational activities

INTRODUCTION

Engaging in recreational activities is an essential aspect of maintaining a healthy, balanced lifestyle. In this section we will look at your involvement with recreational activities by moving from participation to personal planning. After exploring and experiencing various forms of recreation, including individual, group, indoor, outdoor, active, and passive activities, you will now create your own recreational activity plans. You will learn how to design activities that suit your interests, needs, and environments while promoting health, well-being, and enjoyment. You will be empowered to become more intentional and proactive about incorporating meaningful recreation into your daily lives.

KEY IDEAS

- **Recreational Activities:** Physical, social, or cultural pursuits done during free time for enjoyment, relaxation, and fitness.
- **Behavioural Benefits:** Positive habits developed through recreation, including discipline, responsibility, and consistency.
- **Physical and Mental Benefits:** Improvements in fitness, stress relief, emotional well-being, and overall health.
- **Personal Recreational Planning:** A structured guide that schedules activities, frequency, and goals to ensure regular participation.
- **Social and Cultural Value:** Strengthening of social bonds and promotion of cultural identity through group and traditional activities.
- **Challenges and Solutions:** Barriers like time, resources, or weather, and strategies to overcome them for consistent participation.

BENEFITS OF ENGAGING IN RECREATIONAL ACTIVITIES

Figure 10.1: Benefits of Engaging in Recreational Activities

BENEFITS OF ENGAGING IN RECREATIONAL ACTIVITIES

The benefits of engaging in recreational activities refer to the positive outcomes or advantages that individuals gain when they take part in enjoyable and non-work-related physical, social, or creative activities during their free time. These benefits include:

1. Physical (e.g., improved fitness and health).
2. Mental and emotional (e.g., reduced stress and improved mood).
3. Social (e.g., building friendships and teamwork).
4. Academic or cognitive (e.g., better focus and time management).
5. Moral or behavioural (e.g., learning discipline and reducing risky behaviour).

In simple terms, these benefits are the good things that happen to one's body, mind, and social life when they regularly take time to play, relax, exercise, or engage in hobbies.

Physical Benefits of Engaging in Recreational Activities

Table 10.1: Physical benefits of engaging in recreational activities

Improves Cardiovascular Health	Engaging in physical recreational activities such as brisk walking, jogging, swimming, or dancing strengthens the heart and improves blood circulation. This helps reduce the risk of heart disease, lowers blood pressure, and enhances the efficiency of the cardiovascular system.

Enhances muscular strength and flexibility	Activities like hiking, playing sports, or working out help to tone muscles, improve posture, and increase flexibility. Strong and flexible muscles also support joint function and reduce the risk of injuries during daily tasks.
Aids in weight management	Regular participation in recreational activities helps burn calories and regulate body fat. This contributes to maintaining a healthy weight, especially when combined with proper nutrition. It is a natural and enjoyable way to prevent obesity and its associated health risks.
Boosts overall physical fitness and energy levels	Recreational activities improve stamina, coordination, and endurance. Over time, people who regularly engage in such activities experience increased energy levels and feel less fatigued during their daily routines. Physical fitness also contributes to better sleep quality and quicker recovery from illnesses or stress.

Mental and Emotional Benefits

Table 10.2: Mental and emotional benefits of Engaging in Recreational Activities

Reduces stress and anxiety	Participating in recreational activities, such as meditation, or even playing a musical instrument, listening to inspirational songs, helps to lower cortisol levels and promote relaxation. This reduction in stress hormones contributes to a calmer state of mind and less anxiety over time.
Improves mood and emotional well-being	Recreation can trigger the release of endorphins, the body's natural "feel-good" chemicals, which improve mood and create feelings of happiness. Regular engagement in fun activities can help combat feelings of depression and increase overall emotional resilience.
Enhances self-esteem and confidence	Mastering a new skill, whether it's dancing, painting, or a sport, provides a sense of accomplishment. This, in turn, boosts self-confidence and helps individuals feel better about themselves, positively impacting their self-image.
Improves cognitive function and focus	Activities that require coordination and strategy, like chess, puzzles, or team sports, sharpen mental abilities. This improved cognitive engagement helps enhance concentration, problem-solving abilities, and decision-making skills.

Figure 10.2: The Joy of Engaging in Recreational Activities

Social Benefits

Table 10.3: Social benefits of Engaging in Recreational Activities

Builds and strengthens friendships	Recreational settings provide a natural environment to meet new people with similar interests. Whether in sports teams, clubs, or hobby groups, these interactions foster new friendships and create social networks that support emotional well-being.
Enhances teamwork and collaboration	Many recreational activities are inherently social, requiring communication and cooperation. This helps individuals develop teamwork skills, learn how to share responsibilities, and appreciate the value of working together toward a common goal.
Improves communication skills	Participation in group activities encourages verbal and non-verbal communication. Engaging with others in a relaxed setting allows learners to practice expressing their ideas, listening actively, and resolving conflicts constructively.
Fosters a sense of community	Being part of a recreational group or club instils a strong sense of belonging. This communal support not only enriches social lives but can also enhance community spirit and collective well-being.

Academic and Cognitive Benefits

1. Enhances concentration and memory: Taking regular breaks for recreational activities can improve cognitive performance. Activities like puzzles, board games, or even short sports sessions provide the brain with a rest and boost memory and learning capacity.
2. Boosts creativity and problem-solving: Engaging in creative activities like art, music, or dance fosters out-of-the-box thinking and innovation. The creative process can stimulate new connections in the brain, enhancing one's ability to solve problems in academic and personal settings.

3. Improves time management and organisational skills: Balancing schoolwork with recreational activities teaches learners to manage their time effectively. Planning and adhering to a schedule that includes leisure activities reinforces organisational habits, which can be beneficial for academic success.

Moral and Behavioural Benefits

1. Encourages a positive use of free time: Engaging in structured recreational activities can lead to the development of positive habits. By using free time constructively, individuals reduce the likelihood of engaging in risky behaviours such as excessive screen time or unhealthy lifestyle choices.
2. Instils discipline and responsibility: Regular participation in recreational programmes or sports requires commitment, punctuality, and responsibility. These experiences build discipline as individuals learn to follow routines, set and achieve goals, and adhere to group rules.
3. Promotes fair play and social respect: Many recreational activities, especially team sports, teach the values of fairness, respect, and cooperation. Understanding and respecting game rules and interacting respectfully with others fosters a sense of ethics and ethical behaviour outside the activity setting.

Community and Cultural Benefits

1. Strengthens community bonds: Participating in community-based recreational activities such as local sports leagues or cultural festivals helps build a stronger community by bringing together people from diverse backgrounds. This creates a network of support and shared interests.
2. Preserves cultural traditions: Recreational activities often include traditional dances, games, and festivities that help preserve and promote cultural heritage. Engaging in these activities can instil pride and continuity in cultural identities.
3. Encourages civic engagement: Community recreation programs often include volunteer opportunities and cooperative initiatives that encourage individuals to contribute to local projects. This participation boosts community involvement and fosters a spirit of collective responsibility.
4. Enhances public health and well-being: When communities promote accessible recreational facilities and events, they contribute to overall public health. Increased participation in community recreation leads to broader health benefits for the community at large, including lower healthcare costs and improved quality of life.

Activity 10.1 Exploring the Benefits of Recreational Activities

1. Think about your previous learning on recreational activities. Walk around the classroom and talk with at least three different classmates.

2. Ask your classmates the following question:
3. What types of recreational activities did we learn about last time and which ones did you enjoy participating in?
4. In pairs, **walk freely around the classroom** to observe six displayed posters or picture boards of people participating in recreational activities (e.g., dancing, cycling, skipping, playing board games, sack race, and traditional games).
5. At each poster, ask and answer with your partner:
    a. What benefit of recreation do you see in this activity?
    b. How might this activity help someone in their life?
6. Organise yourself into groups of 3-5 people! Move to your assigned starting station. There are six stations, each representing a category of recreational activity benefits:
    a. Physical Benefits
    b. Mental and Emotional Benefits
    c. Social Benefits
    d. Academic and Cognitive Benefits
    e. Moral and Behavioural Benefits
    f. Community and Cultural Benefits
7. At each station:
    a. Examine the pictures, short texts, or infographics provided.
    b. Discuss as a group:
        i. Which benefit does this activity represent?
        ii. How does engaging in this activity benefit an individual or a group?
        iii. Record your explanations of what you see and understand at each station.
8. Rotate to the next station until you have completed all six.
9. After visiting all the stations, return to your group seating area. As a group, discuss and summarise your findings into a six-point explanation of the benefits of recreational activities. Be sure to cover all categories:
    a. Physical
    b. Mental
    c. Social
    d. Academic
    e. Moral
    f. Community

10. Write your explanations clearly and share them with the class.
11. Reflect, Share, and Grow Together

    Sit together in a large circle for group presentations. Each group will:

    a. Share one key benefit of recreational activities from each of the six categories.

    b. Listen actively to others, ask questions, and add ideas.

    c. Discuss why these benefits are important to personal health and community well-being.

CREATING A PERSONAL PLAN FOR RECREATIONAL ACTIVITIES

CREATING A PERSONAL PLAN

Creating a personal plan for recreational activities involves developing a structured and thoughtful guide that helps an individual to regularly take part in enjoyable, non-work-related physical or leisure activities during their free time. The plan involves choosing activities that match one's interests, fitness level, schedule, and available resources, and setting clear goals for how often, where, and when to engage in them. The plan may also include ways to track progress, overcome challenges, and stay motivated. For example, a student may decide to jog every Monday, Wednesday, and Saturday for 30 minutes in the morning before school. They might track their progress in a journal and adjust the plan monthly based on how they feel physically and emotionally.

What to Consider When Creating a Personal Plan For Recreational Activity Engagement

1. **Self-Assessment and Personal Interests**

    a. Identifying personal interests and preferred activities: Identify personal interests and preferred activities that make one feel relaxed, energised, or happy. This step helps to choose suitable recreational activities that they are more likely to stick with. Since they consider their hobbies, what motivates them to stay active?

    b. Assessing physical fitness and time availability: Individuals must evaluate their current physical condition, stamina, and health status to select appropriate activity levels to pursue. They also must review their daily schedules to identify how much time they can realistically dedicate to recreation.

    c. Recognising barriers to participation (e.g., time, resources): Learners identify common obstacles such as lack of time, parental restrictions, cost of equipment, or safe spaces to play. This helps in planning ways to overcome or reduce these challenges (e.g., using free public spaces, choosing home-based activities).

2. **Goal setting for recreational participation**
   a. Set SMART goals (Specific, Measurable, Achievable, Relevant, Time-bound): Clear and realistic goals must be set to guide the plan, such as: 'I will go for a 30-minute walk three times a week for the next month to improve my fitness.
   b. Short-term and long-term activity goals: Individuals must differentiate between immediate goals (e.g., participating in a school fun walk next weekend) and long-term goals (e.g., maintaining regular jogging throughout the school term). They must learn how both types of goals contribute to consistency and improvement.

Components of a Personal Recreational Plan

1. Activity type and frequency: They must select the kind of recreational activity that suits their interest and decide how often they will engage in it (e.g., swimming twice a week, playing ampe every Saturday, doing aerobics every Saturday).
2. Duration and location: They must specify how long each session will last (e.g., 20, 25, 30 or 45 minutes) and where the activity will take place. Is it at school, home, a community field, or a local park?
3. Resources and support needed: This is where the person identifies what materials (e.g., sportswear, skipping rope) and support (e.g., friends, family, teachers) they may need to effectively carry out their plan.
4. Safety considerations: They should consider safety before engaging in activities such as wearing appropriate gear, warming up, checking the environment, and understanding limits to avoid injuries.

Time Management and Scheduling

1. Time management: This is creating a personalised weekly or monthly activity timetable showing the days and times they will engage in their chosen activities, balancing it with their academic work and other responsibilities.
2. Balancing school, home responsibilities, and recreation: This is how to prioritise and allocate time effectively, ensuring recreation does not interfere with study or chores, but rather supports overall productivity and well-being.

Monitoring and Evaluating the Plan

1. Keeping an activity log or journal: This is tracking the activities using a simple chart or diary recording when they participated, what they did, and how they felt afterwards. This promotes consistency and reflection.
2. Reviewing progress and adjusting: After a set period (e.g., two weeks or a month), learners assess what went well, what didn't, and what changes are needed to improve their plan.

3. Reflecting on how the plan affects well-being: This describes how participating in regular recreational activities has impacted their mood, energy levels, physical health, or relationships with others.

Sustaining Motivation and Participation

1. Finding an activity partner or support group: This is finding others to help in engaging in the planned activities. Individuals are encouraged to engage in recreation with friends or join clubs or groups to keep their interests alive and promote accountability.
2. Exploring new activities to avoid boredom: This is learning to occasionally try different types of recreational activities (e.g., cycling instead of walking) to stay engaged and expand their experiences.
3. Celebrating milestones and achievements: This is motivating people to acknowledge their progress (e.g., completing four consistent weeks of activity) through small rewards or sharing achievements with others.

Presenting the Recreational Activity Plan

1. Sharing plans with classmates: This is presenting the planned personal recreational plans to peers using posters, charts, or digital slides. This fosters confidence and inspiration among classmates.
2. Peer feedback and suggestions: Classmates provide respectful feedback, encouragement, or ideas to help improve each other's plans.
3. Displaying personal responsibility and initiative: This is showing evidence of taking charge of their health and well-being, demonstrating growth in planning, decision-making, and commitment to a balanced lifestyle.

Components of a Good Personal Recreational Activity Plan

1. **Personal information and background**
   a. Basic details: name, age, current physical condition, interests.
   b. Purpose of the plan (e.g., to stay fit, reduce stress, have fun, socialise).
2. **Personal interests and preferred activities**
   a. A list of enjoyable activities that match your personality and preferences.
   b. Example: dancing, football, swimming, jogging, traditional games like ampe or oware.
3. **SMART Goals**

   Clearly stated S.M.A.R.T. goals

   a. *Specific*: What exactly do you want to do?

b. *Measurable:* How will you know when you've achieved it?

c. *Achievable:* Is the goal realistic?

d. *Relevant:* Does it match your needs and interests?

e. *Time-bound:* By when will you achieve it?

f. Example: 'I will do 30 minutes of traditional dance every Saturday morning for the next 3 months.

4. **Activity schedule (frequency and duration)**

   a. Timetable showing when and how often the activity will take place.

   b. Duration of each session (e.g., 20 minutes daily or 1 hour three times a week).

5. **Type of activity and description**

   a. Specify what kind of activity it is (e.g., physical, social, creative).

   b. Provide a brief description if necessary.

   c. Example: Skipping: a simple aerobic activity that builds endurance and coordination."

6. **Location and venue**

   a. Identify where the activity will happen.

   b. Should be safe, accessible, and suitable for the chosen activity.

   c. Examples: School field, home compound, community park, living room.

7. **Resources and equipment**

   a. List the materials needed to carry out the activity (if any).

   b. Consider cost, availability, and safety.

   c. Example: Skipping rope, water bottle, mat, comfortable shoes.

8. **Safety measures**

   a. Outline precautions to avoid injury or harm.

   b. May include warm-up and cool-down routines, appropriate gear, hydration, and first aid awareness.

9. **Time management plan**

   a. Balance between school, home, and recreational time.

   b. Helps avoid stress or over-commitment.

   c. Tip: Use a weekly planner to map out recreational time alongside other responsibilities.

10. **Monitoring and evaluation**

    a. Method: Include a method to track progress and reflect on experiences.

    b. Tools: activity journal or log, checklists, or self-reflection questions.

    c. Example: 'How did I feel after today's activity? Did I complete it as planned?

11. **Challenges and solutions**
    a. Predict possible barriers (e.g., weather, school workload, motivation).
    b. Provide realistic alternatives or backup plans.
    c. Example: If it is raining, do an indoor workout instead of jogging.
12. **Support system**
    a. Identify people who can help you stay on track (e.g., friends, family, teachers).
    b. A partner or group can offer encouragement and accountability.
13. **Review and adjustment plan**
    a. Include how and when you'll revise your plan.
    b. Plans should be flexible and grow with your needs and goals.

Challenges in Implementing the Recreational Activity Plan

1. **Lack of Time**

   Many people, including learners, have busy schedules filled with school lessons, homework, chores, office work, deadlines to meet and sometimes part-time jobs or religious activities. These responsibilities can make it difficult to find consistent time for recreational activities.

   Example: A learner may intend to jog three times a week but often finds themselves too busy with assignments or household chores.

2. **Lack of Motivation**

   Staying motivated over time can be challenging, especially when the activity becomes repetitive or when there are no immediate results. Learners may feel tired, bored, or uninspired to follow through with their plan.

   Example: A learner may start strong with daily skipping but loses interest after a few weeks without encouragement or visible benefits.

3. **Limited Resources or Equipment**

   Some recreational activities require specific equipment (e.g., footballs, skipping ropes, sports shoes, music box) or materials that learners may not have access to due to financial constraints or unavailability.

   Example: A learner wants to play table tennis regularly but does not have a bat or access to a table.

4. **Inadequate Space or Facilities**

   Not all learners have access to appropriate or safe spaces for physical activity. Some may live in crowded environments or communities without parks or open grounds.

   Example: A learner living in a densely populated urban area may struggle to find a quiet and safe space for jogging.

5. **Poor weather conditions**

   Outdoor recreational activities like walking, jogging, or team games can be hindered by weather conditions such as rain, extreme heat, or cold. This inconsistency can disrupt regular participation.

   Example: A rainy week may prevent a learner from doing their planned outdoor activities, leading to missed sessions.

6. **Peer influence or lack of support**

   Friends or peers may not share the same interest in recreational activities, making it difficult for learners to stay consistent or feel encouraged. On the other hand, negative peer influence may discourage participation.

   Example: A learner's friends prefer indoor screen time, making it hard for them to find partners for games like Ampe or football.

7. **Health or physical limitations**

   Some learners may face health issues, such as asthma, injuries, or chronic fatigue, which limit the type or intensity of activities they can engage in.

   Example: A learner recovering from a knee injury may have to pause all physical activities temporarily, affecting their routine.

8. **Parental restrictions or lack of encouragement**

   In some households, parents may not prioritise recreational activities due to safety concerns, cultural beliefs, or a strong focus on academics, especially during exam periods.

   Example: A parent may not allow a learner to go out and play in the evening due to safety concerns in the neighbourhood.

9. **Poor planning or unrealistic goals**

   Setting goals that are too ambitious or failing to plan around existing responsibilities can make the plan hard to stick to. Without proper time management or gradual progression, learners may feel overwhelmed.

   Example: Planning to exercise every single day for an hour without considering school workload can lead to burnout and failure.

10. **Boredom or repetition**

    Doing the same activity repeatedly without variety or challenge can become monotonous. Learners may eventually lose interest if they do not explore new or more engaging options.

    Example: A learner who only skips rope every day may become bored after two weeks and lose enthusiasm.

Sample personal recreational activity plan

Name: Ama Kokonte

Age: 18

Class: SHS 3

Term: 2nd Semester

Date Created: 1st July 2025

Purpose of My Plan: To stay physically active, reduce stress, and improve my energy and mood by participating in fun and healthy recreational activities regularly.

My Preferred Activities: Traditional dance, skipping, netball and ampe

SMART Goal

1. Specific: I want to participate in traditional dance and skipping regularly.
2. Measurable: I will do 30 minutes of recreational activity 3 times a week.
3. Achievable: I have access to space and music for dancing and skipping rope.
4. Relevant: This will help me stay fit and enjoy my free time.
5. Time-bound: I will follow this plan from July to September 2025.

Activity Timetable

Day	Activity	Duration	Location
Monday	Skipping	20 minutes	Home compound
Wednesday	Traditional dance	30 minutes	School hall
Saturday	Ampe with friends	30 minutes	Community Park

Resources and Equipment: Skipping rope, comfortable shoes, music (phone and speaker), a bottle of water and local friends to play with.

Safety Measures

1. Warm-up for 5 minutes before skipping or dancing.
2. Wear proper shoes to avoid injury.
3. Stay hydrated before and after activities.

4. Ensure a clean and safe environment.

Time Management Strategy

1. Do activities after school or chores.
2. Use a calendar to mark recreational days.
3. Limit phone time to make space for recreation.

Monitoring and evaluation

1. I will keep a weekly activity journal.
2. I will tick off completed activities.
3. I will reflect once a month on:

   What I enjoy.

   If I feel more active or relaxed.

   If I miss any days, and why.

Possible challenges

1. Heavy schoolwork or tiredness.
2. Bad weather.
3. No partner for games sometimes.

Solutions

1. I will use indoor space when the weather is bad.
2. I will reschedule for weekends if weekdays are tight.
3. I will invite a cousin or a neighbour to join me.

Support System

1. My older sister will support and sometimes join me.
2. Two of my classmates will join me on Wednesdays.
3. My teacher will check my progress once a month.

Review and Adjustments: I will review the plan every four weeks. If I skip more than two sessions in a month, I will reduce the time or change the activity to something more flexible, like playing oware or indoor dancing.

Final Remarks: This plan will help me stay fit, meet friends, and manage stress from school. I am committed to sticking to it and adjusting it when needed.

Activity 10.2 Exploring Personal Recreational Plans

1. Organise yourself into groups of 3-5 people. Discuss what a personal recreational activity plan is and why it might be important for maintaining regular participation.
2. Exploring and Analysing a Sample Plan
3. In your group, search and display a sample personal recreational activity plan template. Use these headings:
    a. Activity type
    b. Frequency and time
    c. Location/resources needed
    d. Personal goals/reasons
    e. Safety considerations
4. Analyse the sample plan to identify what makes it effective.
5. Then, discuss and list five key components of a strong personal recreational activity plan.
6. Create your own personal plan that includes:
    a. Chosen activities (e.g., traditional games, sports, dance, cultural activities like Tumatu)
    b. Days and times of participation
    c. Duration of each session
    d. Personal goals (e.g., fitness, relaxation, cultural connection, socialisation)
    e. Resources or materials needed (e.g., skipping rope, playing area, partner)
    f. Safety considerations (e.g., hydration, stretching, safe environment)
7. Share your plan with two friends for peer feedback and suggestions.
8. With your friends, discuss possible challenges in implementing your plan (e.g., lack of time, motivation, resources, or bad weather) and propose at least one solution for each (e.g., set reminders, schedule with friends, use indoor alternatives).
9. Present your plan to your class.

Extension: Track and Reflect

Keep a one-week participation log by following your recreational activity plan. At the end of the week, reflect on what worked well and what could be improved in your plan.

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REVIEW QUESTIONS 10

1. Analyse how participating in at least three different recreational activities can contribute to the physical, mental, and social well-being of a student. Provide specific examples for each dimension of health.
2. Evaluate the potential long-term effects of consistent participation in recreational activities on a student's academic performance and moral development.
3. Examine a school environment and propose a plan for a one-day recreational activity program that includes at least three activities. Explain how the chosen activities cater to diverse student interests and abilities.
4. Assess the challenges a school might face when organising a community recreational day and propose solutions to overcome these challenges.

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GLOSSARY

Acute stress	Immediate reaction to a threat, triggering fight-or-flight response
Adaptability	Ability to adjust to new environments or conditions
Adaptive immunity	Specialised immune response developed over time
Adjuvant	Substance added to vaccines to boost immune response
Aerobic capacity	Maximum oxygen use during intense exercise
Aerobic fitness	Ability of cardiovascular/respiratory system to supply oxygen during activity
Aggressive	Dominating opponent with powerful strokes
AIDS	Acquired Immune Deficiency Syndrome
Antibody	Protein that neutralises foreign substances
Antigen	Substance triggering immune response
Aspirations	Hopes, dreams, and goals
Bad stress (Distress)	Negative stress causing anxiety and reduced performance
Bacteria	Single-celled organisms thriving in diverse environments
Best-of-five sets	Match format where first to three sets wins
Booster shot	Extra vaccine dose to extend immunity
Cardiovascular endurance	Ability of heart/lungs to supply oxygen during activity
Casualty	Person injured or harmed in accident/conflict
Causative agent	Organism/factor causing disease
Chronic stress	Long-term strain from ongoing challenges
Cognitive function	Mental processes for knowledge and decision-making
Communal traditions	Shared practices reflecting cultural identity
Consecutively	Occurring one after another without interruption
Contraindication	Situation where vaccine should not be given

Coordinated movements	Smooth and efficient body control
Crouch	Bend down low by bending knees
Cultural heritage	Legacy inherited from past generations
Cultural identity	Sense of belonging to a culture/group
Customs	Traditional practices of a group
Defensive	Strategy focused on returning shots and minimising mistakes
Dominant hand	Preferred hand for fine motor tasks
Dynamic	Constantly changing, active, energetic
Effectiveness	How well a vaccine works in real-world conditions
Efficacy	Vaccine's ability to produce desired immune response in trials
External stressors	Pressures from environment or interactions
Fact	Information that is objectively true
Federation	Organisation governing sports nationally/internationally
Folklore	Traditional beliefs, customs, and stories
Forehand stroke	Stroke with racket front facing shot direction
Fundamental	Essential aspect of a sport
Generations	Groups of people born around same time
Generative factors	Underlying causes producing patterns
Genetics	Study of genes and heredity
Good stress (Eustress)	Positive stress bringing excitement and motivation
Grip	How a player holds the racket
Herd immunity	Population-level protection through widespread immunity
Immobilise	Prevent movement, often in medical context
Immune memory	Immune system's ability to "remember" pathogens
Immunity	Protection against disease

Inactivated vaccine	Vaccine made from killed pathogens
Innate immunity	First line of defense, non-specific protection
Innovative movements	Creative new ways of moving in gameplay
Intervention	Act of involvement to alter outcomes
Internal stressors	Stress from within an individual
Involuntary	Actions occurring without conscious control
Live-attenuated vaccine	Vaccine with weakened pathogen
Mental agility	Ability to think quickly and adapt
Mental toughness	Ability to stay resilient under challenges
Mixed-gender	Activities involving both genders
Mortality	Death rate in a population
Motor skills	Abilities to control bodily movements
Myth	Widely held but false belief
Offensive	Aggressive strategies to dominate opponent
Origin	Source or starting point
Outbreak	Sudden increase in disease cases
Parasites	Organisms living on/in host at its expense
Pathogen	Microorganism causing disease
Pathogens	Microorganisms causing disease (bacteria, viruses, fungi, parasites)
Physical fitness	Overall health and ability to perform tasks
Physical skills	Competencies involving body use
Pessimistic	Tendency to expect worst outcomes
Procrastinate	Delay or postpone tasks
Racket	Equipment essential for racket sports
Rally	Sequence of back-and-forth shots

Randomly	Occurring without specific pattern
Reciprocal relationship	Balanced mutual exchange and cooperation
Reflexes	Quick responsiveness to situations
Rejuvenate	Make someone/something feel young or energetic again
Resilience	Ability to withstand stress and thrive
Respiratory paralysis	Condition where breathing muscles weaken
Responsiveness	Ability to react quickly and positively
Rinse	Wash lightly with water
Side effect	Unintended vaccine effect
Social connections	Relationships and interactions with others
Sterile material	Items free of microorganisms
Stigmatisation	Branding individuals/groups as inferior
Stimuli	Factors provoking a response
Strenuous	Activity requiring great effort
Stroke	Action of hitting ball with racket
Swivel	Rotate smoothly around a point
Symptoms	Indications of disease or condition
Topspin	Shot causing ball to rotate forward
Traditional games	Games passed down through generations
Transition	Changing from one state to another
Trauma	Deeply disturbing experience affecting well-being
Triggers	Factors causing symptoms
Vaccine	Biological preparation providing immunity
Vaccine Preventable Diseases (VPDs)	Diseases preventable through vaccination
Vaccine schedule	Recommended series of vaccinations

Variation	Different spins/strokes disrupting opponent
Violate	Break a law, rule, or agreement
Viruses	Tiny infectious agents reproducing inside host cells

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This book is intended to be used for the Year Three Physical Education and Health (Core) Senior High School (SHS) Curriculum. It contains information and activities to support teachers to deliver the curriculum in the classroom as well as additional exercises to support learners' self-study and revision. Learners can use the review questions to assess their understanding and explore concepts and additional content in their own time using the extended reading list provided.

All materials can be accessed electronically from the Ministry of Education's Curriculum Microsite.

[Scan the QR Code to visit the website]

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