



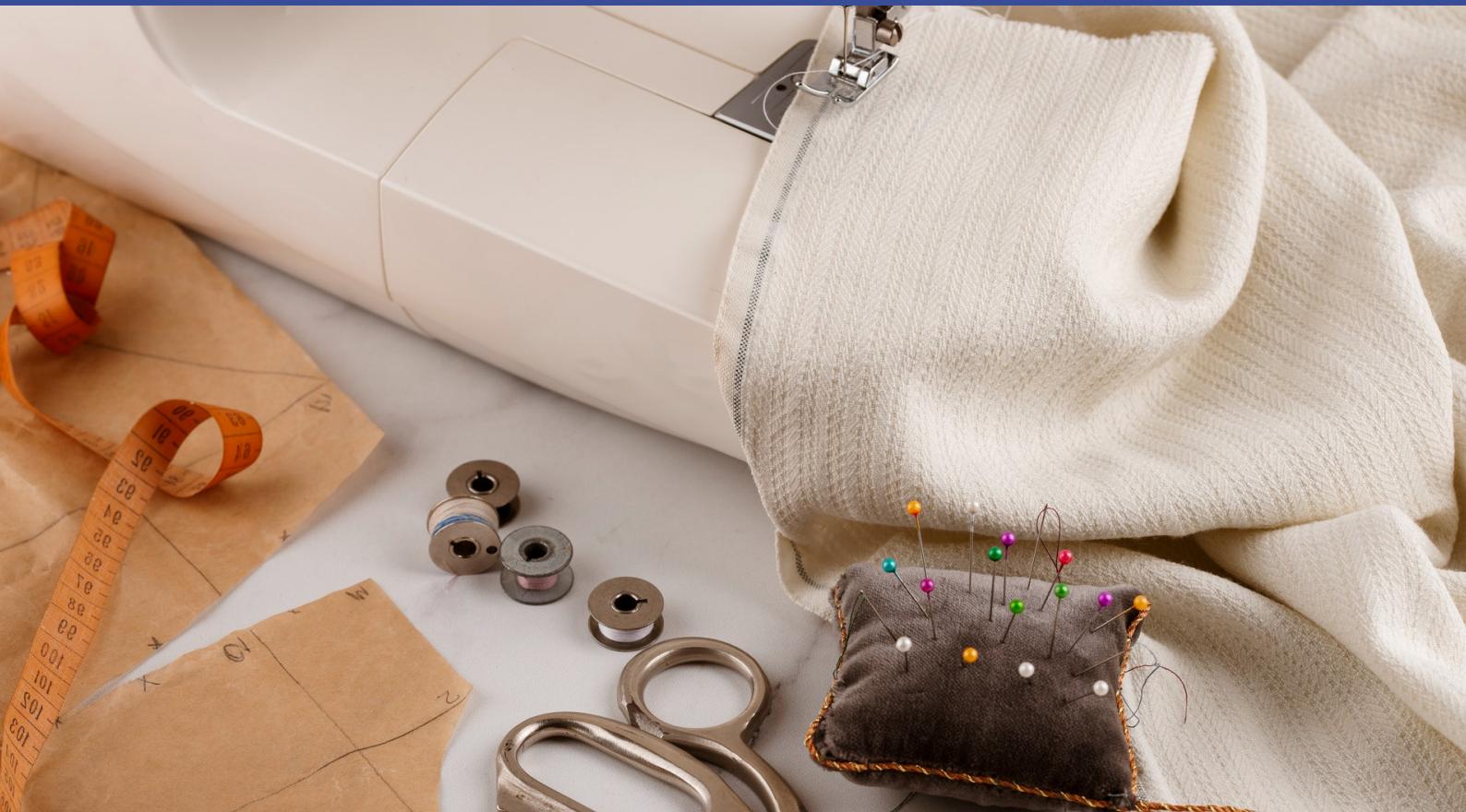
MINISTRY OF EDUCATION
HOME ECONOMICS
TEACHERS ASSOCIATION, GH



Clothing And Textiles

for Senior High Schools

Year 1



Millicent Duah
Jusinta Kwakyewaa
Rahimatu Yakubu

**MINISTRY OF EDUCATION
HOME ECONOMICS TEACHERS' ASSOCIATION, GH**

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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 Coalition of Concerned Teachers- CCT) 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

UNDERSTANDING CLOTHING CONCEPTS AND PRINCIPLES FOR PERSONAL GROOMING



PSYCHOSOCIAL ASPECT OF CLOTHING

Understanding Concepts and Principles of Clothing

Introduction

Clothing has been an important part of human life since early history. People first wore clothes for protection, modesty and cultural identity. Over time, clothing styles and materials changed, but the need to wear and care for garments has remained the same. In this section, you will learn about the basic concept and history of clothing, why people wear clothes and how it affects our appearance and daily lives. You will also learn how to take good care of your clothes so they last longer and stay neat. This includes reading and following care labels, washing and ironing correctly, fixing torn garments, and storing clothes the right way. Keeping your wardrobe clean and organised helps you look smart, feel comfortable and save money. These clothing care habits are part of sustainable living and will help you become responsible both at home and in future work or business in the clothing industry.

KEY IDEAS

- Clothes protect the body, support cleanliness, show our cultural and social identity and help build confidence through personal appearance and self-expression.
- Clothing began as a basic human need for protection. Over time, it became a way to show culture, personality and social roles. Learning about its history helps people value its role in everyday life.
- Care labels on clothing give important instructions for washing, drying and ironing. Following these instructions prevents damage and helps people care for their garments the right way.
- Key ways to care for clothes include washing, ironing, mending and storing them properly. These methods help clothes last longer and stay in good condition.
- Taking good care of clothes involves sorting them before washing, removing stains properly, drying them correctly and handling them with care. These practices help keep clothes clean, lasting longer and looking neat.

THE CONCEPT OF CLOTHING

What is Clothing?

Clothing is anything you wear or carry on your body to improve your look or express yourself. It includes not just garments but also accessories like bags and jewellery,

cosmetics, hairstyles, and even full body coverings. Within cultures, people usually dress in similar styles of clothing to show who they are and to fit into their society.

A Brief History of Clothing

In the past, people wore clothes mainly to cover their bodies. Early clothing came from things like body paint, leaves, tree bark, and animal skins. As humans moved to colder places, they began using what they could find to stay warm. Examples: animal hides, leaves, and tree bark.

Over time, people learned how to turn fibres into yarn and weave them into fabric. During the Stone Age, clothes were made by sewing animal skins with sharp tools like bones, thorns, or ivory. Some even decorated their garments with shapes and patterns.

As skills improved, people created better tools and started using new materials. In the Medieval period, weaving fabric became more common, and tools became finer. Around 1670, steel needles were made, making sewing easier and neater. The first scissors were invented by a shepherd to trim wool, and by 1856, when steel became cheaper, scissors became common.

A significant change occurred in 1830 with the invention of the sewing machine by Elias Howe. It made sewing faster and easier. In 1889, the Singer Company introduced electric sewing machines. Today, sewing is both a home skill and a big business around the world. Popular clothing companies include: Marks and Spencer in the UK, Sharp Looks and Nice Shape in Cape Coast, Nallen Fashion and MKOG in Accra, and Awura Abena Fashion in Kumasi.

Types of Clothing

Casual Clothing

1. **Description:** Casual clothing means the clothes people wear in relaxed and informal situations. These clothes are comfortable, simple to put on, and do not need to follow any special rules. They are made to let you move freely, feel at ease, and show your personal style.
2. **Uses**
 - a. Daily activities (home, market, town)
 - b. Informal social gatherings
 - c. Weekend wear
 - d. School or campus (in casual institutions)
3. **Examples**
 - a. T-shirts and tank tops
 - b. Jeans, leggings, and cargo pants
 - c. Casual shirts and blouses

- d. Sneakers, flat sandals, slip-ons
- e. Simple cotton dresses and skirts
- f. Shorts and joggers



Figure 1.1: Examples of casual clothing

Formal Clothing

- 1. Description:** Formal clothing is worn for special, official, or important events. These clothes are usually well-made from quality fabrics, fit nicely, and follow certain styles or traditions. People wear formal clothes to look respectful, neat, and professional. There are also traditional formal wear such as agbada, kente dresses, etc.
- 2. Uses**
 - a. Job interviews and office work
 - b. Religious ceremonies and services
 - c. Weddings, funerals, graduations
 - d. Official events and award ceremonies
- 3. Examples**
 - a. Suits (jacket and trousers/skirt)
 - b. Dresses, shirts, ties, waistcoats
 - c. Blazers and tailored pants
 - d. Evening gowns, ball gowns
 - e. Court shoes, brogues, heeled sandals

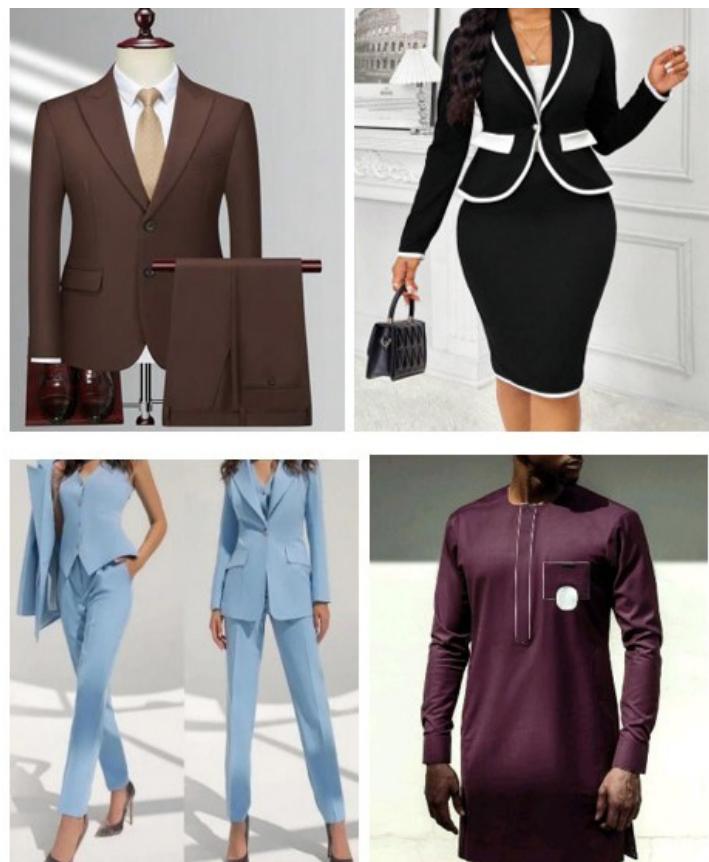


Figure 1.2: Examples of formal wear

Work or Occupational Clothing

- 1. Description:** These are clothes made for a person's job. They can help protect the worker, keep things clean, or show what job the person does. Many jobs require workers to wear these clothes as a uniform.
- 2. Uses**
 - a. Showing what kind of work a person does (e.g., nurse, chef, police)
 - b. Ensuring safety (construction workers, welders)
 - c. Maintaining hygiene (in health or food sectors)
 - d. Helping people know the company or team someone belongs to
- 3. Examples**
 - a. Nurse uniforms and scrubs
 - b. Lab coats for doctors/scientists
 - c. Chef jackets and aprons
 - d. Overalls for factory or construction workers
 - e. Security or military uniforms
 - f. Airline cabin crew uniforms

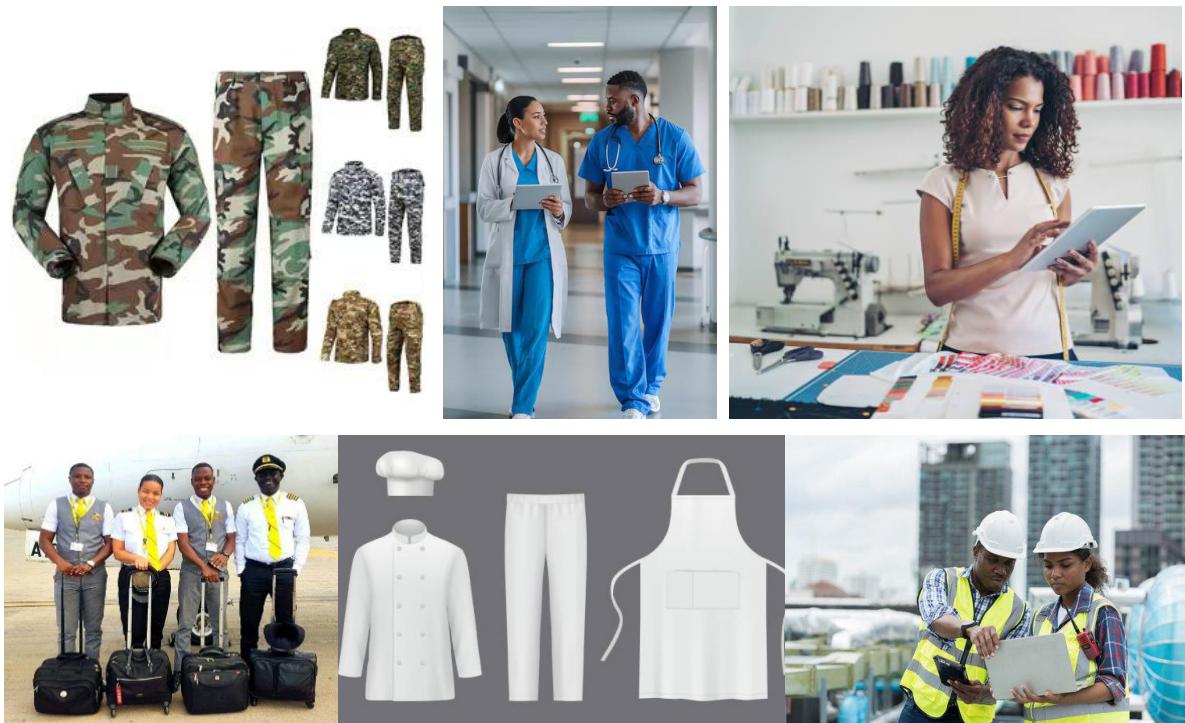


Figure 1.3: Work or occupational clothing

Protective Clothing

- 1. Description:** Protective clothing is clothing that keeps a person safe from danger or harsh conditions. It is made from strong, special materials to help lower the chance of getting hurt.
- 2. Uses**
 - a. Protection from weather (cold, rain, sun)
 - b. Dangerous places or work areas (fire, chemicals, machinery)
 - c. Infections (in hospitals or labs)
 - d. Sporting or industrial safety
- 3. Examples**
 - a. Raincoats and waterproof boots
 - b. Helmets and gloves
 - c. Firefighter suits and heat-resistant wear
 - d. Lab goggles, aprons, face shields
 - e. Bulletproof vests, reflective vests
 - f. Masks and disposable gowns



Figure 1.4: Protective clothing

Sportswear / Active wear

- 1. Description:** This type of clothing is made for exercise or sports. It helps the body move easily, stops friction, soaks up sweat, and keeps the person comfortable while being active.
- 2. Uses**
 - a. Sports (football, basketball, athletics, swimming)
 - b. Exercise and gym activities
 - c. Dance, yoga, jogging
 - d. Casual or as leisure wear
- 3. Examples**
 - a. Tracksuits and joggers
 - b. Leggings and gym tops
 - c. Sports bras and compression shorts
 - d. Jerseys and team kits
 - e. Sneakers, running shoes, trainers
 - f. Swimwear, rash guards



Figure 1.5: Sports or active wear

Traditional or Cultural Clothing

1. **Description:** These are clothes that show a person's culture, background, tribe, or religion. People often wear them at traditional events, festivals, or religious observances. Different groups or places have their own special styles and meanings they give to these clothes.
2. **Uses**
 - a. Cultural celebrations and ceremonies
 - b. Weddings and funerals
 - c. Religious holidays and festivals
 - d. Representing one's identity and pride
3. **Examples**
 - a. Kente cloth (Ghana)
 - b. Dashiki and smock (West Africa)
 - c. Sari (India), Kimono (Japan)
 - d. Agbada (Nigeria), Kaftan (North & West Africa)
 - e. Boubou, Hijab, Abaya
 - f. Beaded accessories and traditional caps



Figure 1.6: Traditional or cultural clothing

Party or Occasion Wear

1. **Description:** 'Party wear' means nice clothes people choose to wear for celebrations or festive events. These clothes are often bright, colourful, stylish, and sometimes fancy.
2. **Uses**
 - a. Birthdays, weddings, anniversaries
 - b. Graduation parties and dinner dates
 - c. Religious feasts and family celebrations
3. **Examples**
 - a. Sequinned or lace dresses
 - b. Elegant kaftans and peplum tops
 - c. Designer agbada or senator suits
 - d. High heels and jewellery
 - e. Dress shirts and fitted trousers
 - f. Handbags, shawls and caps

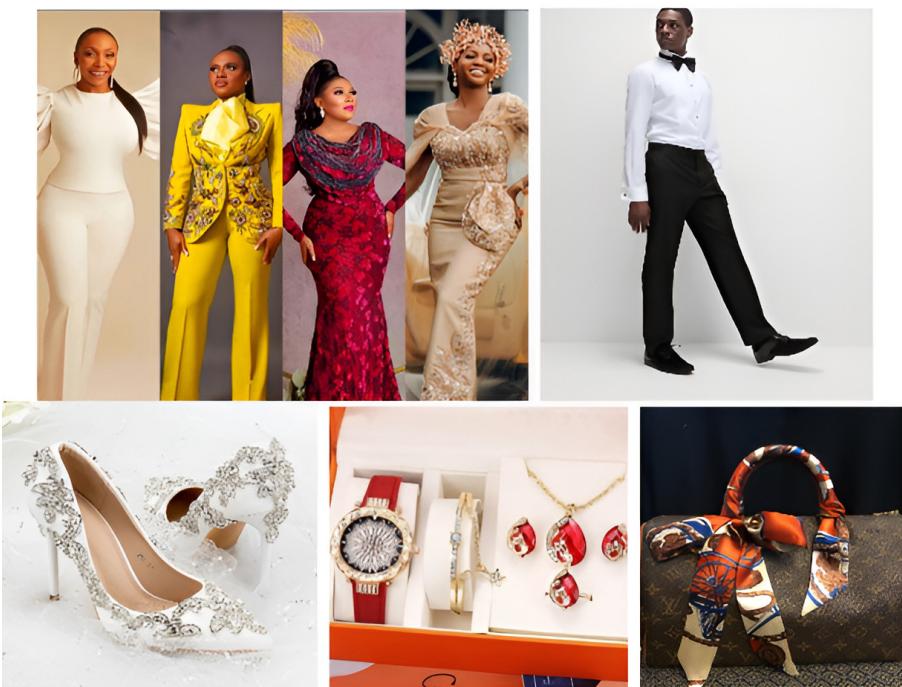


Figure 1.7: Party or occasional wear

Maternity Clothing

1. **Description:** Maternity clothes are made to keep pregnant women comfortable. They are made from soft, stretchy fabrics and can be adjusted to fit a growing belly.

2. Uses

- a. Comfort during pregnancy
- b. Reducing pressure on the waist and abdomen
- c. Making nursing easier postpartum (in nursing wear)

3. Examples

- a. Maternity dresses with empire waistlines
- b. Stretchable maternity jeans and trousers
- c. Wrap tops and nursing bras
- d. Smocked blouses
- e. Maternity leggings and skirts

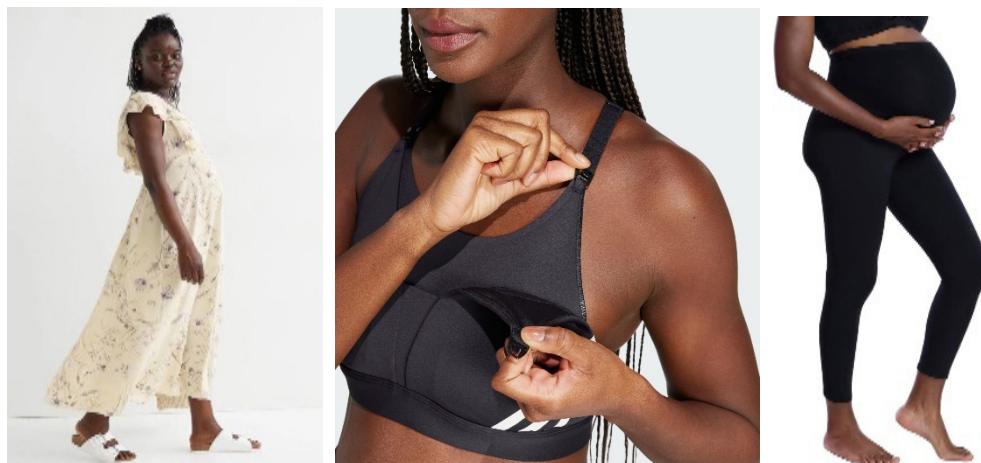


Figure 1.8: Maternity clothing

Festival / Costume Clothing

1. Description: These are clothes people wear for fun, shows, parties, or special holidays. They are often used to look like different characters or to entertain others.**2. Uses**

- a. Drama and stage performances
- b. Costume parties and Halloween
- c. Cultural dances and school plays
- d. Carnivals and parades

3. Examples

- a. Superhero costumes
- b. Traditional dancer outfits
- c. Clown suits and masks
- d. School mascot costumes

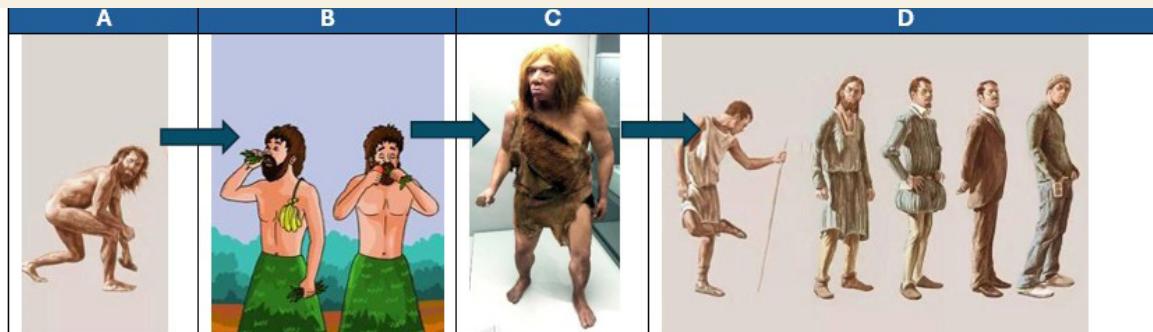
e. Animal and cartoon-themed clothes



Figure 1.9: Festival or costume clothing

Activity 1.1 Discovering the meaning of clothing

1. By yourself, think about what you understand by the word ‘clothing’.
2. Turn to a friend and share your thoughts on the word ‘clothing’.
3. After sharing, write down one idea. Organise yourself into a group of 4 members and read out the ideas.
4. From the responses, come up with your own definition of clothing.
 - a. Check to see if your definition contains some of these key words: worn, body, cover, appearance, modify.
 - b. Write your definition in your notebook.
5. Explore the history of clothing by carefully observing the following images **A** to **D** below.



- Describe what you see in the images with a friend or partner.
- What materials were used in the past?
- How has clothing changed over time?
- Write down two reasons why clothing has changed over time (example, weather, culture).
- Share your answers with another pair.

Activity 1.2 Seeing clothing today: understanding types and uses

- Organise yourself into groups of 4-6 members.
- Observe real clothing items around you, such as school uniforms, traditional wear, sportswear, casual wear and formal clothes.
- List and describe at least three types of clothing you observed.
- For each one, state who wears it and for what purpose (e.g., School uniforms are worn by students for learning).
- Write your group's findings in your notebook.

Classification of Clothing

Clothing is more than just something to cover the body. It silently tells people about you, your style, mood, culture, and even what event you are attending. To use clothing well, it is important to understand the different types of clothing and their purposes.

Clothing can be grouped into three main categories based on its purpose (See **Table 1.1** below).

Table 1.1: Classification of clothing

Clothes	Cosmetics	Accessories
Underwear (Undergarments)	Pomade	Headdress
Innerwear (Inner Garments)	Powder	Jewellery
Outerwear (Outer Garments)	Perfume	Neckwear
Sleepwear	Body Paint	Footwear

	Artificial Eyelashes	Belts
	Artificial Nails	Carried Objects (e.g., bags)
		Hosiery
		Eyeglasses

Clothes

Table 1.2: Types of clothes

S/N	Clothes	Example in pictures
1	Undergarments: These are the clothes worn closest to your body. For example, panties, singlets, brassieres, and boxers. They should be soft, breathable, and absorbent, especially in Ghana's hot weather. Cotton is a good choice. Synthetic ones like nylon may be cheaper, but can cause sweating and skin problems.	
2	Inner Garments: Worn over undergarments and under your outerwear. Examples are shirts, blouses, slips, camisoles, tank tops, and waistcoats. They should feel comfortable and suit the weather. In Ghana, they are usually worn in cool environments like air-conditioned offices or by clergy.	
3	Outer Garments: These are the clothes others see, such as dresses, T-shirts, trousers, jackets, and slit and kaba. They should be neat, show your personal style, and be made from strong, easy-to-care-for fabric.	

Figure 1.10: Under garments



Figure 1.11: Inner garments



Figure 1.12: Outer garments

4	<p>Sleepwear: These are clothes for sleeping. Examples are pyjamas, nightgowns, robes, onesies, and sleep shirts. They should be soft, washable, and allow you to move freely during sleep.</p>	
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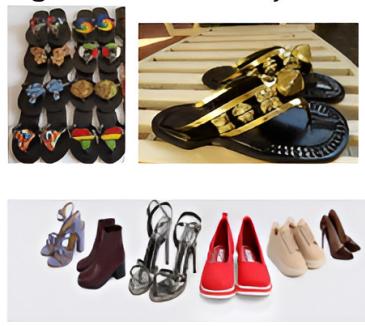
Note: A blouse or shirt becomes an inner garment when worn under a jacket or coat.

Accessories

Accessories complete your look. Choosing the right ones can make a simple outfit look more stylish. Neutral colours like black, brown, and white go with many clothes and help you save money.

Table 1.3: Types of accessories

S/N	Accessories	Example in pictures
1	<p>Headdress: Items worn on the head, like hats or scarves. They can protect you from the sun or add style to your outfit.</p>	
2	<p>Neckwear: Includes ties and scarves worn around the neck. They should match your outfit in both colour and fabric.</p>	
3	<p>Jewellery: Made from materials like gold, beads, or silver. Jewellery adds beauty to clothes. Use simple ones for everyday wear and bold ones for special events.</p>	

4	<p>Footwear: Shoes protect your feet and complete your look. In Ghana's warm climate, choose light, breathable shoes made from suitable materials.</p>	 <p>Figure 1.17 shows a variety of footwear including a row of colorful flip-flops, a pair of black leather loafers with gold buckles, and a collection of high-heeled and flat shoes in various colors like red, blue, and beige.</p>
5	<p>Belts: Worn around the waist, either for fitting or decoration. Belts come in many types and can make your outfit look balanced.</p>	 <p>Figure 1.18 displays three belts: two black leather belts with silver buckles, and one decorative belt with a gold chain and a large floral buckle.</p>
6	<p>Carried Objects: These include handbags and purses. They help carry your personal items while also showing off your fashion taste</p>	 <p>Figure 1.19 shows three carried objects: a brown leather shoulder bag, a teal clutch bag with a chain strap, and a vibrant red beaded handbag.</p>
7	<p>Hosiery: These are socks and stockings. Cotton ones are better in warm weather because they allow your feet to breathe. Nylon can cause sweating and discomfort</p>	 <p>Figure 1.20 illustrates various hosiery items. It includes a grid of colorful socks (pink, purple, blue, grey) and a pair of sheer black stockings worn on a model's legs.</p>
8	<p>Gloves: They may be worn for fashion or protection. Brides often wear stylish gloves, while rubber gloves are used for tasks like washing or gardening.</p>	 <p>Figure 1.21 shows a collection of gloves. It includes a grid of various styles and colors of leather gloves, a pair of blue nitrile rubber gloves, and a pair of black leather driving gloves.</p>

9	Eyeglasses/Spectacles: These include both prescription glasses and sunglasses. They help with vision, protect your eyes from sunlight, and can also be fashionable.	
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Figure 1.22: Eyeglasses or spectacles

Cosmetics

Cosmetics are used to improve or change how the face or skin looks. They also help keep the skin clean and protected.

Table 1.4: Types of cosmetics

S/N	Cosmetics	Example in pictures
1	Pomade: A cream or gel used on the hair or skin to moisturise and sometimes protect against the sun.	
2	Powder: Used on the body or face to reduce shine and match skin tone. Talcum powder does not stain, and face powders can last long and stay even in water.	
3	Perfume: Adds a pleasant smell. It is better to choose soft scents. Apply it directly to your skin, not your clothes, to avoid stains.	
4	Lipstick/Lip-gloss: Lipstick adds colour, while lip-gloss adds shine and moisture to your lips. Choose shades that match your skin tone and clothes.	

Figure 1.23: Pomade



Figure 1.24: Powder



Figure 1.25: Perfume



Figure 1.26: lipstick and gloss

5	<p>Eye Shadow: Used on the eyelids to make the eyes stand out. Lighter colours are best for night, and darker ones are better for day. You can use them to make your eyes look bigger or smaller.</p>	
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Figure 1.27: Eye shadow

Types of Wear by Occasion

1. **Casual/Informal Wear:** These are clothes for everyday use, comfortable and easy to move in. Worn at home or for non-formal activities. Examples: jeans, T-shirts, polo shirts, shorts, simple dresses, and casual jackets. They are made from soft, breathable fabrics and are suitable for Ghana's warm weather.

2. **Formal/Occasional Wear:** Worn for special events, professional settings, and cultural ceremonies. These clothes are more stylish and made with finer fabrics. Examples: suits, kaftans, agbada, slit and kaba, formal gowns, and smocks.

Formal clothes are used for weddings, religious services (like church or mosque), cultural events, dinner parties, state occasions, and professional work environments.

Activity 1.3 Observing different clothing types

1. Organise yourself into a group of 3-5 members to identify clothing items from your local area or setting (e.g., your school uniforms, singlets, panties, handkerchiefs).
2. In your group:
 - a. Identify and list at least **three** examples of each of the following clothing types.
 - i. Undergarments (e.g., panties)
 - ii. Inner garments (e.g., shirts)
 - iii. Outer garments (e.g., dresses)
 - iv. Sleepwear (e.g., pyjamas)
 - v. Casual/informal wear (e.g., jeans)
 - vi. Formal/occasional wear (e.g., kabas and slits)
 - b. Choose any two accessories and describe their purpose (e.g., belt – to hold trousers in place).
3. Create a list of three cosmetic items you have used or seen others use (Examples: Body cream)

For each item, write:

- What it is used for (e.g., body cream is used to make the face smooth and protect the skin).
- Where it is used (e.g., on the face, hands or body).
- Arrange your findings in a table like this and share with a partner.

Cosmetic Name	Purpose	Area of Application

Reasons for Wearing Clothes

Clothing plays many important roles in our lives. Besides covering our bodies, it helps protect us, express who we are, and even shows how we feel. The way you dress can say a lot about you without you saying a word. Here are the main reasons why people wear clothes:

Protection

- Physical Protection:** Clothes keep us safe from harsh weather, insect bites, and injuries. For example:
 - Farmers wear boots to avoid snake bites.
 - Nurses and doctors wear protective gowns and gloves.
 - Soldiers wear camouflage and bulletproof vests for safety in battle.
- Psychological (Spiritual) Protection:** Some people wear certain clothes or items for spiritual or emotional comfort. For example:
 - Traditional priests wear special garments during rituals.
 - Charms, beads, talismans and amulets are believed to protect or bring strength.





Figure 1.28: Physical protection



Figure 1.29: Psychological (Spiritual) protection

Adornment

Clothing is used to decorate and beautify the body. Wearing nice styles, bright colours, makeup, or jewellery can make someone look more attractive. This is one of the reasons fashion is so popular around the world it helps people feel good about how they look.



Figure 1.30: Clothes for adornment

Modesty

Modesty means dressing in a way that respects cultural or religious beliefs about covering the body.

1. For example, Muslim women wear veils in public.
2. In Ghana, tradition teaches women to dress in a way that covers the body from the chest to the knees. What is modest in one culture might not be modest in another, but the goal is the same: respect for oneself and others.



Figure 1.31: Modesty

Communication and identity

Clothing helps share messages about who we are. It can show the following:

1. **Mood:** Wearing black may mean you are mourning, while white shows joy and celebration.
2. **Group Identity**
 - a. Occupation: Police officers, nurses, and soldiers wear uniforms that show what they do.
 - b. Associations: Group members often wear the same colours or clothes, for example, a tailor's group using the same batik print.
 - c. Culture: A Ghanaian may wear kente to show heritage; a Nigerian may wear a boubou with headgear.
 - d. Family: Family members may dress alike, especially at events like funerals, to show unity.
3. **Status or Rank:** Clothing can show your level in society. Chiefs, queens, and professionals often wear rich fabrics, beads, or symbols of power and respect.



Figure 1.32: Group identity

Impression Creation

People often judge others based on their appearance, especially during initial meetings. For example:

- a. A criminal in a suit may be mistaken for a respected person.
- b. A good student who dresses carelessly may be seen wrongly. How you dress can affect how people treat you, especially in job interviews or when meeting your partner's family.

Attraction

Clothing is also used to get public attention. Examples include:

- 1. Clergy wearing white collars to show their role.
- 2. Protesters wearing red bands to signal anger or demands.
- 3. Santa Claus wearing bright red during Christmas to spread cheer.

These outfits are chosen to stand out and send a message.



Figure 1.33: Santa Claus

Activity 1.4 Reasons for wearing clothes

1. By yourself, think about the clothes you wear in school, at home, at church/mosque or during festivals. E.g., **Kente or smock, Raincoat or sweater.**
2. Write two main reasons why you wear these clothes. (E.g., raincoat - to protect from rain, kente or smock - to show tradition)
3. Turn to a friend and talk and share your ideas. Also, talk about what each clothing item tells you about the person wearing it.
4. Think about times you have seen people wearing bright colours, dark colours, neat clothes or untidy clothes. With your partner:
 - a. Talk about how each style or colour might show the person's feelings.
 - b. Share real-life examples from your home, school or community.
 - c. Write three sentences in your notebook about how clothing can show someone's mood.

TECHNIQUES FOR CARING AND MAINTAINING CLOTHING

Taking care of your clothes properly helps them last longer, look neat, and saves money. When you use the right techniques, you protect the fabric, reduce damage, and avoid replacing clothes often. Caring for clothes is not only smart, it also supports a more sustainable lifestyle.

Simple Techniques for Good Clothing Care

Clothing care involves daily habits that keep clothes looking clean, fresh, and presentable. Here are some basic steps to follow.

1. Read Care Labels

Every garment has a care label that gives instructions for washing, drying, and ironing. Always check and follow these instructions to protect your clothes from shrinking, fading, or getting damaged.

2. Sort Clothes Before Washing

Group clothes by colour (e.g. darks, lights, whites), by fabric type, and by how dirty they are. This prevents colours from mixing and ensures each type is cleaned properly.

3. Choose the Right Drying Method

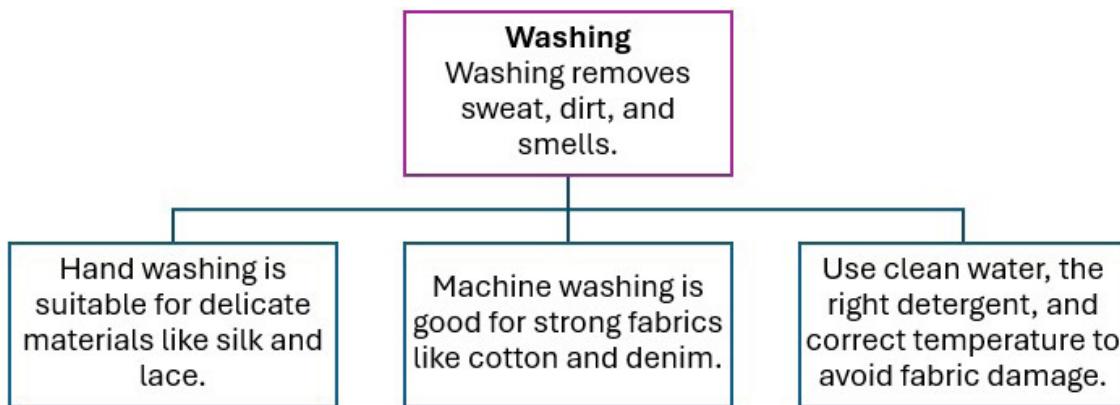
Air-dry delicate clothes to protect the fabric. Machine drying is good for sturdy clothes, but don't over-dry it weakens fabric fibres and wears clothes out faster.

4. Treat Stains Quickly

The faster you remove a stain, the better. Use the right method for the type of fabric and stain to prevent permanent marks or fabric damage.

Four Major Clothing Care Techniques

In addition to these general guidelines, four main techniques are widely used in the daily care and upkeep of clothing.



Hand washing



Machine washing

Figure 1.34: Washing as a clothing care technique

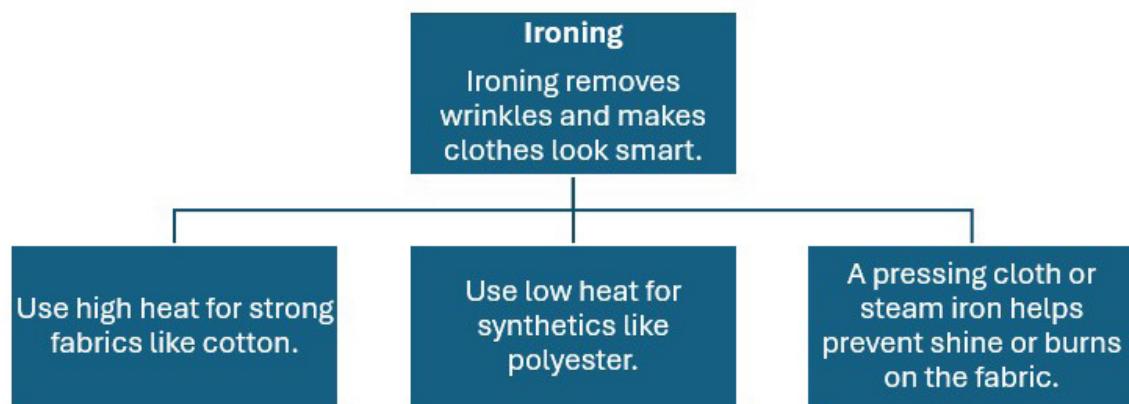




Figure 1.35: Clothing care technique (Ironing)



Figure 1.36: Mending

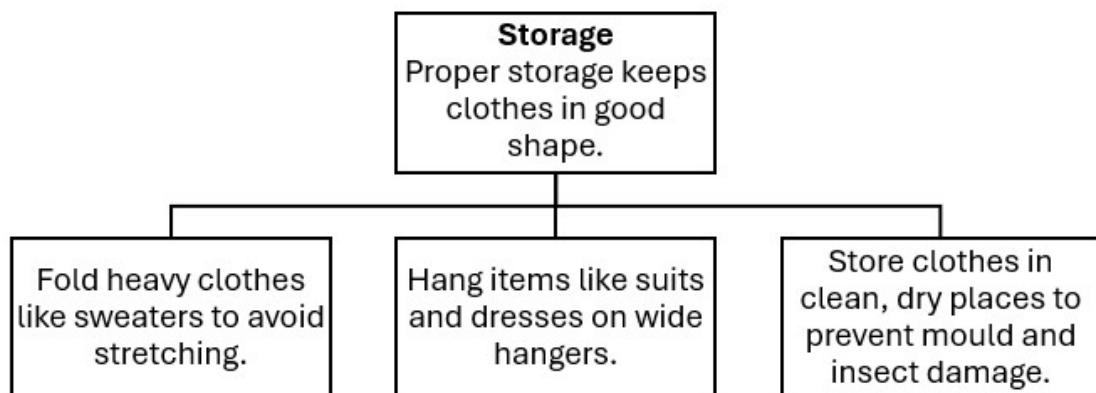




Figure 1.37: Storage

Care and Maintenance of the Wardrobe

Taking care of your wardrobe is more than just owning it. It involves how you organise and maintain it. A neat and well-kept wardrobe not only keeps your clothes in good shape but also makes it easier to choose outfits. It also helps with hygiene and boosts your sense of pride in your appearance.

Best practices for wardrobe maintenance

- 1. Buy wisely:** Choose strong, durable clothes that last longer. Avoid buying too many unnecessary items. This saves money and reduces waste.
- 2. Wash and iron carefully:** Do not overload your washing machine or wardrobe. Overcrowding can damage fabrics and cause wrinkles.
- 3. Rotate clothes:** Change the clothes you wear often. Do not overuse one item while others are left unused. This helps reduce early wear.
- 4. Use cosmetics carefully:** Apply lotions, perfumes, and makeup before dressing. This prevents staining or damaging the clothes.
- 5. Remove stains quickly:** Learn how to clean different types of stains like oil, ink, or sweat as soon as they happen to avoid permanent damage.

Proper storage of clothing

How you store your clothes has a big impact on how long they stay in good shape. Using the wrong storage methods can lead to damage, like fabric wear, misshaping, or even ruining your clothes completely. The following are **storage tips for longevity and appearance**.

- 1. Use quality hangers:** These protect the shape of the shoulders. Avoid wire hangers; they can bend and stretch clothes.
- 2. Know when to fold or hang**
 - Fold thick knitwear like jumpers to stop them from stretching.

- b.** Hang shirts, trousers, and jackets to keep them neat and wrinkle-free.
- 3.** **Store seasonally:** Put away clothes that are not in season (Example: store winter wear during hot weather). Use clean fabric bags or boxes. Do not use plastic; it traps moisture and can cause mildew.
- 4.** **Protect special garments:** Store gowns, suits, and traditional clothes in garment bags. This keeps out dust, light, and insects, helping the clothes stay fresh and clean.

Activity 1.5 Sharing Experiences & Identifying Techniques

Case study (Scenario): “Akua’s clothing care dilemma”

Akua is a 19-year-old boarding school student in Oda. She has a small wardrobe with school uniforms, a church dress, a sportswear set and two pairs of jeans. She notices that some of her clothes are losing colour, the collars of her shirts are getting dirty and stiff, and a button has fallen off her favourite blouse. Akua also shares her dormitory with five other girls who have different cultural habits for clothing care. Some prefer handwashing, others use washing machines during vacation and a few use ironing sparingly.

Ama wants to make her clothes last longer but is not sure which techniques to use regularly, which ones to avoid and how to keep them looking neat.

- 1.** Read Akua’s case study and think about how you would advise her based on your own experiences at home, in the dormitory or in your community.
- 2.** Partner with a friend or a classmate and share your personal clothing care habits, such as washing and mending.
- 3.** Join another pair to form a group of four:
 - a.** In your notebook, list all possible ways to care for clothes (e.g., washing, sorting and mending).
 - b.** Share your group’s top three recommended techniques for Akua with the whole class and note down other groups’ ideas for use in the next activity.

Activity 1.6 Analysing pros and cons of clothing care techniques

- 1.** Organise yourself into a group of 3-5 members.
- 2.** Use your responses from point 3 in Activity 1.5 above to answer the following questions.
 - a.** From **Activity 1.5** point 3 (b), choose **4 clothing care techniques** that are common in your school, home or community.
 - b.** For each technique:

- i. Write three **advantages** (pros) of each technique.
- ii. Write three **disadvantages** (cons) of each technique.
- iii. Think about any cultural or environmental factors that may affect it.
- c. Put your answers in a **simple table** as shown below.

Technique	Advantages (Pros)	Disadvantages (Cons)	Cultural/Environmental Factors
Example: Handwashing	Uses less electricity	Takes more time and energy	Common in areas with no machines
1.			
2.			
3.			

- d. Present your table to the class and listen to other groups' ideas.
3. As a class, agree on the top 5 clothing care methods for Akua and explain why they show responsibility and cleanliness.

INTERPRETATION AND IMPORTANCE OF CARE LABELS IN CLOTHING

Information on Care Labels

A **care label** is a small tag attached to your clothing. It tells you how to wash, dry, iron, or handle the fabric so that the garment stays in good shape for a longer time. By following the instructions on the label, your clothes will look better, feel more comfortable, and last longer.

Information on Clothing Care Labels

Care labels must be permanently attached to clothes. They give useful information such as:

1. The type of fabric used (Example: cotton, polyester, silk)
2. The percentage of each fibre in the garment
3. The brand name and where the item was made
4. A registered number to identify the manufacturer
5. Symbols or written instructions for washing, drying, ironing, bleaching, and dry-cleaning

This information helps you take better care of your clothes and avoid mistakes like buying a sports outfit that says “dry clean only.”

If the garment gets damaged after you follow the care instructions, you may be able to return it or ask for a refund. The registered number (RN or WPL) also helps identify the maker of the clothing.



Figure 1.38: Information on care labels

Below are the main components typically found on care labels, along with their significance.

Fibre Content

This tells you what the fabric is made of (Example, 100% cotton or 70% polyester/30% wool).

1. Knowing this helps you understand how the fabric behaves when washed or ironed.
2. For example, cotton can shrink in hot water, but polyester doesn't shrink easily.
3. It also tells you whether the fabric is strong, stretchy, soft, or breathable.

Care Symbols and Instructions

These are easy-to-read pictures or short phrases that show you how to care for the garment.

1. **Washing:** Whether to wash by hand, machine or not at all, and at what temperature.
2. **Bleaching:** Whether you can use bleach. For example:
 - a triangle symbol means any bleach is acceptable.
 - a triangle with lines means only non-chlorine bleach.
 - a crossed-out triangle means do not bleach.
3. **Drying:** Shows how to dry the garment (For example, tumble dry, line dry).
4. **Ironing:** One dot means low heat; three dots mean high heat. Crossed-out iron means do not iron.
5. **Dry-cleaning:** Circle with letters shows if and how it can be dry-cleaned (Example "P" or "F") to show the types of solvents that are safe to use. Crossed-out circle means do not dry-clean.

These symbols help prevent shrinking, colour loss, or fabric damage.



Figure 1.42: Care Symbols and Instructions

Manufacturer and Country of Origin

This tells you who made the garment and where it was made.

1. It helps you trace the source.
2. It can show quality or ethical practices.
3. It is useful if you need help or a replacement.

Size and Lot/Style Number

Shows the garment's size (Example: S, M, L or numbers like 10, 12).

1. Lot/style number helps retailers manage stock.
2. It makes reordering easy, especially for uniforms or bulk purchases.

Analysis of Care Labels/Notes/Tags to Clothing Articles

Table 1.5: Advantages of Attaching Care Labels/Notes/Tags to Clothing Articles

1. Gives you proper care instructions
Care labels provide clear directions on how to wash, dry, iron, and handle the garment. This helps you keep your clothes in good condition and avoid making mistakes that could spoil them.
2. Prevents damage
By following the care instructions, you reduce the chances of your clothes shrinking, losing colour, or tearing. It helps you protect your clothes from early damage.
3. Helps you choose wisely
Care labels show the fibre content and origin of the fabric, which helps you make better decisions when shopping. For example, if you have allergies or prefer certain materials, the label helps you avoid the wrong fabric.
4. Promotes safety
Some care labels include safety messages, such as “Keep away from fire.” This is especially important for children’s clothes or uniforms to prevent accidents.
5. Encourages responsible buying
The label tells you whether the garment is easy or difficult to maintain. You can avoid buying clothes that need special care, like dry-cleaning, if you do not have access to those services.
6. Meets legal rules
For fashion producers and clothing brands, care labels help meet legal requirements. It also builds customer confidence when they see clear, honest information on the clothes they buy.

Table 1.6: Disadvantages of using care labels on clothes

1. Can be uncomfortable
Some care labels are sewn into areas like the neck or waistband. They can itch or irritate the skin, especially when the fabric is rough or the person has sensitive skin.
2. May spoil the look
Big or dark-coloured labels can show through thin or light fabrics. This may make the garment look unattractive or poorly finished.
3. Likelihood of removal
Many people cut off labels because they feel uncomfortable. Once removed, it becomes difficult to remember how to take proper care of the garment.
4. Not easy to understand
Some labels use only symbols, which can be confusing if you don’t know what they mean. Labels written in foreign languages also make it hard to follow the instructions.

5. Environmental concerns

Some care labels are made from materials that don't break down easily, like plastic or synthetic fabric. When thrown away, they can pollute the environment.

6. Increased production costs

Designing, printing, and attaching care labels increases production costs. For small fashion businesses, especially those producing in low quantities, this extra cost can be a burden.

Activity 1.7 The labels you never noticed

In this activity, you will be making reference to clothing care techniques from the previous lesson.



- Observe the clothing tag found on your under garments, such as panties and brassiers or favourite clothes. An example tag is shown above.
- In your notebook, list five common words and their symbols found in the tag.
- Turn to a partner and share your answers. Does your partner have similar answers?
- With your partner, select **3 care labels** from real clothes.

For each written care label, discuss the following.

- Advantages (Pros)** – How they help in caring for the clothes.
- Disadvantage (Cons)** – Why they may not be followed for the clothing selected.
- Cultural/Environmental factors** affecting use.

5. Record findings in a **table** (Pros, Cons, Factors). An example of the table is shown below

Table: Care Label Analysis Table

Care label example	Advantages (Pros) – how it helps in caring for clothes	Disadvantages (Cons) – why it may not be followed	Cultural/Environmental Factors affecting Use
1. Do not bleach	Keeps fabric strong, prevents colour fading	Bleach is seen as a “strong cleaner,” so some may still use it	In some cultures, whitening clothes with bleach is a tradition; bleach may be cheaper than alternatives
2.			
3.			
4.			
5.			
6.			

6. With your partner, draw and label a sample care label with at least 5 symbols.
 7. Present findings in the classroom and agree on the **3 important symbols found on care labels** that are important to follow.

Activity 1.8 Exploring Clothing Care Labels

1. Organise yourself into a group of 4-6 members.
2. Select a sample garment from the class collection or from one of your group members.
3. In your groups, carry out the following:
 - a. Share personal experiences about what happened when you washed or ironed a piece of clothing without checking the care label.
 - b. Identify if the selected garment has a care label and what information or symbols it includes.
 - c. Discuss what you think each of the symbols might mean (even if unsure).
4. Exploring care symbols:
 - a. **Think:** Reflect silently on what you know or assume about care symbols.
 - b. **Pair:** Turn to your friend seated next to you and compare your answers.
 - c. **Share:** As a pair, share your findings with the rest of your group.

5. As a group, record your observations about care labels and the common challenges or mistakes when they are ignored.
6. Each group should appoint a speaker to summarise and present one experience or insight during a brief class presentation.
7. Class-wide reflection:
 - a. Why do you think care labels are important?
 - b. What should one do if a care label is missing or unclear?

Activity 1.9 Decoding Clothing Care Symbols

1. Organise yourself into a group of 3-5 members.
2. Search the internet for pictures of clothing care symbols or use the worksheet provided by your teacher. (For example: washing, bleaching, drying, ironing, dry cleaning).
3. In your group:
 - a. Match each symbol to its meaning using your best judgement.
 - b. Write a possible instruction for each (e.g., “Do not bleach,” “Iron at medium temperature”).
 - c. Use markers and chart paper to create a colourful visual guide.
4. Prepare to present your group’s guide to the class.
5. During presentations, pay attention to others and update your own notes with corrections or additional meanings.
6. Post all group charts on the classroom wall to serve as a reference poster.

The Importance of Good Care Habits for Clothing

Taking good care of your clothes is more than just making sure you look tidy. It is about protecting your health, feeling comfortable, and saving money by making your clothes last longer. Below are some key reasons why developing good care habits for your clothing is very important.

1. Maintain cleanliness of clothing and the body.

Wearing clean clothes every day keeps your body free from sweat, dirt, and bacteria. This protects your skin from rashes, bad odours and infections. For example, wearing dirty underclothes can lead to skin problems or body odour.

2. Keeps you feeling fresh and comfortable.

Fresh clothes help you feel confident and relaxed. When clothes are clean and properly aired or sun-dried, they smell nice and feel comfortable against your skin, especially in hot or humid weather.

3. Prolong the Lifespan of Clothing.

Proper washing, drying, ironing, and storing help clothes stay in good condition for a long time. Clothes that are well taken care of won't tear, fade, or lose shape quickly, so you can wear them longer without replacing them often.

4. Prevent skin and hair infections.

Dirty clothes, especially undergarments and towels, can carry bacteria, fungi, or germs. If not cleaned well and regularly, these can cause skin infections, itching, or other health issues. Drying them in sunlight helps kill germs naturally.

5. Prevents bad smell (body odour).

When you wear clean clothes, especially around your armpits and feet, you reduce the chances of developing strong body odour. Clean clothing helps you feel and smell fresh throughout the day.

Examples of Good Clothing Care Habits

- 1. Change underwear daily:** Items like panties, brassieres, and singlets must be changed every day because they collect sweat and body oils.
- 2. Wash handkerchiefs often:** Since handkerchiefs collect dirt and germs from the nose and face, they should be washed after every use.
- 3. Washing and sun-drying of undergarments, towels and handkerchiefs:** Drying clothes like towels and underwear in sunlight helps kill germs and keeps them fresh.
- 4. Air lightly worn clothes and footwear:** If you wear something briefly and it's not dirty, airing it outside can remove smells and moisture.
- 5. Iron clothes to avoid wrinkles:** Ironing helps clothes look neat and can kill any leftover germs in the fabric.
- 6. Practicing proper storage:** Fold or hang your clothes neatly in clean, dry places to protect them from dust, insects, or mould.

The Importance of Care Labels in the Care of Clothing and Household Articles

- 1. Proper care and maintenance of clothing and household textiles help preserve:** Proper care helps your clothes and household textiles look better and last longer. Care labels are your best guide for doing this correctly.
 - Appearance:** Keeps fabric colour, shape, and texture looking new.
 - Function:** Helps your clothes do what they're supposed to keep you warm, stylish, or comfortable.
 - Durability:** Prevents damage, so you don't have to replace clothes too soon.

- 1. Care labels are one of the most reliable tools for achieving proper care:** Care labels give you correct instructions on washing, drying, ironing, and storing. Following these labels means fewer mistakes and better results.
- 2. You will find care labels on most ready-made clothes:** These labels are usually sewn into garments to help you take the best care of them, based on the fabric and how the item is made.
- 3. Provide specific instructions on how to clean, maintain and store clothing properly:** Care labels may give instructions such as “hand wash only,” “iron at low temperature,” or “tumble dry.” These instructions help protect your clothing from shrinking, fading, or tearing.
- 4. Following care label instructions:**
 - a. Helps prevent damage to fabrics:** If you ignore or misunderstand care instructions, your clothes can shrink, stretch, fade, or get damaged. Care labels give important instructions to help you avoid these problems and keep your clothes in great shape.
 - b. Maintains the original quality and look of the garment over time:** When you follow the care instructions, your clothes or household items keep their shape, color, and overall look. This helps the original design and quality stay intact, making them look as good as new even after many uses or washes.
- 5. Ready-made clothes always come with care guidance**

Labels are designed to match the material cotton, wool, silk, etc. so that the garment stays in good condition.
- 6. For custom-made or home-sewn items.**

These might not come with labels. In that case, you must:

 - a. Use your knowledge of fabric types to choose the best washing and ironing method.**
 - b. Understand garment construction so you can handle delicate parts properly.**
 - c. Apply basic textile science, like knowing how cotton or polyester behaves during washing or pressing.**
- 7. Practical Skills You Should Learn:** To care well for your clothes whether labelled or not you need to know how to:
 - a. Do Laundry Correctly:** Use the right water temperature, soap, and wash method (hand or machine).
 - b. Remove Stains Properly:** Different stains need different treatments. Knowing which works best saves your fabric from damage.
 - c. Iron Clothes the Right Way:** Learn what heat settings match which fabric. This keeps clothes smooth without burns.

d. **Mend Clothes:** If something tears, learn to sew or patch it so you can wear it again instead of throwing it away.

Activity 1.10 Spotting & Defining Good Clothing Care Habits

1. By yourself, examine your school bag, the clothing you are wearing or the clothing in your bag.
2. Find the care label/tag inside the clothing or school bag. (If yours has none, borrow a friend's item to check.)
3. Use clues from your previous lesson to guess what at least two symbols or words mean.
4. Think of a time when your clothing lasted long versus when it spoiled quickly.
5. Write what you did differently in each case (e.g., I followed the label or I ignored the washing instructions).
6. Based on what you saw and your experiences, write your own definition of "good clothing care habits."
7. Share your definition with 3 classmates and combine ideas.

Note: Your definition must include these keywords: (cleanliness, neatness, long-lasting, proper handling).

As a small group, list at least five habits that keep clothes clean, neat and long-lasting.

Use these clues: washing, proper storage, drying in the sun, etc.

- a. Write your five habits in your notebook.

Activity 1.11 Analysing Pros & Cons of Clothing Care Habits

1. Complete this activity in the same group as activity 1.10.
2. From your group's list, select five habits to study.
3. Draw and fill the table below in your notebook, on chart paper or a shared sheet:

Clothing Care Habit	Pros (Good effects)	Cons (Possible problems)	Cultural/Environmental Notes
Example: Handwashing wool sweater	Prevents shrinking, keeps fabric soft	Takes more time to dry, uses more water	Cultural: uses traditional washing technique Environmental: Uses less electricity
1			

Clothing Care Habit	Pros (Good effects)	Cons (Possible problems)	Cultural/Environmental Notes

Note

- Use these clues for **Pros**: saves money, keeps clothes looking new and prevents skin irritation.
- Use these clues for **Cons**: costs more, takes time, special tools needed.

4. Decide how to present your table: chart, poster, concept map or PowerPoint. (Make sure your format is clear for everyone).
5. Present your group's findings and take note of the similarities and differences from other groups.
6. As a whole class, agree on the top 4 clothing care habits that:
 - a. Keep clothes clean and in good condition.
 - b. Show responsibility and cleanliness.

Note: Examples to guide your discussion

Clothing care habit	How it keeps clothes clean & in good condition	How it shows responsibility & cleanliness
e.g. Washing clothes regularly	Removes dirt, sweat and germs	Shows you value hygiene and health
e.g. Sorting clothes before washing	Prevents colour transfer and damage	Shows planning and organisation
1.		
2.		
3.		
4.		

7. Record the agreed list in your notebook for future reference.

EXTENDED READING

Below is a recommended reading material that you can consult for more information.

- Forster, P. (2014). *Clothing and textiles*. Winmat Publishers Limited: Accra.

Review Questions

1. List any two materials early humans used for clothing.
2. Give two features of outerwear that make it suitable for cold weather.
3. Explain why people usually prefer casual clothing for weekend wear.
4. What makes protective clothing important for workers in dangerous environments?
5. Suggest two types of clothing suitable for a construction worker and justify your choices.
6. Design a simple clothing plan for a person attending a wedding and explain why each item was chosen.
7. List the main classifications of clothing.
8. How can accessories enhance or complete an outfit? Provide examples.
9. Fill in the blanks with one accessory item that matches each type of clothing.

Clothing Type	Matching Accessory
Casual wear	
Formal wear	
Traditional wear	
Sportswear	

10. Identify two ways accessories can change the appearance of a simple outfit.
11. Why is it important to choose appropriate clothing and accessories for different events?
12. Create a table to show the different classifications of clothing using three examples under each.

Classification	Examples
Casual	
Formal	
Traditional	
Protective	

13. What is the difference between adornment and protection as functions of clothing?
 - a. Adornment focuses on beauty, while protection shields the body from harm.
 - b. Adornment relates to body temperature, while protection is about accessories.
 - c. Adornment prevents diseases, protection shows social rank.

d. Adornment is used for work, protection is for religious events.

14. **True or False:** Clothing worn for ceremonial or decorative purposes falls under protection.

15. Explain with two examples how clothing can be used for adornment.

16. How can clothing be used to show a person's role or membership in a group?

17. Write the primary function of each type of clothing listed in the table below.

Clothing Item	Function
Fireman's uniform	_____
Beaded traditional wear	_____
Lab coat	_____
Graduation robe	_____

18. The main reason for ironing clothes after washing is to

- fade the colour of the fabric
- remove dirt particles
- restore a neat appearance
- shrink the garment

19. *Fill in the Blank:* Woollen garments should be stored with _____ to prevent damage from moths.

20. True or False: Drying clothes in direct sunlight for long periods may weaken their fibres and fade their colour.

21. List three different methods of caring for clothes and explain one benefit of each method.

22. Analyse and describe at least two common techniques people in your home or community use to care for their clothing. For each technique, write one advantage and one disadvantage.

23. Interview two adults in your home or community. Ask how they take care of their clothes. Write your findings in a paragraph and include a group demonstration, role-play or poster to show what you have learnt.

24. What is commonly found on clothing care labels?

25. *Fill in the Blank:* A triangle symbol on a care label usually indicates _____.

26. True or False: Care labels help the user understand how to wash, iron and dry a garment.

27. Using the image of a care label, identify two symbols and explain what they mean.

28. Investigate a case where a garment was damaged due to wrong care (e.g., hot iron, bleach). Suggest two ways this damage could have been prevented.

- 29.** Why is it important to follow care label instructions for delicate garments like silk or wool? Give two reasons.
- 30.** State two functions of care labels found on clothing.
- 31.** Draw the correct care symbols for each of the following instructions:
 - a.** Machine wash cold
 - b.** Do not bleach
 - c.** Tumble dry low
- 32.** Evaluate how care habits affect the durability and appearance of garments. Give two examples.
- 33.** Which fabric (wool, cotton or polyester) is best for making sportswear? Give a reason for your choice.
- 34.** Create a care guide for a custom-made outfit without a care label. Include tips on how to wash, dry, iron and store the garment.

SECTION

2

WARDROBE PLANNING AND APPEARANCE MANAGEMENT (PRINCIPLES AND PRACTICES)



PSYCHOSOCIAL ASPECT OF CLOTHING

Wardrobe Planning and Appearance Management Practices

Introduction

In this section, you will explore how to make smart choices about clothing and how to plan a wardrobe that suits your needs, lifestyle, and budget. You will also understand the concept of good grooming and how it relates to your dress sense and personal image. Making the right clothing choices helps you feel confident, look neat, and stay comfortable in different environments. Wardrobe planning allows you to manage your clothes wisely, avoid waste, and always be prepared for school, social, and family occasions. Additionally, good grooming practices, such as personal hygiene, neat clothing, and proper posture, play an important role in how others see and respect you. These lessons help you develop habits that promote self-respect, social acceptance, and positive personal presentation at school, home, and in your community.

KEY IDEAS

- Clothing selection means choosing what to wear based on your age, gender, the event or activity, and your personal needs. This helps you dress properly for every situation.
- Good grooming is supported by eating well, getting enough rest, maintaining good posture, staying clean, having confidence, following routines, and having access to grooming products or services.
- Good grooming means looking neat and clean by taking care of your body, wearing suitable clothing, and practising personal hygiene and self-care.
- Planning and organising a wardrobe help you avoid clutter, save money, and create a neat collection of clothes that can be used for different occasions.
- Several things affect the clothes people choose. These include the family budget, stage of life, type of work, cultural expectations, and the weather.
- When planning a wardrobe, it is important to consider what clothes you already have, your daily activities, age, weather conditions, and the money and resources available.

UNDERSTANDING WARDROBE AND WARDROBE PLANNING

Concept of Wardrobe

A **wardrobe** is the total collection of clothes, accessories and cosmetics a person owns and uses for different activities and occasions.

Types of clothes in a wardrobe

1. School uniforms
2. Church or mosque outfits
3. Casual wear
4. Sleepwear
5. Sportswear
6. Traditional wear
7. Footwear and accessories like belts, scarves and caps

Types of clothes in a wardrobe



Figure 2.1: Types of clothes in a wardrobe

Wardrobe Planning

Wardrobe planning is the process of choosing, arranging and managing clothing items to match a person's lifestyle, climate, activities and budget. It helps you:

- a. Select clothes suitable for different occasions
- b. Avoid wasting money on clothes you don't need
- c. Maintain good grooming and dressing habits
- d. Dress responsibly within your means

Wardrobe planning teaches you how to use what you already have, buy only what you need, and create a personal style that fits your daily life.

Factors That Influence Clothing Selection

The family life cycle

As a family moves through different stages, their clothing needs change. Examples of each stage relating to clothing selection explained in the diagram below:

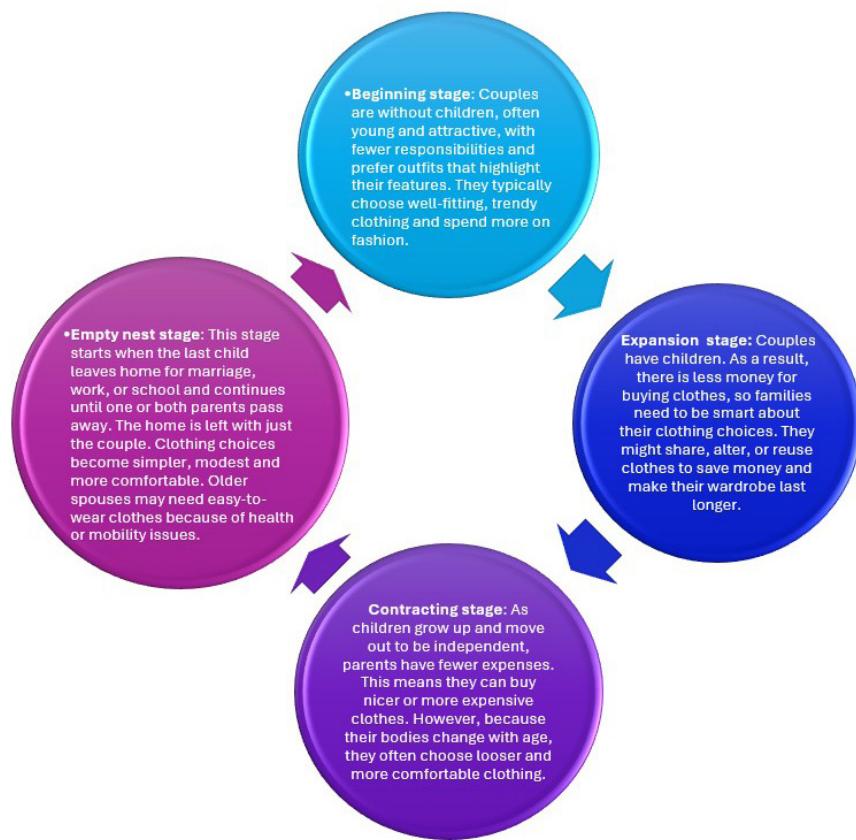


Figure 2.2: Family life cycle

Family budget

A family's income determines how much they can spend on clothing. Families with high income may buy designer or quality items, while those with low income may choose affordable, second-hand, or multi-purpose clothing to stay within budget.

Community standards

What people wear is often influenced by cultural norms or societal expectations. Dressing according to accepted standards avoids embarrassment and helps one feel accepted in the community.

Occupation

Different jobs require different types of clothing. For instance, a student wears a school uniform, a farmer wears practical work clothes, and a bank worker may wear formal office attire. Dressing properly for your job builds respect and confidence.

Age and sex of family members

People at different ages require different styles of clothing:

- Children wear flexible, durable clothes, teens may choose stylish outfits.
- Teenagers may prefer fitted clothing.

- c. Men and women have different clothing needs based on physical and social differences. It is important to wear different types of clothes suited to their needs and appearance

Climate and weather

Weather influences the types of clothes people wear for comfort and protection. In hot, humid areas, lightweight fabrics like cotton and linen keep you cool. In cold regions, layered clothing made from wool or fleece helps retain warmth.

During rainy seasons, raincoats and waterproof shoes are essential to stay dry. Adapting clothing to seasonal changes keeps everyone comfortable and healthy, and families often choose versatile clothes that can be layered for practicality and cost-effectiveness.

Fashion trends and personal taste

Fashion and personal style are key in clothing choices. People use clothes to express personality, mood, and creativity. Trends from magazines, social media, and celebrities influence buying decisions, especially among youth.

Some prefer classic styles, while others like bold colours and modern designs. Families may discuss styles that balance tradition and personal expression. Understanding fashion trends ensures clothes are appropriate and not outdated.

Religious and Cultural Beliefs

Beliefs and traditions influence clothing choices. Some religions require modest clothing, head coverings, or specific colours. Festivals, weddings, and rituals involve meaningful traditional clothes.

Choosing traditional clothes helps preserve cultural heritage and identity. Families must balance modern styles with cultural respect, especially during important events. Teaching younger generations about traditional clothing fosters appreciation for cultural customs.

Table 2.1: Factors to consider when planning a wardrobe

1. Existing wardrobe: Before buying new clothes, check what you already have. Remove old items, no longer fit, or are out of style. This helps avoid waste and guides you on what you really need.
2. Climate: Your wardrobe should match the weather in your area. In Ghana's hot climate, light fabrics like cotton, batik, tie-dye, Ghana Textile Prints, Akosombo Textile Prints, and Printex are ideal to stay cool and comfortable.
3. Age: Age influences clothing preferences. Young people often like trendy, fitted outfits, while older individuals may prefer relaxed, breathable, and easy-to-wear garments.
4. Financial resources: The amount of money available for clothing affects your choices. Even with little money, you can plan smartly by buying simple, durable clothes that suit many occasions.

5. **Status or lifestyle:** Your daily activities should guide your clothing choices. For example, a student needs uniforms and casual clothes, while a teacher or professional may need office wear and traditional outfits for ceremonies.
6. **Activities:** Plan clothing based on events and occasions. Everyday clothes differ from clothes worn to weddings, funerals, church, or the beach. Choose what is suitable rather than copying trends that may be inappropriate.

Benefits of Planning a Wardrobe

A thoughtfully planned wardrobe offers numerous advantages. It helps individuals make smart clothing choices and get the most out of their resources. The key benefits include:

1. Saves money

When you plan your wardrobe, you avoid buying clothes that you do not need. This means you can use your money wisely by focusing only on items that are useful and suitable for your lifestyle. It prevents wasteful spending on trendy or duplicate clothes.

2. Gives variety

A well-planned wardrobe allows you to combine different tops, bottoms, and accessories to create many outfit choices. This way, you can wear the same clothes in different ways for various occasions without always needing new clothes.

3. Reduces clutter

Planning helps you avoid having too many clothes that you do not wear. Your wardrobe will stay tidy and organised, making it easier to find what you need quickly.

4. Encourages sharing

When you regularly go through your wardrobe, you can identify clothes that no longer fit or suit your style. These can be given to friends, family, or donated to those in need, instead of being wasted.

5. Improves image

With proper wardrobe planning, you are more likely to dress neatly and appropriately for every event. This helps you feel more confident and gives others a good impression of you.

6. Expands gradually

You can build your wardrobe over time by adding a few important or stylish items each year. This allows you to develop strong personal style and own clothes that truly fit your needs and taste.

Activity 2.1 Wardrobe Planning

1. By yourself, think about where you keep your clothes at home, in the dormitory or in **the community** (e.g., trunk, cupboard, suitcase, plastic bag, box).
 - a. Share with a friend the way you store your clothes.
 - b. Say what word comes to your mind when you think about all the clothes, shoes and accessories you own.
2. With your friend, write a definition for the following.
 - a. **Wardrobe:** A wardrobe is....
 - b. **Wardrobe planning:** Wardrobe planning is...
 - c. Check your definitions with your teacher.
3. Draw a table with 3 columns: What I Know about planning a wardrobe – What I Want to *Know about planning a wardrobe* – *What I Learned about planning a wardrobe*.
 - a. Fill in the first two columns now.
 - b. Leave the last column for later.

Activity 2.2 Factors to Consider in Wardrobe Planning

1. Organise yourself into a group of 4-6 members.
2. Observe people around you (children, adults, workers) and how age, weather, money or activities affect their clothing.
3. In groups, list at least 5 factors to consider when wardrobe planning. For example:
 - a. Clothes already owned
 - b. Climate/weather
4. Plan a simple wardrobe for a **senior high school student** (uniform, sportswear, religious wear, casual wear).

Note: Think about the values related to wardrobe planning. For example, Wardrobe planning teaches responsibility (wise use of money) and self-esteem (neat, confident appearance).

5. In your group, can you think of any more values relating to wardrobe planning? Write these in your notebook.
6. Share your values in a whole-class discussion and add any additional values shared by other groups to your notes.

WARDROBE PLANNING AND PRACTICAL APPLICATION

Steps in Selecting and Arranging Clothing for A Wardrobe

Planning a wardrobe goes beyond looking fashionable. It's about choosing clothes that meet your daily needs, save money, and help you dress well in different situations. The steps below will help you plan and organise your clothing in a smart and practical way:

Table 2.2: Steps in selecting and arranging clothing for a wardrobe

1. Think about your clothing needs
<p>Start by asking yourself: What clothes do I need for school, home, church or mosque, social events, and leisure? Also consider the weather, do you need lighter clothes for hot days and warmer ones for cold or rainy seasons? This step helps you focus on what's really needed.</p>
2. Check what you already have.
<p>Look through your wardrobe. Keep clothes that still fit and are in good condition. Fix the ones that can be mended and give away or repurpose clothes that you no longer wear. This helps clear up space and avoid buying what you already own.</p>
3. Set a budget and focus on important items.
<p>Decide how much money you can spend on clothes. First, buy what you truly need like school uniforms, Sunday wear, or everyday basics. Avoid spending on unnecessary or trendy clothes that you might not wear often. This saves money and avoids waste.</p>
4. Plan your clothing shopping.
<p>Make a list of what you need before going to the market. Look out for quality clothes that last longer and choose colours and styles that you can wear in many ways. You can also buy from sales, thrift stores, or local seamstresses to get value for your money.</p>
5. Choose clothes that fit you and your style.
<p>Your clothes should make you feel comfortable and confident. Pick styles that suit your body shape, your skin tone, and your personal taste. Wearing clothes that fit well and look good helps you feel proud of how you present yourself.</p>
6. Arrange your wardrobe properly.
<p>Keep your clothes neat and easy to find. Group similar items like shirts, trousers, skirts, or traditional wear together. Put items you wear often in easy-to-reach places. Use hangers and fold clothes nicely to avoid wrinkles.</p>
7. Keep your wardrobe updated and clean.
<p>Wash, iron, and repair your clothes regularly to keep them looking good. From time to time like each school term or season go through your clothes and remove what no longer fits or is no longer needed. Add new items when necessary.</p>

Steps in Planning a Wardrobe for Specific Groups

Sometimes you may need to plan a wardrobe not just for yourself, but for someone else, like a younger sibling, a parent, or even for a project. The steps below can help guide you.

- 1. Know who you are planning for:** First, decide who the clothes are for. Children, teenagers, adults, and the elderly have different needs. For example, a teenager may want trendy outfits, while a new mother may need easy-to-wear clothes suitable for caring for a baby.
- 2. Think about their daily activities:** What does this person do every day? Do they go to school, work in an office, attend market, or take care of children at home? This helps you choose clothes that suit each activity. A student might need uniforms and casual clothes, while a working adult may need office wear.
- 3. Consider the weather and environment:** Is the person living in a hot, humid, or cold place? Make sure their wardrobe has clothes for the weather in their area. For example, someone in a cold region may need sweaters and coats, while someone in a coastal area may need light, breathable clothes.
- 4. Respect cultural and religious practices:** Clothes should respect the person's beliefs and customs. A Muslim girl, for instance, might wear long dresses and a hijab. Traditional or cultural attire should also be considered for festivals and special events.
- 5. Plan according to your budget:** Find out how much money you have to spend. Use that amount wisely. For example, if you have 500 cedis, you might spend 200 cedis on shoes, 150 cedis on tops, and 150 cedis on trousers. This helps cover all the essentials without overspending.
- 6. Choose the right clothes for the person:** Pick clothes that suit the person's needs. Children may need easy-to-clean clothes for playing, while the elderly may prefer clothes with elastic bands for comfort. People with special needs may require clothes with adjustable fasteners.
- 7. Plan for mixing and matching:** Try to choose clothes that go well with each other. This helps create many outfit combinations without needing lots of clothes. For example, a navy-blue top might match different trousers or skirts, giving you more options.
- 8. Check and update the wardrobe often:** People grow, seasons change, and activities may change too. Go through the wardrobe regularly to see what needs to be replaced or added. This keeps the wardrobe useful and up to date.

Activity 2.3 Steps in Arranging Clothing

1. By yourself, **think about how you keep clothes** (trunk, cupboard, suitcase, box, bag).

- a. Share with a partner how you arrange them.
 - b. Together, write the steps for selecting and arranging clothes.
2. Compare with the following guide. Do you follow any of these with your own wardrobe?
 - a. Sorting
 - b. Arranging by type
 - c. Considering climate
 - d. Placing items neatly.

Activity 2.4 Planning Wardrobes for Different People

1. Organise yourself into a group of 3-5 members.
2. Choose one person from your community (e.g., student, farmer, seamstress, teacher, trader).
3. Plan a simple wardrobe with 4–5 items that the person would need for school, work or social events.
4. Share your plan with others in a whole-class discussion.
5. Reflect individually on these questions: From the class discussion, which wardrobe do you think is more practical? Why do you think this?

Activity 2.5 Practical Wardrobe Planning

1. Organise yourself into groups of 4-6 members.
2. Think about how clothes are stored at home, in a dormitory or community.
3. Select clothing items (real or imagined) and act out how to arrange them neatly.
4. Show how to organise items for different occasions (school, religious, casual or work).
5. Pretend you are a radio presenter and tell a partner one tip you have learned about wardrobe planning.

THE CONCEPT OF GOOD GROOMING

Good Grooming in Relation to Dress Sense

Looking neat and presentable is an important part of everyday life. Good grooming means taking care of your appearance, especially how you dress and keep yourself clean. It involves wearing clothes that are clean, well-ironed, and suitable for the event or place you are going to. Whether it is school, a party, or a formal programme.

Good grooming also includes small but important details like keeping your shoes polished, trimming your nails, brushing and styling your hair neatly, and wearing simple, matching accessories. When you pay attention to these things, you look smart, confident, and respectful.

People often notice how you look before you even speak. That is why good grooming helps create a positive impression wherever you go. It shows that you respect yourself and others, and it helps you feel proud of how you present yourself in public.



Figure 2.3: Personal grooming items

Importance of Good Grooming

- Build self-confidence:** When you look neat and well-dressed, you feel good about yourself. This boosts your confidence in class, during events, and when talking to others. But poor grooming can make you shy or worried about how others see you.
- Shows you are active and healthy (Gives vitality):** A well-groomed person looks lively and healthy. People are more likely to admire and engage with you when you appear fresh and energetic.
- Make you look professional:** In the workplace or during interviews, how you dress and groom yourself matters. It shows that you are serious, respectful, and reliable and it can open doors to better opportunities.
- Improve your social life:** When you are well-groomed, others enjoy being around you. You are more likely to make friends, have meaningful conversations, and build trust.
- Boost your mental well-being:** Taking care of your appearance makes you feel good inside. It can reduce stress and give you a sense of order and self-worth, helping you stay happy and confident.
- Keep you clean and healthy:** Grooming is part of good hygiene. It helps prevent bad smells, skin infections, and other health problems. Clean clothes, tidy hair, and trimmed nails all contribute to good health.
- Make you more attractive:** Looking after yourself helps you bring out your best features. This can make you more appealing to others and help you enjoy positive attention and interactions.
- Show self-respect and respect for others:** When you groom yourself properly, it tells people that you care about how you look and how you present

yourself. It also shows that you respect those around you by not appearing dirty or untidy.

Activity 2.6 Understanding Good Grooming through a Story

1. Read the story and answer the questions that follow.

*Ama is a JHS graduate who just gained admission to Senior High School. On her first day, she wore a neat uniform, polished shoes and had her hair neatly braided. Her friends admired her confidence. Another student, Kojo, arrived wearing a dirty shirt, unkempt hair, and torn sandals. Some learners laughed at him, and he felt shy to talk in class. Later, the teacher explained that the way we care for our body, hair, teeth, clothes and shoes is called **good grooming**. It helps us look neat, stay healthy and feel confident*

2. Answer these questions in pairs or small groups:
 - a. From the story, what made Ama confident?
 - b. What made Kojo shy?
 - c. What do you think “good grooming” means after reading the story?
3. Write why good grooming is important in school and in the community. Give an example for each case.
 - a. *Example (school):* It makes me look neat in my uniform, so teachers and classmates respect me.
 - b. *Example (community):* It helps people trust me and see me as responsible.
4. *Whole-Class Discussion*
 - a. Based on what you read in the story and your own experience, write your own definition of “good grooming.”
 - b. Share your definition with 3 classmates and combine ideas.

Note: Your definition must include these key words: (*cleanliness, neatness, health, confidence*).

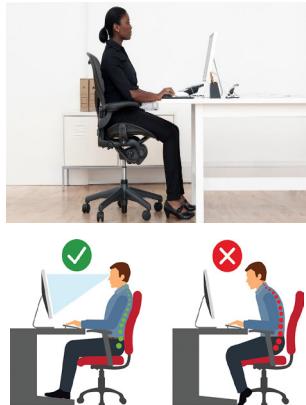
5. Turn to the person on your right and discuss examples of good grooming practices you do at home, school or in the dormitory.
6. As a class, list why good grooming is important (e.g., builds self-confidence, keeps us healthy, makes people respect us).

EXAMINE THE FACTORS THAT PROMOTE GOOD GROOMING

Factors That Promote Good Grooming

Looking neat and presentable is not just about clothes; it includes your overall appearance and how you care for yourself. Several factors contribute to achieving good grooming. Let's look at these factors and how they support hygiene, confidence, and smart appearance.

Table 2.3: Factors that promote good grooming

Factors that promote good grooming	Examples
<p>Posture</p> <p>Posture means the way you stand, sit, or walk. Keeping your back straight makes you look confident, healthy, and well-groomed. Slouching can make your body look bent and unattractive. Avoid wearing high heels that affect your balance or posture.</p> <p><i>Example:</i> Sitting straight in class instead of slouching makes you appear alert and respectful.</p>	 <p>Figure 2.4: Posture</p>
<p>Diet</p> <p>What you eat affects how you look and feel. A balanced diet gives your body the nutrients it needs to stay strong, healthy, and energetic. Eating the right mix of fruits, vegetables, proteins, and water improves your skin, hair, and body shape all part of good grooming.</p> <p><i>Example:</i> A student who eats healthy meals and drinks water regularly will have clearer skin and more energy.</p>	 <p>Figure 2.5: Balanced diet</p>
<p>Exercise</p> <p>Regular exercise keeps your body fit and active. It improves your physical shape, boosts your energy, and helps you look fresh. Exercise also supports healthy skin and posture, which are important in looking well-groomed.</p> <p><i>Example:</i> Skipping rope or jogging in the morning can make you feel fresh and strong during the day.</p>	 <p>Figure 2.6: Exercise</p>

Rest and Relaxation

Getting enough sleep and taking breaks from stressful activities helps your body recover. Rest makes your face and body look fresh and cheerful. You can relax by taking walks, watching your favourite movie, or enjoying quiet moments.

Example: Sleeping 8 hours at night and taking short breaks after studying helps you stay cheerful and healthy.

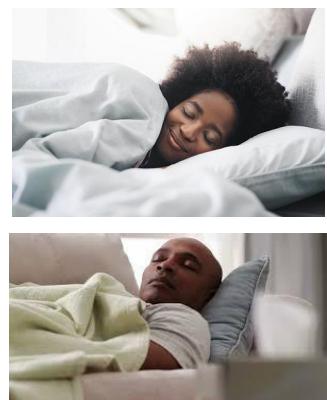


Figure 2.7: Rest and Relaxation

Personal Cleanliness (Hygiene)

Keeping clean is one of the most important parts of grooming. Wash your body, brush your teeth, clean your nails, and wear fresh clothes every day. Clean hair, neat nails, and fresh breath make a big difference in how others see you.

Example: Bathing daily and brushing your teeth in the morning and evening helps you stay fresh and confident.

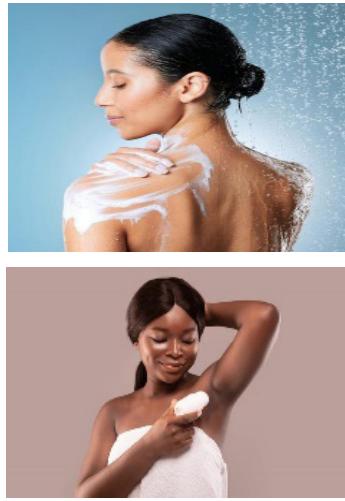


Figure 2.8: Personal Cleanliness (Hygiene)

Clothing

What you wear says a lot about you. Wear neat, well-fitting, and clean clothes that are right for the occasion. Avoid torn or faded clothes, and always dress in a way that suits your body and personality. Your clothes should also match the weather and setting.

Example: Wearing your clean school uniform and polished shoes every day shows respect for school rules.

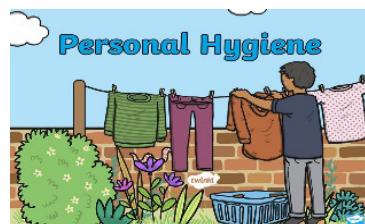


Figure 2.9: Clothing

Environmental Hygiene

Living in a clean space shows you care about hygiene. Tidy up your room, classroom, or home regularly. A clean place prevents sickness and makes it easier for you to look after yourself.

Example: Sweeping your bedroom and arranging your books neatly helps prevent illness and looks pleasing.



Figure 2.10: Environmental Hygiene

<p>Jewellery Care</p> <p>Wearing simple jewellery can make you look smart. But if it's dirty or rusty, it can cause infections or make you look untidy. Clean your jewellery often and store it properly to keep it in good condition.</p> <p>Example: Wiping your earrings after use and storing them in a dry place keeps them shiny and safe to wear.</p>	 <p>Figure 2.11: Jewellery care</p>
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FACTORS THAT PROMOTE GOOD GROOMING AND HOW THEY CONTRIBUTE TO MAINTAINING

Hygiene and Appearance

Other things that help you stay well-groomed

1. Learning about hygiene

When you understand why grooming is important, you are more likely to take it seriously. Knowing how to care for your skin, hair, and teeth helps you stay clean and confident.

2. Culture and social influence

People around you, like family, friends, or the community, can affect how you groom yourself. In some cultures, looking neat and presentable is highly valued. When others encourage good grooming, you are more likely to follow.

3. Self-esteem and confidence

When you look good, you feel good. Taking care of your appearance builds confidence and makes it easier to speak, smile, and socialise. Good grooming can also help you succeed in school or future work.

4. Access to products and services

Having the right items like soap, lotion, combs, or even visiting a salon can help you groom better. If grooming tools and products are easy to get and affordable, it's easier to maintain personal care.

5. Having a routine

Grooming should be a regular habit. Brushing your teeth every morning, washing your clothes every weekend, or trimming your nails every two weeks are good examples. Creating a routine helps you stay organised.

6. Environment

Living in a clean and well-arranged space makes it easier to take care of yourself. If your community, school, or home supports neatness, you are more likely to follow good grooming practices.

7. Mental health

When you feel mentally strong and happy, you are more likely to care for yourself. Grooming routines can also help reduce stress and make you feel better about yourself.

Activity 2.7 Factors that Promote Good Grooming

1. Organise yourself into a group of 4-6 members.
2. In your group, recall what makes a person look well-groomed (e.g., neat hair, clean uniform, polished shoes) and poorly groomed (e.g., dirty shirt, torn sandals).
3. From this, write some factors that help people stay well-groomed.
4. In your group, look at the pictures below.



Instructions

- a. Say what is happening in each picture.
- b. Match each picture with a grooming factor (personal hygiene, diet, posture, clothing).

c. Write why each factor is important for daily life.

Activity 2.8 Linking Grooming to Daily Life

1. Write one example of how you practice:
 - a. Personal cleanliness (e.g., I bathe twice daily).
 - b. Good clothing care (e.g., I wash and iron my uniform).
2. Share your answers with a friend and add one new idea you learned from them.
3. Complete the table below.

Factor	Example in Daily Life	How it Promotes Good Grooming
E.g., Personal hygiene	Bathing daily	Keeps the body clean and prevents sickness

4. Observe a member of your family. What good grooming factors do they practice?

EXTENDED READING

- <https://www.elle.com/uk/fashion/a32822034/how-to-organise-wardrobe/>
- <https://www.theguardian.com/lifeandstyle/2022/may/31/file-fashion-how-to-organise-your-wardrobe-to-make-getting-dressed-easier>

Videos on wardrobe planning and good grooming

- <https://www.youtube.com/shorts/2wFuabo-O0s?feature=share>
- <https://www.youtube.com/shorts/JnVDvCNbFNU?feature=share>

Review Questions

1. Define the term wardrobe planning and list three types of clothing commonly found in a wardrobe.
2. State two reasons why wardrobe planning is important for students.
3. True or False: Wardrobe planning helps avoid buying unnecessary clothing.
4. Explain how climate and financial resources influence the choice of clothing in wardrobe planning.
5. List two personal factors that must be considered when planning a functional wardrobe.
6. Describe how the purpose of an activity affects the type of clothing a person includes in their wardrobe.
7. Compare the wardrobe needs of a university student and a working mother, considering their daily activities and lifestyle.
8. Kofi is a footballer and Ama is a bank receptionist. Give two reasons why their wardrobe contents may differ.
9. List three key steps in selecting clothing for your wardrobe.
10. Name any two factors that influence the selection of clothing for a school wardrobe.
11. Explain how considering the climate and comfort of fabrics can influence wardrobe selection.
12. Describe how financial constraints might affect the kinds of clothes a student can include in their wardrobe.
13. Create a plan for organising a wardrobe that includes both casual and formal wear. Justify your choice of how to categorise and store clothes to ensure both accessibility and longevity.
14. Critically assess two problems that may occur from poor wardrobe planning and suggest ways to overcome them.
15. What is the meaning of good grooming?
16. State any four personal hygiene practices that promote good grooming.
17. Mention three grooming items that help keep the skin clean and fresh.
18. How does good grooming contribute to a person's self-confidence and vitality?
19. Describe how poor grooming habits may affect an individual's self-esteem.
20. Why is it important to maintain neat and well-kept hair as part of grooming?
21. How does good grooming affect social acceptance and personal interactions?

22. Imagine you are part of a school club creating a campaign on personal grooming.

- a.** Outline three key grooming habits you would promote.
- b.** Explain how each habit contributes to better personal relationships.

23. List four factors that promote good grooming.

24. What is meant by the term “personal hygiene” as it relates to good grooming?

25. Explain how rest and relaxation contribute to good grooming.

26. How does regular exercise help improve one’s grooming and overall appearance?

27. Compare the effects of poor diet and poor posture on a person’s grooming and appearance.

28. Adwoa bathes daily and always keeps her nails trimmed. However, she wears dirty, wrinkled clothes to school.

- a.** Identify the grooming factor she is neglecting.
- b.** Suggest two ways she can improve in this area.

29. You are a prefect in charge of health and cleanliness in your school. Your class has been selected to lead a seminar on personal grooming.

Design a presentation outline that addresses at least five key factors that promote good grooming and explain the importance of each factor and how students can apply them in their daily lives.

SECTION

3

UNDERSTANDING THE PROPERTIES & APPLICATIONS OF FIBRES AND FABRICS IN TEXTILES



TEXTILES IN CLOTHING

Characteristics of Fibres and Fabrics Functionality

Introduction

In everyday life, the type of fibre used to make a fabric determines how the fabric feels, behaves, and performs. This section introduces you to the basic properties of textile fibres, such as absorbency, elasticity, durability, and thermal insulation. Understanding these properties helps you to choose the right fabrics for clothing, bedding, uniforms, and other items. For example, fibres that absorb sweat are better for hot weather, while those that trap heat are useful in cold climates. You will also learn how these fibre characteristics affect comfort, appearance, and care of garments. With this knowledge, you will be able to explain why certain fabrics are preferred for specific uses and how to make good decisions when selecting fabrics. This understanding also supports sustainable clothing practices by helping to avoid waste and improve the quality of clothing choices. The activities and examples in this section will guide you step-by-step.

KEY IDEAS

- Durable fabrics are strong and can be worn or used for a long time without damage. They are ideal for everyday wear and help save money in the long term.
- Fabrics made from highly absorbent fibres like cotton are suitable for hot weather and sportswear because they soak up sweat, keeping the body dry and comfortable.
- Fabrics that flow and hang well are used for dresses, skirts, and curtains. This quality is called drape, and it adds beauty and style to the final item.
- Fibres that can stretch and return to their original shape, such as spandex or wool blends, provide comfort and ease of movement in fitted garments and sportswear.
- Insulating fibres like wool trap body heat, making them suitable for cold-weather clothing and blankets.
- The texture of a fabric affects how it feels on the skin and what it is used for. Some fabrics are soft and smooth, like those used for baby clothes, while others are rough and better for items like floor mats.

THE CONCEPT OF FIBRES

Fibres are very fine, hair-like strands that are used to make all types of fabrics and textiles. Every piece of clothing, curtain, bed sheet or bag starts from fibres. These tiny strands are first spun into yarns. The yarns are then woven, knitted, or pressed to make fabric.

Without fibres, we would not be able to produce yarn. And without yarn, we could not make cloth. So, fibres are the building blocks of all the textiles we use every day.

To be useful for making textiles, fibres must have some important qualities.

1. **Strength:** The fibre should not break easily when pulled.
2. **Flexibility:** The fibre should be able to bend or twist without breaking.
3. **Fineness:** The fibre should feel soft, smooth, and comfortable when worn.

Forms of Fibres

Fibres come in two forms. Namely;

- a. **Staple fibres** are short and fluffy, like cotton or wool.
- b. **Filament fibres** are long and smooth, like silk or nylon.

Terminologies in Fibres

Fibre: A fibre is a thin, thread-like material that can be twisted into yarn. All fabrics begin as fibres.



Figure 3.1: Fibre

Staple fibres: These are short-length fibres from natural sources like cotton or wool. Some synthetic fibres are also cut short to make staple fibres.



Figure 3.2: Staple fibres

Filament fibres: These are very long and continuous fibres. Most of them are man-made, but silk is a natural filament fibre.



Figure 3.3: Filament fibres

Yarn: Yarn is made by twisting fibres together. It can be made from either staple or filament fibres.

1. **Monofilament yarn:** Yarns consisting of one filament are called monofilament yarns—example: Fishing lines, nylon thread.
2. **Multifilament yarn:** Yarns made up of more than one filament are known as multifilament yarns. Example: Satin fabric.



Figure 3.4: Yarn

Understanding Fibre Classification

Fibres are grouped into types to help us understand where they come from and what they are made of. Here are four main ways fibres can be classified.

Principal origin – where do fibres come from?

1. **Natural fibres:** These come from plants (like cotton), animals (like wool), or minerals (like asbestos).
2. **Man-made fibres:** These are produced using chemicals in factories. Examples include polyester and nylon.

Chemical type – what are the fibres made of?

1. **Cellulose fibres:** Made from plant sources like cotton and flax.
2. **Protein fibres:** Made from animal sources like wool and silk.
3. **Mineral fibres:** Come from natural minerals (asbestos) or are man-made (like glass fibres).

4. **Regenerated fibres:** Come from natural materials but are changed using chemicals, like rayon.
5. **Synthetic fibres:** Completely man-made using chemicals, like nylon or polyester.

Generic or family name – how are they grouped based on their source?

Here are some family names of fibres based on where they come from.

1. **Seed hair fibres** – example cotton
2. **Animal hair fibres** – example wool
3. **Animal secretion fibres** – example silk
4. **Leaf fibres** – example sisal
5. **Man-made fibres** – examples: rayon, polyester, nylon

Common or Specific Names – Names You Often See on Labels

1. **Natural fibres:** Cotton, silk, wool
2. **Man-made fibres:** Nylon, rayon, spandex, polyester.

Fibre Classification Table (With Examples)

Table 3.1: Fibre classification table (with examples)

SN	Principal origin	Chemical type	Family name	Specific name
1	Natural	Protein	Animal secretion	Silk
2	Natural	Protein	Animal hair	Wool
3	Natural	Mineral	Metallic	Lurex
4	Natural	Cellulosic	Seed hair	Cotton
5	Man-made	Synthetic	Polyester	Dacron
6	Man-made	Synthetic	Nylon/ polyamide	Nylon 66
7	Man-made	Regenerated/ man-made cellulosic	Rayon	Viscose rayon
8	Man-made	Regenerated/ man-made protein	Azlon	casein

PROPERTIES AND EXAMPLES OF FIBRE TYPES

Cellulose Fibres (Natural – Plant-based)

Examples: Cotton, Linen (Flax), Ramie, Jute, Hemp, Sisal, Raffia, Pina, Coir, Kapok

Table 3.2: General properties of cellulose fibre

1. Cellulose fibres are usually short in length and are called staple fibres.
2. They are strong and durable because they have high tensile strength.
3. These fibres cling together easily, making them easy to spin into yarn.
4. Cellulose fibres wrinkle easily and often need ironing because they have low resiliency.
5. They absorb moisture and dye well, making them comfortable in hot weather.
6. These fibres do not stretch much because they have low elasticity.
7. Staying in direct sunlight for a long time can bleach or weaken them.
8. If stored in damp places, they can be damaged by insects, bacteria, and mildew.
9. They can be destroyed by termites and silverfish but are safe from moth damage.
10. Over time, they break down naturally because they are biodegradable.
11. Cellulose fibres are good conductors of heat, so they feel cool to wear.

Protein Fibres (Natural – Animal-Based)

Examples: Wool (from sheep), Silk (from silkworms), Mohair, Cashmere, Alpaca

Table 3.3: General properties of protein fibres

1. Protein fibres absorb moisture easily, so they take dye well.
2. They are lightweight due to their low density and specific gravity.
3. These fibres do not catch fire quickly.
4. They can get scorched when exposed to dry heat.
5. White protein fibres can turn yellow after being in the sun for a long time.
6. Chlorine bleach and other strong chemicals can damage them.
7. They can be weakened by alkaline substances like some soaps.
8. Wool fibres are short (staple), but silk is a long, continuous fibre (filament).
9. Both wool and silk have a natural shine or lustre.
10. Wool bounces back well after wrinkling, but silk creases more easily.
11. They hang or drape beautifully on the body.
12. These fibres are strong when dry but become weaker when wet, especially wool.

Mineral Fibres

1. Natural mineral fibre

Example: Basalt fibre

Uses in Clothing and Textiles

- Used to make flame-resistant suits for people who work in factories.
- Acts as fireproof curtains and barriers in workplaces.
- Used to make gloves and mitts that can handle high heat.
- Provides protection in safety clothes through special linings and panels.
- Added to materials to make strong and protective clothing.

Table 3.4: General properties of basalt fibres

<ul style="list-style-type: none"> Very Heat-Resistant: It can stand temperatures around 800 °C and short bursts over 1000 °C.
<ul style="list-style-type: none"> Fireproof and Safe: It does not give off harmful fumes when it burns.
<ul style="list-style-type: none"> Very Strong: It is stronger than many other fibres like glass fibres.
<ul style="list-style-type: none"> Resistant to Chemicals: It does not easily break down when exposed to acids, alkalis or salty liquids.
<ul style="list-style-type: none"> Flexible: It can bend and is easier to weave or sew than glass fibre.
<ul style="list-style-type: none"> Keeps Heat In or Out: It does not let heat pass through easily, so it is a good insulator.
<ul style="list-style-type: none"> Eco-Friendly: It is made from volcanic rock and needs very little processing, making it safe for the environment.

2. Man-Made Mineral Fibres

Examples: Glass fibres, Metallic fibres (Gold, Silver, Aluminium, Stainless Steel)

Table 3.5: General properties of man-made mineral fibres

<ul style="list-style-type: none"> These fibres are very strong and have high tensile strength.
<ul style="list-style-type: none"> They stretch very little but bounce back well due to their high elastic recovery.
<ul style="list-style-type: none"> They keep their shape well in different conditions because they are dimensionally stable.
<ul style="list-style-type: none"> These fibres are very dense and are not comfortable for clothing.
<ul style="list-style-type: none"> They do not absorb moisture easily.
<ul style="list-style-type: none"> They resist wrinkling and stay smooth.
<ul style="list-style-type: none"> These fibres are often transparent.
<ul style="list-style-type: none"> They are flame-resistant and do not catch fire.
<ul style="list-style-type: none"> Only a few strong acids, like hydrofluoric and hot phosphoric acid, can damage them.
<ul style="list-style-type: none"> Strong alkalis and hot weak alkalis can also weaken them.

Man-made cellulose (regenerated) fibres

Examples: Rayon (Viscose), Acetate, Triacetate

Table 3.6: General Properties of man-made cellulose (regenerated) fibres

• These fibres shine brightly (lustrous) and have different levels of springiness (resiliency).
• They are not affected by most dry-cleaning solvents but can be damaged by acetone and similar chemicals.
• In damp places, mildew can grow on them.
• Insects like silverfish can damage them, especially rayon.
• Rayon soaks up water quickly, but acetate and triacetate absorb less moisture.
• Triacetate springs back well after wrinkling, acetate is average, and rayon wrinkles easily.
• These fibres are fairly strong and can last a long time.
• Acetate and triacetate do not stretch or shrink much, but rayon does.
• Sunlight can weaken them over time, although they usually resist ageing.

a. Regenerated Protein Fibres

Example: Azlon (made from soybeans, milk, peanuts, corn, egg white, feathers)

Table 3.7: General properties of regenerated protein fibres

• These fibres behave like natural protein fibres such as wool and silk.
• They are soft, springy, and good at absorbing moisture.
• Azlon is often blended with wool to make jackets, suits, coats, and knitwear.

b. Synthetic Fibres (Man-Made – From Chemicals)

Examples: Polyester (Terylene), Nylon (Polyamide), Acrylic, Modacrylic, Polyurethane

Table 3.8: General properties of synthetic fibres (Man-made from chemicals)

These fibres are strong even when they are wet, which makes them long-lasting.
They do not change shape easily and are stable in size.
They are easy to wash, need little ironing, and do not wrinkle much.
When heated, they melt and can be shaped because they are thermoplastic.
They shrink away from fire and melt, which makes them unsafe near flames.
These fibres do not let heat escape easily, so they feel warm in hot weather.
They absorb oil quickly, which makes oily stains hard to remove.
They stretch well, are elastic, and hang nicely without wrinkling.
Some, like nylon and polyester, tend to form tiny balls (pilling).
These fibres do not absorb water well, so they dry fast and are hard to dye.

Activity 3.1 Meaning of Fibres

1. Organise yourself into a group of 4-6 members.
2. Touch the clothes you are wearing (e.g., uniform, socks, belt) and describe how they feel.
3. In pairs, guess what material they are made from (cotton, nylon, polyester).
4. As a group, agree on a simple definition of fibre.
5. Write your definition and compare it with what you learnt in JHS.
6. As a class agree a class definition of fibre.

Activity 3.2 Identifying Fibres

1. Organise yourself into a group of 4-6 members.
2. Observe fibre samples/pictures (cotton ball, silk cocoon, polyester thread, raffia rope).
3. Say which ones come from plants, animals or factories.
4. Match each fibre to items in your environment: Example
 - a. Cotton → School uniform
 - b. Raffia → Basket or broom
5. Write two sentences on why fibres are important for clothing and household items.

Activity 3.3 Classifying Fibres

Organise yourself into a group of 3-5 members.

1. Fill in the table as a group and add local examples:

Fibre Source	Examples	Local Use in Ghana
a. Plant	Cotton, raffia	School uniforms, baskets
b. Animal		
c. Mineral		
d. Regenerated (man-made)		
e. Synthetic (man-made)		

2. Add at least one new example for each fibre source.
3. Compare your answers with another group.

4. Present your group's table to the class.

Activity 3.4 Characteristics of Fibres

1. Join with a friend to complete this activity.
2. Observe or touch samples/pictures of fibres (cotton, wool, silk, nylon, polyester).
3. Say which are smooth, rough, shiny, dull, strong, light, or quick drying.
4. Which fibre is good for hot weather?
5. Write two reasons why cotton is suitable for hot climates.

TEST FOR THE CHARACTERISTICS OF FIBRES

To know the type of fibre used in making a fabric, you need to understand how the fibre behaves under different conditions. This is important because it helps you know how to care for the fabric, how it will feel when worn, and whether it is natural or man-made.

Identifying a textile fibre is not always easy by just looking at it. You need to test it using different methods. Sometimes, the label on the fabric can give you clues, but other times, you have to test it yourself to be sure. Some of the ways to test fibre types include visual inspection, burning test, absorbency test, solubility test, and microscopic examination. Each method works better for different types of fibres.

Table 3.9: Test for the Characteristics of Fibres

Test type	How to carry out the test	What you will observe	Conclusion
1. Visual Inspection 	Look at the colour, shine, and texture of the fabric. Untwist a thread or yarn from the fabric to see the fibre inside. Feel the fabric to check if it is rough, soft, heavy or light.	The fabric may be shiny or dull. The fibre may be long (filament) or short (staple). It may feel soft, rough, light, or heavy.	This helps to guess the type of fibre. For example, cotton looks dull and feels soft, silk looks shiny and feels smooth, and synthetic fabrics may feel slippery. However, it is not a sure way to identify fibre types.

Figure 3.5: Visual inspection

<p>2. Microscopic Examination</p>  <p>Figure 3.6: Microscopic appearance</p>	<p>Clean the microscope lens, glass slide, and cover slip.</p> <p>Put a drop of water on the slide. Pull a fibre from the fabric and place it in the water on the slide.</p> <p>Cover with the cover slip and look under the microscope.</p>	<p>You will see the shape, surface, and lines of the fibre. Natural fibres have special patterns (e.g., cotton looks like a twisted ribbon)</p>	<p>This is best for identifying natural fibres like cotton, wool, or linen. It is not very good for synthetic fibres because many of them look alike under the microscope.</p>
<p>3. Burning Test</p>  <p>Figure 3.7: Burning test</p>	<p>Pull a yarn from the fabric and hold it with tweezers.</p> <p>Slowly bring it close to a flame.</p> <p>Watch how it burns, the smell, and the ash or bead it leaves.</p>	<p>Cotton burns like paper and smells like burning paper. Wool burns slowly and smells like burnt hair. Polyester melts and forms a hard bead.</p>	<p>Each fibre reacts differently to fire. This test helps to tell if the fibre is natural (like cotton or wool) or synthetic (like nylon or polyester).</p>
<p>4. Absorbency Test</p>   <p>Figure 3.8: Absorbency test</p>	<p>Cut a small square of fabric (about 1cm by 1cm).</p> <p>Drop it into clean water in a cup or test tube.</p> <p>Watch how fast the water soaks into the fabric.</p>	<p>If it sinks quickly and becomes wet, it has high absorbency.</p> <p>If it floats or wets slowly, it has low absorbency.</p>	<p>Natural fibres like cotton and wool absorb water quickly. Synthetic fibres like nylon or polyester do not absorb water well. This helps to know how comfortable the fabric will be in hot weather.</p>
<p>5. Solubility/ Chemical Test</p>  <p>Figure 3.9: Solubility test</p>	<p>Put on gloves and work in a place with fresh air.</p> <p>Add a small amount of a chemical (like acid, alkali, or acetone) into a test tube.</p> <p>Drop a small fibre sample inside and stir gently.</p> <p>Watch for any colour change or if the fibre dissolves.</p>	<p>Some fibres dissolve completely. Some change colour. Others do not react at all.</p>	<p>This test is best for man-made fibres. For example, acetate dissolves in acetone. The reaction helps to know the type of chemical used in making the fibre.</p>

Activity 3.5 Discovering Fibre Tests

1. Organise yourself into a group of 3-5 members.
2. Recall from **Activity 3.1** how you identified fibres by touch and observation.
3. Discuss how you usually know if something is **cotton, nylon or wool**.
4. Observe fibre samples/pictures (cotton thread, nylon rope, wool yarn, silk).



Figure 3.10: samples of fibres

5. Match each test to its purpose

a. Visual test	Water soaking
b. Burning test	Dissolves in liquid
c. Absorbency test	Appearance
d. Solubility test	Smell, flame, ash
6. As a class, explain why more than one test is needed to identify fibres.

Activity 3.6 Testing Fibre Absorbency

1. Organise yourself into a group of 4-6 members.
2. Recall from **Activity 3.4 point 4**, how cotton absorbs sweat and nylon dries quickly.
3. In your groups, collect three fabrics (school uniform cloth, polyester bag strap, rayon scarf).
4. Dip each into water and observe **fast/slow absorbency**.
5. Record on the table below:

Fibre Sample	Observation (Fast/Slow)	Type (Natural/Synthetic/Regenerated)
Cotton (uniform)		
Nylon (bag strap)		
Rayon (scarf)		

6. Share and compare results as a class.

ABSORBENCY, DURABILITY AND ELASTICITY OF DIFFERENT FABRIC TYPES

Absorbency of Fabrics

Absorbency means how well a fabric can take in and hold moisture or water. This property helps decide how suitable a fabric is for certain uses. For example, towels, underclothes, baby diapers, and sportswear should be very absorbent to keep the body dry and comfortable. Natural fibres like cotton, linen, wool, and silk absorb moisture well because they have tiny spaces in their structure that allow water in. Rayon, which is a regenerated fibre made from natural materials, also absorbs water easily. In contrast, synthetic fibres such as polyester, nylon, and acrylic do not absorb water well. This makes them useful for making items like raincoats and jackets.

Practical Activity

Soak different fabric samples in water and observe how fast they absorb water and whether they sink or float. This will help compare how absorbent each fabric is and relate it to the type of fibre used.

Durability of Fabrics

Durability is the strength of a fabric and how well it can resist damage over time. A durable fabric does not tear, wear out, or lose its shape easily, even after frequent use or many washes. This quality is important for clothes like school uniforms and workwear that are worn often.

Synthetic fabrics such as nylon and polyester are very durable. Cotton and linen are strong too, but may wear out quicker if washed roughly. The durability of a fabric depends on the fibre it is made from, how the yarn is twisted, how the fabric is woven or knitted, and any treatments added to make it stronger.

Practical Activity

Rub different fabrics against a rough surface or wash them several times, then observe which ones show signs of damage. This will help us understand which fabrics last longer

Elasticity of Fabrics

Elasticity is the ability of a fabric to stretch and return to its original shape. Fabrics with good elasticity are used for clothing that needs to fit the body well and allow movement, such as leggings, swimwear, and sportswear. Spandex (also called Lycra or elastane) is a fibre that is very elastic. It is often blended with other fibres like cotton

or polyester to make stretchable fabrics. Also, fabrics that are knitted are usually more elastic than those that are woven because of the way they are made.

Practical Activity

Gently stretch different fabric samples and then release them. Check which ones return to their original shape quickly. These are the ones with better elasticity.

Crease Resistance

Crease resistance is how well a fabric can stay smooth without wrinkling when folded or pressed. This property is important for clothes that should look neat all day, like school uniforms or office wear. Synthetic fabrics like polyester and nylon resist creasing better than natural fabrics such as cotton and linen, which wrinkle more easily.

Practical Activity

Fold and press different fabric samples under a heavy book for a few minutes. Then unfold them and observe how wrinkled they are. Fabrics that look smooth have better crease resistance.

Pilling Resistance

Pilling resistance means how well a fabric can avoid forming little fuzzy balls on its surface, called “pills.” These are caused by rubbing or washing. Clothes that pill easily can look old and worn quickly. Fabrics with tight weaves or yarns that are tightly twisted usually do not pill much.

Practical Activity

Rub fabric samples with rough items like sandpaper or Velcro and check if small balls form. The fewer the pills, the better the fabric’s pilling resistance.

Shrinkage

Shrinkage is when a fabric becomes smaller after being washed or exposed to heat and moisture. If a fabric shrinks too much, clothes may no longer fit well. Cotton and wool often shrink unless they are specially treated. Synthetic fibres usually do not shrink much because they are made from stable materials.

Practical Activity

Measure fabric samples, wash them, and measure again after drying. Compare the sizes to see how much each one shrinks.

Colour-Fastness to Washing

Colour-fastness is the ability of a fabric to keep its original colour after being washed. If a fabric has poor colour-fastness, the colour may fade or run into other clothes. This depends on the dye used and how well it is fixed to the fibre.

Practical Activity

Sew a small piece of coloured fabric to a white fabric and wash them together. Check if the colour has transferred to the white fabric. If it does, the coloured fabric has poor colour-fastness.

Flammability

Flammability describes how easily a fabric can catch fire and how it behaves when burning. Some fabrics burn quickly and dangerously, while others may melt or self-extinguish. Cotton and other plant-based fibres catch fire easily, while some synthetic fibres melt rather than burn. This property is very important for children's clothing and uniforms.

Practical Activity (with teacher supervision only)

Hold a small fabric sample with tweezers and place it near a flame. Observe whether it melts, burns, or goes out by itself. Always follow safety rules when testing flammability.

Activity 3.7 Durability Test – The Strongest Cloth

In **the concept of fibres**, you classified fibres (cotton, nylon, polyester, wool). Now, test their strength.

1. Organise yourself into a group of 4-6 members.
2. Collect 3 fabrics (cotton cloth, polyester strap, raffia string).
3. Perform a simple pull test – stretch both ends gently until they stretch or tear.
4. Record results using the table below:

Table 3.10: Durability test

Fabric Sample	Observation (Tears easily/ Strong)	Likely Fibre Type
Cotton cloth		
Nylon rope/strap		
Wool yarn		

5. In your group, discuss and answer the following questions.
 - a. Which fabric is best for school uniforms?
 - b. Which fabric lasts longer for ropes or bags?
 - c. Why avoid delicate fabrics for upholstery?

Activity 3.8 Elasticity Test – Stretch and Bounce Back

In the concept of fibres, you noticed that some fibres are flexible. Now test elasticity.

1. Organise yourself into a group of 4-6 members.
2. Collect small samples (socks, a polyester scarf, cotton cloth).
3. Stretch and release each fabric.
5. Record whether it returns to shape quickly or not using the table below:

Table 3.11: Elasticity test

Fabric Sample	Observation (Elastic/Not elastic)	Common Use
Socks (elastic)		Sportswear
Cotton cloth		Uniforms
Polyester scarf		Casual wear

6. In your group, discuss and answer the following questions.
 - a. Why is elasticity important for sportswear?
 - b. Why not needed for upholstery?
 - c. Which fabric suits tights or leggings?

Activity 3.9 Choosing the Right Fabric

Bring together all three tests (absorbency, durability, elasticity).

1. Review results as a class.
2. Decide on the best fabric for:
 - a. Sportswear (needs elasticity + sweat absorption).
 - b. School uniforms (need durability + comfort).
 - c. Upholstery (needs durability + less absorbency).
3. By yourself, complete the table below:

Table 3.12: Summary of fibre tests

Use	Best Fabric	Reasons
Sportswear		
School Uniform		
Upholstery		

HOW THE PROPERTIES OF FIBRES INFLUENCE THE SELECTION OF FABRICS FOR SPECIFIC PURPOSES

The type of fibre used to make a fabric determines how that fabric looks, feels, and performs in different situations. Whether you are choosing fabric for clothing, household use, or outdoor items, you need to think about the properties of the fibre.

Some fibres absorb moisture well, some stretch easily, and others are strong and long-lasting. By understanding the unique properties of each fibre, you can select the most suitable fabric for your purpose. This section explains key fibre properties and how they affect the choice of fabric for specific uses.

Table 3.13: Key Fibre Properties and Their Influence on Fabric Selection

Fibre Property	Description	Influence on Fabric Selection
Absorbency	The fibre's ability to absorb and retain moisture.	Highly absorbent fibres like cotton, linen and rayon are ideal for hot climates, towels and undergarments. Less absorbent fibres like polyester are used for sportswear and rainwear.
Elasticity	The ability of a fabric to stretch and return to its original shape without distortion.	Elastic fibres like spandex are used in activewear, swimwear and fitted clothing for better fit and comfort.
Tensile Strength	The resistance of a fibre to breaking under tension.	Strong fibres like nylon and polyester are used in upholstery, ropes and work uniforms.
Durability	The ability of a fibre to withstand repeated use, laundering and friction.	Durable fibres are used in school uniforms, workwear and jeans. Polyester and acrylic are common choices.

Texture and Hand	The feel or surface quality of a fabric.	Soft fibres like silk and fine cotton are used in luxury clothing, while coarse fibres are used for sacks and mats.
Drape	How well a fabric falls or hangs in folds.	Fabrics with good drape like silk and rayon are used for dresses and scarves. Stiff fibres like canvas are for jackets and bags.
Thermal Insulation	A fabric's ability to retain heat and provide warmth.	Wool and polyester are used for winter clothing, while cotton and linen are used for summer wear.
Wrinkle Resistance	The ability of a fabric to resist creasing.	Polyester and wool blends are used for office wear and travel garments.
Flame Resistance	Ability of a fabric to resist catching fire.	Modacrylic and treated cotton are used in protective clothing for industrial workers and fire-fighters.

Examples of How Fibre Properties Are Applied

- Sportswear and Activewear:** These garments are made from polyester blends with spandex for stretch, durability, and moisture-wicking. This helps in comfort and flexibility during activities.
- Children's Clothing:** Made from soft, breathable cotton which is gentle on the skin, keeps the child comfortable and absorbs moisture well.
- Workwear and Uniforms:** Polyester or polyester-cotton blends are used due to their strength, resistance to frequent washing, and breathability.
- Luxury Garments and Accessories:** Silk, cashmere, and fine wool are chosen for their softness, drape, and elegant appearance.
- Outdoor and Camping Gear:** Uses nylon and polyester for strength, water resistance, and quick drying. Ideal for jackets, tents and backpacks.
- Curtains and Upholstery:** Made from acrylic, polyester or treated cotton blends. These fibres add durability, flame resistance and style to home décor.

Activity 3.10 Choosing Fabrics for Daily Life

- Organise yourself into a group of 4-6 members.
- Recall fabric properties (absorbency, durability, elasticity).
- In your group, discuss clothes you wear (school, home, church/mosque) – which are most comfortable and why.

4. Match fabric samples (cotton, polyester, silk, wool) to their common uses.
5. Come together as a class, recommend the best fabric for: sportswear, baby clothes, bed sheets, and classroom curtains.

Activity 3.11 Why Fabric Choice Matters

1. Organise yourself into a group of 4-6 members.
2. In your group, discuss the following cases:
 - a. Why is polyester blended with cotton for uniforms?
 - b. Why do parents prefer cotton for children's clothes?
 - c. Why are silk and wool bought despite being expensive?
3. In your group, prepare short answers to the questions and present them to your classmates.
4. As a class, agree on **three rules** for choosing the right fabric in Ghana and fill in a rule chart.

EXTENDED READING

- Forster, P. (2014). *Clothing and textiles*. Winmat Publishers Limited: Accra.
- Smith, J. (2019). *Textiles and their properties*. New York, NY: Textile Press. pp. 45-67.

Review Questions

1. What is a fibre? Give two ways it is important in making fabrics.
2. List one example each of the following types of fibres:
 - a. Cellulose fibre: _____
 - b. Protein fibre: _____
 - c. Mineral fibre: _____
 - d. Regenerated fibre: _____
 - e. Synthetic fibre: _____
3. Classify the following fibres according to their origin:
Cotton, Polyester, Nylon, Wool, Rayon
4. What is the difference between staple fibres and filament fibres? Give one example of each.
5. Compare the properties of cotton (natural fibre) and polyester (synthetic fibre).
6. Your school sews uniforms for two groups of students: those involved in sports and those in the science lab. Which types of fibres would you recommend for each group and why?
7. Why is it important to test fibres before identifying the type of fabric, instead of relying only on visual inspection?
8. Explain how the burning test can be used to distinguish between natural and synthetic fibres. Give one example for each.
9. Compare the absorbency test results of cotton and polyester, and explain what this means for their comfort when worn in hot weather.
10. Which fibre testing method is most suitable for identifying natural fibres, and why might it not be very effective for synthetic fibres?
11. What is elasticity in fabrics, and why is it important in garment construction?
12. Explain how the fibre type affects the durability of a fabric.
13. Match the fibre to its correct durability level

Fibre	Durability level
A. Polyester	Very durable
B. Cotton	Moderate durability
C. Silk	Delicate

13. Kwame is choosing fabric to make his school bag and uniform. Which fibre would be best for each item and why?
14. Draw a simple experiment setup used to test the absorbency of fabrics in class. Label the key parts, such as the fabric sample, dropper, and timer.
15. Identify two fibres commonly used in outdoor and camping gear. For each one, state one reason why it is suitable.
16. Explain how the absorbency and softness of cotton influence its use for children's clothing.
17. Match the fibre property with its appropriate fabric use

Fibre Property	Fabric Use
A. Flame resistance	Baby sleepsuits
B. Soft texture	School uniform
C. Durability	Sofa cushion covers

18. Kojo is selecting fabric for upholstering a couch in a busy family living room. Analyse how fibre properties like flame resistance and durability should influence his choice.

SECTION

4

UNDERSTANDING FIBRES & FABRICS IN CLOTHING CONSTRUCTION



TEXTILES IN CLOTHING

Fibres and Fabrics in Clothing Construction

Introduction

In **Section 3**, you explored the types and characteristics of fibres natural, regenerated, synthetic, and mineral. Now, in **Section 4**, you will discover how these fibres influence the properties of fabrics and how those properties affect garment performance, comfort, and durability. The fabrics you choose for clothing construction play an important role in how well garments function in different conditions.

You will learn how key properties like absorbency, elasticity, strength, and thermal regulation are linked to fibre type. For example, breathable cotton is best for hot weather, while moisture-wicking synthetics are ideal for sportswear. This section will guide you in selecting the right fabrics for specific uses whether for school uniforms, summer dresses, or warm jackets. You will also examine how fabric properties affect care, sustainability, and cost. By the end of this section, you will be able to make smart, eco-friendly choices that enhance garment life and reduce textile waste.

KEY IDEAS

- Different fabrics respond to climate needs. Wool and fleece trap heat, making them ideal for winter clothing. Light, breathable fabrics like cotton are better for hot weather.
- Durable fibres like nylon and polyester are strong and suitable for clothing that is worn often, such as school uniforms or workwear. Silk has a shiny appearance, while polyester resists wrinkles, making it easy to maintain.
- Elastic fibres such as spandex and wool blends stretch easily, allowing comfort and freedom of movement in fitted clothes and active wear.
- Fabrics made from highly absorbent fibres, such as cotton and linen, are excellent for warm weather and sportswear because they pull moisture away from the skin. Breathable linen is perfect for summer clothing, while moisture-wicking synthetic fibres work well for active wear. Layered wool is best for keeping warm in cold conditions.
- Fabrics such as silk and rayon flow beautifully, making them suitable for dresses, blouses, or curtains. In contrast, stiff fabrics like denim are best for structured garments like jeans and jackets.
- The texture of a fibre affects how it feels on the skin. Soft cotton is gentle and suitable for baby clothes, while rough fibres such as jute are more appropriate for making items like rugs.

CATEGORISING AND RELATING FIBRES TO FABRICS USED IN GARMENT MAKING

Understanding How Garments Are Made

Fabrics are essential in garment making and are created from fibres, yarns, or chemical solutions. These materials are processed through different methods such as weaving, knitting, bonding, or felting. Understanding how fabrics are made and the types of fibres used is key to selecting the right material for specific garments.

Common terminologies in fabric construction in clothing production

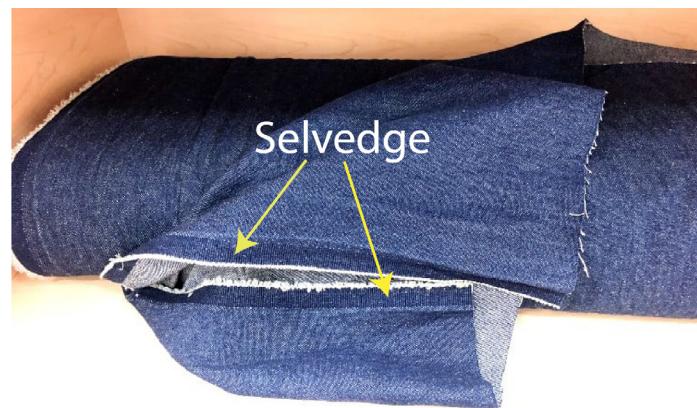
Warp yarns are laid in the loom on which a fabric is woven. Warp yarns are parallel to the selvedge and are interlaced with other yarns during weaving.



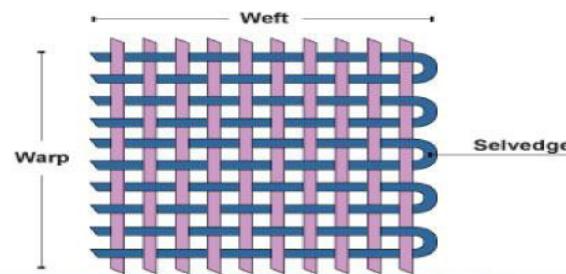
A fabric is a large flat sheet produced from solutions, fibres, yarns or combinations of these.



A selvedge fabric is long, finished or self-neatened edge of a fabric. A fabric usually has two selvedges. The warp yarns are always parallel to the selvedge. The straight grain in clothing construction refers to the direction of the warp and selvedge yarns.



Weft yarns are filling yarns for the warp yarns which are laid on the loom. Weft yarns run perpendicular to the warp and selvedge of a fabric



A grain in fabrics refers to the position of warp yarns relative to filling yarns in the fabric.

Lengthwise grain is parallel to warp yarns. Crosswise grain is parallel to the filling yarns.



Types of Fabrics, Their Characteristics and Their Uses

Each type of fabric has unique qualities that make it suitable for various uses. These qualities include comfort, strength, and appearance.

Natural Fabrics

Table 4.1: Types of natural fabrics, their characteristics and uses

Fabric Type	Key Characteristics	Common Uses
Cotton	Soft, breathable, absorbent; wrinkles and shrinks easily.	T-shirts, dresses, and undergarments.
Linen	Strong, breathable, quick-drying; wrinkles easily.	Summer wear, napkins, table cloths.
Wool	Warm, insulating, moisture-wicking; can be itchy.	Sweaters, coats, suits.
Silk	Smooth, lightweight, temperature-regulating, luxurious.	Formal wear, scarves, and ties.

Synthetic Fabrics

Table 4.2: Types of synthetic fabrics, their characteristics and uses

Fabric type	Key characteristics	Common uses
Polyester	Strong, wrinkle-resistant, quick-drying.	Sportswear, school uniforms.
Nylon	Elastic, abrasion-resistant, lightweight.	Swimwear, activewear.
Acrylic	Warm, soft, moth-resistant.	Sweaters, blankets.
Rayon	Absorbent, drapes well, made from cellulose.	Dresses, linings.
Spandex	Very stretchy, retains shape.	Swimwear, activewear.

Blended Fabrics

Table 4.3: Types of blended fabrics, their characteristics and uses

Fabric Type	Key Characteristics	Common Uses
Poly-cotton	Breathable, durable, wrinkle-resistant.	Shirts, sheets, uniforms.
Wool blend	Warm, more durable than pure wool.	Suits, coats.
Silk blend	Luxurious feel with added strength.	Scarves, dresses.

IMPORTANCE OF FIBRE CLASSIFICATION IN FABRIC PRODUCTION

Influence on Fabric Functionality and Performance

Understanding fibre classification is vital in the textile and garment industry, as the chosen fibre directly affects a fabric's performance, appearance, durability, comfort, and suitability. Each fibre, whether natural or synthetic, has unique properties that influence how the fabric performs in practical situations.

Fibre classification aids manufacturers, designers, and consumers in making informed choices based on fabric performance. For example:

- a. **Natural fibres** like cotton and linen absorb moisture well, making them ideal for hot, humid climates.
- b. **Synthetic fibres** such as polyester and nylon wick moisture and dry quickly, making them suitable for sportswear and rainwear.

Comfort and Skin Sensitivity

Comfort is important in clothing design, as the fibre type affects how fabric feels on the skin.

- a. **Natural fibres** are typically soft, breathable, and gentle, making them great for undergarments, children's wear, and clothing for people with sensitive skin.
- b. **Some synthetic** fibres can irritate if not blended well; innovations have produced softer, more skin-friendly options.

Suitability for Specific Environments or Activities

Different environments need fabrics with specific performance traits.

- a. Workwear requires durability and stain or chemical resistance, often found in **synthetic blends**.
- b. Luxury garments focus on aesthetics, drape, and softness, typical of **natural fibres** like silk or high-quality wool.

Sustainability and Environmental Impact Decisions

Classifying fibres is key for environmental and sustainability reasons.

- a. **Natural fibres** such as organic cotton, hemp, and bamboo are biodegradable and renewable, supporting sustainable fashion choices.
- b. While **synthetic fibres** are durable, they come from petrochemicals and can take hundreds of years to decompose; however, recycled synthetic fibres are emerging as more eco-friendly options.

Fabric Maintenance and Longevity

- a. **Synthetic fibres** are generally easier to maintain, resisting wrinkles, drying quickly, and shrinking less.
- b. **Natural fibres** may need more care, like hand washing or ironing, but they age well and offer exceptional comfort.

Economic Decision-Making

Fibre classification affects production costs and affordability. **Synthetic fibres** are usually cheaper to produce and purchase, making them popular for mass production. In contrast, **natural fibres** can be more expensive due to farming and processing needs, but provide added value in comfort and eco-friendliness.

Fabric Characteristics and Their Impact on Garment Use

Table 4.4: Characteristics of fabrics and their impact on garment use

Fabric	Fabric Characteristics & Suitability	Why It's Used in Clothing	Comfort & Function
Cotton	Soft, breathable, absorbs sweat.	Casual wear, children's clothes.	Cool and gentle on skin.
Wool	Warm, wrinkle-resistant.	Winter garments.	Traps body heat, good for cold climates.
Polyester	Strong, dries quickly, keeps shape.	Sportswear, uniforms.	Durable, but less breathable.
Silk	Smooth, elegant, regulates temperature.	Formal wear.	Comfortable and luxurious.
Nylon	Strong, stretchy, water-resistant.	Swimwear, raincoats.	Good for wet or active use.
Linen	Light, breathable, crisp.	Summer wear.	Keeps the body cool.
Spandex	Super stretchy, keeps its shape.	Activewear, fitted clothes.	Supports body movement comfortably.

Activity 4.1 Fabrics in Our Daily Life

1. Organise yourself into a group of 4-6 members.
2. As a group, recall clothes worn daily (uniforms, t-shirts, kente, jeans).
3. Share with your group: Which clothes feel best in hot or cold weather and why?
4. Observe fabric samples (cotton, polyester, silk, linen). Describe texture, weight, and appearance using the table below.

Fabric Sample	Texture	Weight	Appearance	Common Use
Cotton				
Polyester				
Silk				
Linen				

5. Conclude which fabrics suit hot weather and which suit cold evenings in Ghana.
6. Share your group's findings with your class.

Activity 4.2 Fibre Classification – Sorting Challenge

1. Organise yourself into a group of 3-5 members.
2. In your group, recall that fibres are used to make fabrics. Define **natural**, **synthetic** and **regenerated** fibres.
3. Match examples:

a. Cotton, wool, silk	regenerated
b. Nylon, polyester	natural
c. Rayon	synthetic
4. Collect or observe fabric pieces and sort them into the three groups as provided in the table below.

Fibre Type	Fabric Example	Common Use in Ghana
Natural	Cotton	School uniforms
Synthetic	Polyester	Sports kits/workwear
Regenerated	Rayon	Scarves/dresses

5. Reflect individually on this question: Which fibre type is most common in your community and why?

Activity 4.3 Understanding Fabric Types

1. Organise yourself into a group of 4-6 members.
2. Study charts or pictures (cotton ball, flax plant, silk moth, sheep wool, polyester fabric).
3. Identify whether each is **plant-based, animal-based or man-made** and one key property.
4. Touch and observe real samples; suggest one suitable Ghanaian use for each.

Fabric Type	Source	Key Property	Best Use in Ghana
Cotton	Plant	Breathable	Uniforms
Linen			
Silk			
Wool			
Polyester			

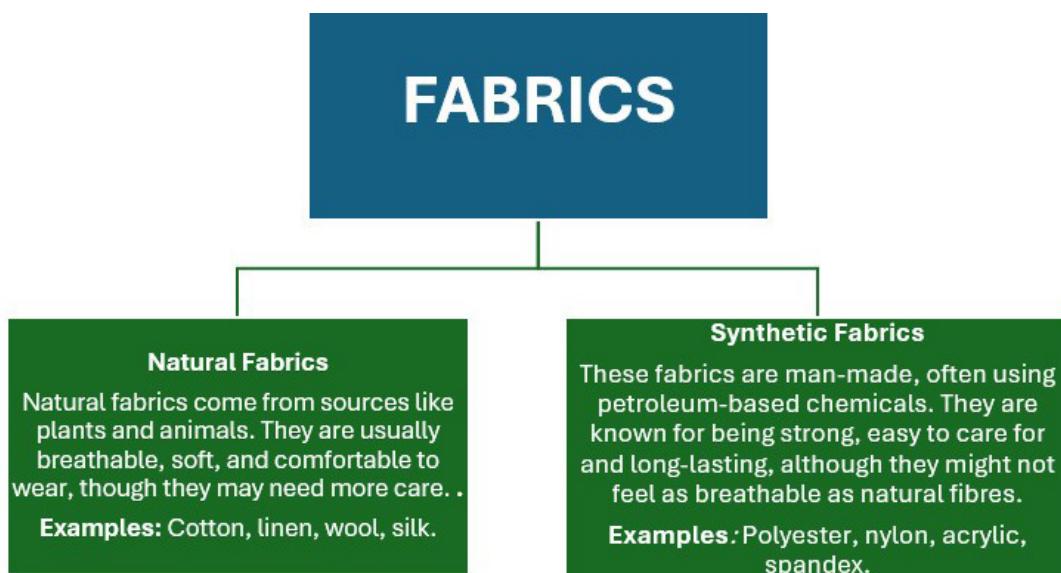
5. In your group, **state two rules for choosing the right fabric** (e.g., light fabrics for hot weather; strong fabrics for uniforms). Write your rules in your notebook.

PROPERTIES OF COMMON FABRICS & HOW THEY INFLUENCE FABRIC SELECTION FOR DIFFERENT CLOTHING STYLES

Introduction to Fabric Selection

Choosing the right fabric is very important when making clothes because it affects how the clothes work, how comfortable they are, and how they look. To pick the best fabric, you need to know its qualities and how they fit with what the clothes will be used for. Fabrics can generally be divided into two main categories: **natural fabrics** and **synthetic fabrics**. Natural fabrics are made from plant or animal sources, while synthetic fabrics are made through chemical processes.

Fabric types: An overview of natural and synthetic fabrics



FABRIC PROPERTIES: UNDERSTANDING KEY CHARACTERISTICS

Properties of Fabrics

When choosing a fabric, it is essential to consider the following properties

1. *Texture*: How the fabric feels when touched; smooth, rough, soft or stiff.
2. *Weight*: The heaviness of the fabric, which affects how it hangs or drapes on the body.
3. *Absorbency*: How well a fabric takes in moisture; important for comfort in warm conditions.
4. *Stretchability*: The fabric's ability to stretch and return to shape; ideal for active wear.
5. *Durability*: How well a fabric resists wear, tear or damage over time.

Natural fabrics: Characteristics and common uses

Cotton	Linen	Wool	Silk
<p>Soft, breathable, and absorbs moisture well.</p> <p>Uses: Everyday clothing, t-shirts, undergarments, dresses.</p>	<p>Strong, breathable, and cool to wear. It wrinkles easily but softens over time.</p> <p>Uses: Summer wear, beachwear, casual shirts, household</p>	<p>Warm, moisture-wicking, and insulating. May feel itchy and needs careful washing.</p> <p>Uses: Coats, jumpers, suits, winter accessories.</p>	<p>Smooth, shiny, lightweight and temperature-regulating.</p> <p>Uses: Formal wear, scarves, lingerie, elegant blouses.</p>

Synthetic Fabrics: Characteristics and Common Uses

Acrylic	Nylon	Polyester	Spandex (Lycra/Elastane)
<p>Lightweight, warm, wool-like, resistant to pests.</p> <p>Uses: Jumpers, hats, blankets.</p>	<p>Strong, stretchy, resistant to moisture and abrasion.</p> <p>Uses: Swimwear, tights, outdoor clothing.</p>	<p>Tough, wrinkle-resistant, dries quickly, and retains shape. Less breathable.</p> <p>Uses: Sportswear, uniforms, jackets, casual wear.</p>	<p>Very stretchy, holds shape well, snug-fitting.</p> <p>Uses: Active wear, leggings, swimwear.</p>

Fabric Selection Based on Intended Use

Selecting a fabric is not only about how it looks. It must suit the garment's purpose, the climate, the wearer's activity, and the desired comfort level. Here are some important factors to think about:

1. Climate considerations

- a. *Hot weather*: Fabrics like cotton and linen allow air flow and absorb sweat, keeping the body cool.
- b. *Cold weather*: Wool and fleece are excellent for warmth and insulation.
- c. *Changing seasons*: Blended fabrics and layers are useful for varying temperatures.

2. Activity suitability

- a. *Sportswear*: Needs fabrics that manage sweat and allow movement – polyester, nylon, spandex.
- b. *Activewear*: Stretchy and supportive fabrics like elastane or spandex work best.
- c. *Casual wear*: Comfortable fabrics such as jersey knit or chambray are great for relaxed outfits.

3. Comfort and functionality

- a. *Everyday use*: Soft and breathable fabrics like cotton are perfect for undergarments and sleepwear.
- b. *Workwear*: Needs tough, long-lasting fabrics like canvas or polyester blends.
- c. *Specialised Needs*: For example, UV protection for outdoor wear or anti-odour fabrics for sports.

4. Aesthetic Appeal

The way a fabric looks and feels can impact how confident and comfortable someone feels in it. Fabrics such as silk and satin offer a rich, elegant look, while textured or patterned fabrics add visual interest.

5. Sustainability Considerations

Choose eco-friendly fabrics, such as organic cotton or recycled polyester. It is also important to consider how the fabric was made and whether it supports ethical sourcing and production.

Activity 4.4 Linking Climate to Fabric Selection

1. Work with a friend for this activity.
2. Recall weather conditions in Ghana (hot afternoons, rainy season, cool evenings).

3. Discuss which fabrics feel most comfortable in hot weather and which in cold.
4. Summarise your answers in your notebook.
5. Contribute your ideas to a **climate-and-fabric-choice chart** for the class wall.

Activity 4.5 Why Cotton is Good for Summer

1. Organise yourself into a group of 3-5 members.
2. Think about how you feel wearing cotton on hot days.
3. Write short sentences on what cotton does (e.g., keeps cool, absorbs sweat, soft on skin).
4. Share and combine ideas into a group list of cotton's properties.
5. Create a simple **cotton fact card** with words and pictures showing why cotton is suitable for summer.
6. **Extension activity:** Complete a fact card for the following fabrics.
 - a. Linen
 - b. Wool
 - c. Polyester
7. Present your findings to your class for discussion.

THE ABSORBENCY, DURABILITY AND ELASTICITY OF DIFFERENT FABRIC TYPES THROUGH SIMPLE EXPERIMENTS

Introduction to Fabric Types

Fabrics are a vital part of everyday life. They are used to make clothing, beddings, upholstery, and many other items. Knowing the different types of fabrics, such as natural and synthetic, as well as woven and knitted fabrics, helps you choose the most suitable ones for specific uses.

Types of Fabrics

1. **Natural Fabrics** come from natural sources. Examples include:
 - a. *Cotton*: Soft and breathable, often used for casual wear and bedsheets.
 - b. *Silk*: Smooth and shiny, suitable for scarves and formal outfits.
 - c. *Wool*: Keeps warmth well, perfect for jumpers and cold-weather coats.

2. **Synthetic Fabrics:** Made through chemical processes. Examples include:
 - a. *Polyester:* Strong and wrinkle-free, used in a variety of clothes.
 - b. *Nylon:* Flexible and strong, used in items like sportswear.
3. **Blended Fabrics:** A mixture of natural and synthetic fibres to create improved materials with properties like durability and comfort.

Absorbency

Absorbency is the ability of a fabric to take in liquid. For example, towels must absorb water well, while gym clothing should pull sweat away from the skin.

Simple Experiment to Test Absorbency

Water drop test

1. *Materials:* Fabric samples, water, stopwatch, measuring cup.
2. *Steps*
 - a. Drop 1 mL of water onto each sample.
 - b. Time how fast the fabric soaks it in.
 - c. Record how much is absorbed in 30 seconds.
3. *Analyse:* The fastest and most soaked fabric is the most absorbent.

Durability

Durability means how well a fabric can resist damage from rubbing, washing or wear. This is important for uniforms and clothes that are used often.

Simple Experiment to Test Durability

1. **Abrasion Test**
 - a. *Materials:* Fabric samples, sandpaper, weight, and stopwatch.
 - b. *Steps*
 - i. Place the fabric on sandpaper.
 - ii. Rub with a weight for 1 minute.
 - iii. Check for damage or fraying.
 - c. *Analyse:* The least damaged fabric is the most durable.
2. **Strength Test**
 - a. *Materials:* Fabric strips, a ruler, and a weight.
 - b. *Steps*
 - i. Cut equal fabric sizes.
 - ii. Pull with weight until it tears.

- iii. Record the amount of weight used.
- c. *Analyse:* The higher the weight before tearing, the stronger the fabric.

Elasticity

Elasticity is a fabric's ability to stretch and return to its original size. It is important in clothes like leggings and sportswear.

Simple Experiment to Test Elasticity

Stretch Test

1. *Materials:* Fabric, ruler, weights.
2. *Steps*
 - a. Measure original fabric length.
 - b. Stretch using weights.
 - c. Record the amount of stretch.
 - d. Remove the weights and measure how much it returns.
3. *Analyse:* The more it stretches and returns, the more elastic it is.

Data Collection and Analysis

Gathering and studying information from the experiments mentioned includes:

- a. Create a table of results.
- b. Compare absorbency, durability, and elasticity.
- c. Decide which fabric suits each use best. For example, absorbent fabric for towels, durable ones for uniforms.

Fabric Testing Data Collection and Analysis

Table 4.5: Sample-filled fabric testing table

Fabric Type	Absorbency Rate	Durability Observation	Elasticity	Strengths Identified	Recommended Application
Cotton	High	Mild wear after repeated rubs	Low elasticity	Excellent absorbency	Towels, T-shirts, undergarments
Polyester	Low	Minimal wear, holds shape well	Moderate elasticity	High durability	Sportswear, outerwear
Wool	Medium	Moderate pilling with friction	Low elasticity	Warmth, insulation	Sweaters, coats

Nylon	Low	Very durable, resists abrasion	High elasticity	Durability and stretch	Swimwear, raincoats
Linen	High	Moderate wear, wrinkles easily	Very low elasticity	Breathability	Summer wear, table linens
Silk	Medium	Frays slightly at edges	Low to moderate elasticity	Luxury and drape	Evening gowns, scarves
Acrylic	Medium	Some fuzz after friction test	Moderate elasticity	Lightweight warmth	Knitwear, hats
Spandex	Low	High resistance to wear under stretch	Extremely high elasticity	Flexibility, stretch	Activewear, bodycon garments

Activity 4.6 Testing Fabrics Around Us

1. Organise yourself into a group of 4-6 members.
2. Collect small pieces of fabric (cotton, nylon, uniform, scarf or smock).
3. In your group, test for the following:
 - a. **Absorbency** – drop water, check soak speed.
 - b. **Strength** – pull gently, check toughness.
 - c. **Stretchability** – stretch and observe.
 - d. **Drape** – place over a bottle/stone, check stiff or soft.
4. Record results in a simple table like the one below.

Fabric Type	Absorbency (Soak Speed/slowly)	Strength (Toughness)	Stretchability	Drape (Stiff/Soft)
Eg; Nylon	Repels water, slow soak	Very strong	Slight stretch	Stiff
Eg; Scarf (silk-like)	Absorbs a little	Weak when pulled	No stretch	Very soft, flows easily

5. Discuss your findings in a whole class discussion.

Activity 4.7 Exploring Fabric Suitability

1. Organise yourself into a group of 3-5 members to interview family members on the suitability of different types of fabrics in their wardrobe.
2. Choose three people to interview.
3. Write the questions you are going to ask. For example:
 - a. Is the fabric durable enough for its intended use (e.g., casual wear, formal wear, sportswear)?
 - b. Does the fabric have the right performance properties (e.g., breathability, stretch, moisture resistance, wrinkle resistance)?
 - c. Is the fabric comfortable and visually appropriate (e.g., texture, weight, colour, drape) for the item of clothing?
4. If appropriate, make more suitable fabric recommendations to your family.
5. Combine your findings and share with another group.

ADVANTAGES AND DISADVANTAGES OF DIFFERENT FABRICS IN CLOTHING CONSTRUCTION

Selecting the appropriate fabric is fundamental in garment construction, as it directly impacts the garment's functionality, comfort, durability, and aesthetic appeal. Fabrics can be broadly categorised into **natural**, **synthetic**, and **blended** fibres, each with distinct properties that make them suitable for specific applications. Understanding these characteristics ensures better decision-making in design, sewing, and garment care.

Natural Fabrics

Cotton

Cotton is a plant-based fibre renowned for its softness, breathability, and versatility, making it a staple in everyday clothing.

1. Advantages

- a. *Highly breathable*: Allows air circulation, keeping the wearer cool in warm weather.
- b. *Moisture-absorbent*: Can absorb up to 27 times its weight in water, making it ideal for activewear and summer clothing.
- c. *Hypoallergenic*: Rarely causes skin irritation, suitable for sensitive skin.
- d. *Easy to dye and print on*: Accepts colours and patterns well.

- e. *Biodegradable*: Environmentally friendly compared to synthetic fabrics.

2. Disadvantages

- a. *Prone to wrinkles*: Requires ironing to maintain a neat appearance.
- b. *Shrinks when washed in hot water*: Pre-shrinking or cold washing is recommended.
- c. *Weakens when wet*: Loses up to 30% of its strength when saturated.
- d. *Fades over time*: Repeated washing can dull colours.

Linen

Linen, derived from the flax plant, is valued for its crisp texture and cooling properties, making it ideal for summer wear.

3. Advantages

- a. *Exceptional breathability*: More breathable than cotton, keeping the body cool.
- b. *Antibacterial and hypoallergenic*: Resists bacteria and allergens.
- c. *Highly durable*: Becomes softer with each wash while maintaining strength.
- d. *Sustainable*: Flax plants require less water and pesticides than cotton.

4. Disadvantages

- a. *Wrinkles easily*: Needs frequent ironing or steaming for a polished look.
- b. *Stiff at first*: Requires several washes to soften.
- c. *Expensive*: More costly than cotton due to labour-intensive production.

Wool

Wool, sourced from sheep, is a natural insulator, making it perfect for winter clothing.

1. Advantages

- a. *Excellent thermal regulation*: Keeps warmth in winter and stays cool in summer.
- b. *Naturally water-resistant*: Repels light rain and moisture.
- c. *Odour-resistant*: Wool fibres neutralise sweat odours.
- d. *Fire-resistant*: Does not ignite easily

2. Disadvantages

- a. *Can be itchy*: Coarse wool may irritate sensitive skin (merino wool is softer).
- b. *Requires special care*: Often needs hand washing or dry cleaning.
- c. *Prone to moth damage*: Must be stored properly to avoid holes.

Silk

Silk, produced by silkworms, is a luxurious fabric known for its smooth texture and elegant drape.

1. Advantages

- a. *Lightweight yet strong*: One of the strongest natural fibres.
- b. *Temperature-regulating*: Keeps the body warm in winter and cool in summer.
- c. *Hypoallergenic*: Resists dust mites and mould.
- d. *Lustrous appearance*: Adds a high-end finish to garments.

2. Disadvantages

- a. *Delicate*: Tears easily and can be damaged by sweat and sunlight.
- b. *Expensive*: High production costs make it a premium fabric.
- c. *Difficult to clean*: Often requires dry cleaning or gentle hand washing.

Synthetic Fabrics

Polyester

Polyester is a petroleum-based synthetic fibre known for its durability and resistance to wrinkles.

1. Advantages

- a. *Wrinkle-resistant*: Holds its shape well, ideal for travel clothing.
- b. *Quick-drying*: Used in sportswear and outdoor gear.
- c. *Colourfast*: Retains dyes well, preventing fading.
- d. *Affordable*: Cheaper than many natural fibres.

2. Disadvantages

- *Non-breathable*: Traps heat and sweat, causing discomfort.
- *Plastic-like feel*: Can feel stiff and artificial.
- *Environmental impact*: Non-biodegradable and sheds microplastics when washed.

Nylon

Nylon is a strong, elastic synthetic fibre often used in activewear and hosiery.

1. Advantages

- a. *High tensile strength*: Resistant to tears and abrasions.
- b. *Lightweight*: Ideal for performance wear like leggings and swimwear.

- c. *Water-resistant*: Dries quickly, making it suitable for rainwear.

2. Disadvantages

- a. *Poor absorbency*: Traps sweat and odours.
- b. *Pills over time*: Forms small fabric balls with friction.
- c. *Melts under high heat*: Cannot withstand high ironing temperatures.

Acrylic

Acrylic is a wool-like synthetic fibre often used in knitwear.

1. Advantages

- a. *Lightweight and warm*: Mimics wool without the itchiness.
- b. *Retains shape*: Resists stretching and sagging.
- c. *Affordable alternative to wool*: Budget-friendly for winter clothing.

2. Disadvantages

- a. *Static-prone*: Can cling to the body.
- b. *Flammable*: Melts and burns easily.
- c. *Not breathable*: Can cause overheating.

Spandex (Elastane/Lycra)

Spandex is a stretchy synthetic fibre used in fitted and activewear.

1. Advantages

- a. *Extreme elasticity*: Stretches up to 500% without breaking.
- b. *Enhances comfort*: Allows freedom of movement in sportswear.
- c. *Durable*: Retains shape after stretching.

2. Disadvantages

- a. *Degradates with chlorine/sunlight*: Not ideal for prolonged sun or pool exposure.
- b. *Weak when exposed to heat*: Can lose elasticity if ironed.

Blended Fabrics

Polyester-Cotton (Poly-Cotton)

A blend combining polyester's durability with cotton's comfort.

1. Advantages

- a. *Wrinkle-resistant yet breathable*: Balances comfort and practicality.
- b. *More affordable than pure cotton*: Cost-effective for everyday wear.

- c. *Easier to care for: Less prone to shrinking.*

2. Disadvantages

- a. *Less absorbent than pure cotton: Not ideal for intense workouts.*
- b. *Can pill over time: May develop small fabric balls.*

Wool-Synthetic Blends

Blends like wool-acrylic improve affordability and durability.

1. Advantages

- a. *More durable than pure wool: Resists wear and tear.*
- b. *Easier to care for: Often machine-washable.*
- c. *Budget-friendly: Reduces cost while maintaining warmth.*

2. Disadvantages

- a. *Less breathable than pure wool: Can feel less comfortable.*
- b. *May lack wool's natural insulation: Not as warm in extreme cold.*

Choosing the Right Fabric for Different Garments

1. Every day wear (T-shirts, jeans)

- a. **Cotton** (breathable, comfortable)
- b. **Poly-cotton blends** (durable, easy-care)

2. Sportswear (Leggings, gym wear)

- a. **Polyester** (moisture-wicking, quick-drying)
- b. **Nylon-spandex blends** (stretchy, supportive)

3. Formal wear (Suits, dresses)

- a. **Wool** (structured, insulating)
- b. **Silk** (elegant, drapes well)

4. Outdoor gear (Jackets, raincoats)

- a. **Nylon** (water-resistant, lightweight)
- b. **Polyester fleece** (warm, quick-drying)

By understanding these fabric properties, you can select the best material for durability, comfort, and style in any sewing project!

Activity 4.8 Blended Fabrics

1. Touch your uniform, shirt, or smock.
2. Clue: Does it wrinkle or stay smooth?
3. Compare the cotton part (soft) vs the polyester part (smooth, firm).
4. Write two reasons why blending fabrics makes them better (e.g., stronger, lasts longer, less wrinkling)

Activity 4.9 Matching Fabrics to Clothing Styles

Use earlier knowledge of fabric properties.

1. Organise yourself into a group of 3-5 members.
2. Match fabrics to clothing.

a. Cotton	evening wear uniform, smock
b. Nylon	Sunday/office wear sportswear, raincoat
c. Polyester blend	sportswear, raincoat
d. Silk	uniform, smock
3. Fill in a table.

Fabric	Clothing Style	Reason
Cotton	Uniform	Absorbs sweat, cool in heat
Nylon		
Polyester blend		
Silk		

4. Check your answers with another group.

EXTENDED READING

- Smith, J. (2019). *Textiles and their properties*. New York, NY: Textile Press. pp. 45-67.

Review Questions

1. What is meant by the term “fabric”?
2. Explain the following terms used in fabric production:
 - a. Weaving
 - b. Knitting
 - c. Non-woven fabrics
3. List three types of fabrics and describe each one with examples.
 - a. Fabric Type:
 - b. Description:
 - c. Example:
4.
 - a. Evaluate the importance of fibre classification in selecting sustainable fabrics and producing garments.
 - b. Write at least **three reasons** why fibre classification matters.
5. You are asked to design a clothing line suitable for tropical climates.
 - a. Which types of fibres would you choose?
 - b. Give three reasons to support your fibre selection.
 - c. Name at least one type of garment you would include in the line.
6. What is a fabric, and why is it important in making clothing? Name two types of fabric.
7. You are asked to choose a fabric for sewing sportswear for a school team. Based on what you know about fibre properties, which fabric would you choose and why?
8. Classify the following fabrics based on their fibre type: cotton, nylon, wool, and polyester. Then, explain one property of any two of them.
9. Amina is choosing a fabric to sew uniforms for factory workers. She wants something that will not tear easily and will feel comfortable in hot conditions. What advice would you give her? Suggest at least two suitable fabric types and explain your reason.
10. Your aunt wants to sew curtains for her living room. Use your knowledge of fabric and fibre properties to recommend a suitable fabric. Explain your choice using two reasons.

11. What is meant by the term absorbency when talking about fabrics?
12. In your own words, explain what durability means in relation to fabrics.
13. Why is it important for sportswear to be elastic?
14. Re-fill the Fabric Testing Table below using the results of your classroom experiment or observation.

Fabric Type	Absorbency Rate	Durability Observation	Elasticity	Strengths Identified	Recommended Application

- a. Based on your observations from the table above, which fabric type would you recommend for each of the following garment types?
- b. Justify your choices using the properties recorded in your fabric testing table.
15. Why is polyester often blended with cotton in garment construction?
16. Match the garment need (column 1) with the best fibre blend (column 2)

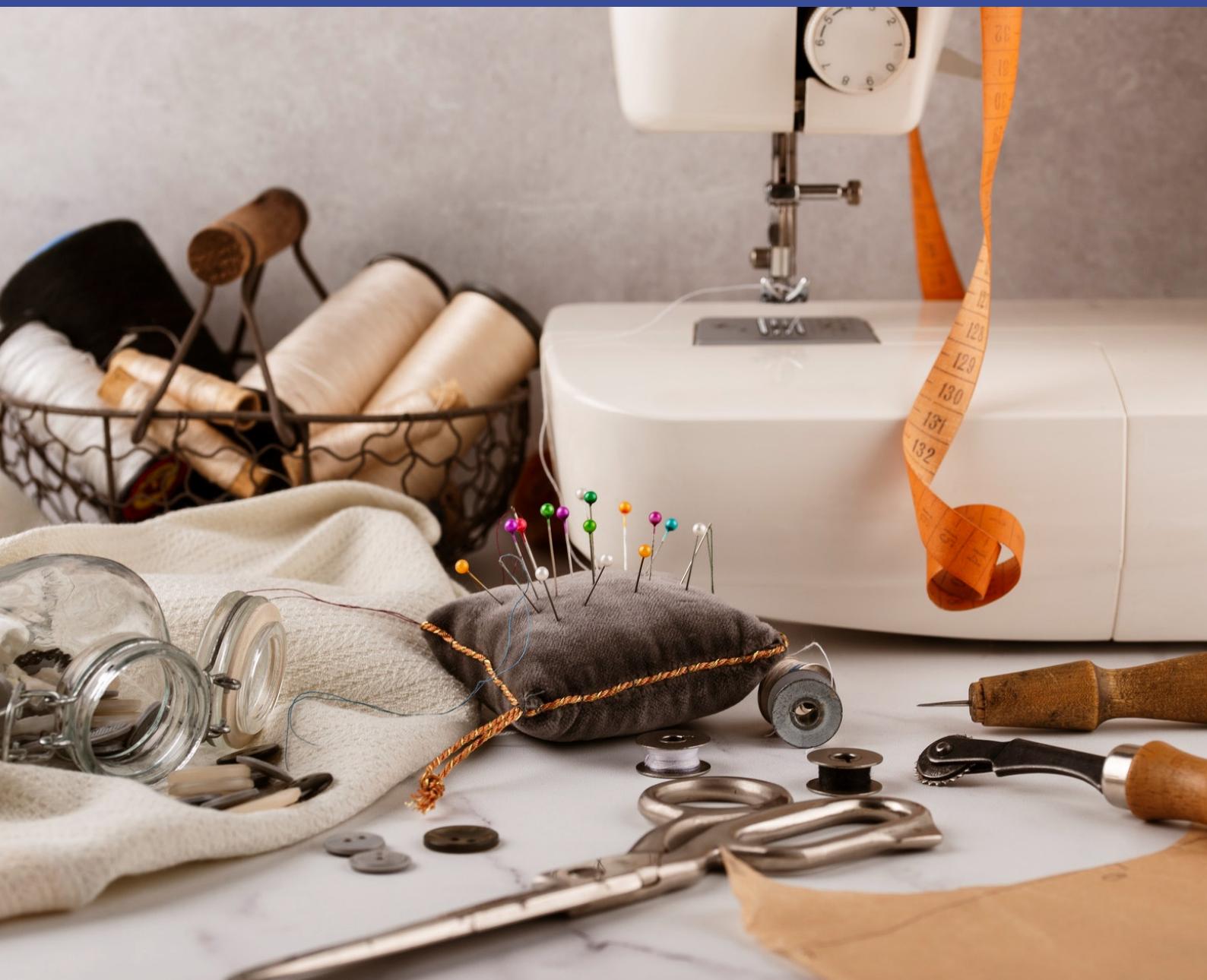
Column 1	Column 2
Lightweight, breathable shirt	Cotton-polyester blend
Durable school uniform	Nylon-spandex blend
Stretchable leggings	Cotton-linen blend

17. How can the disadvantages of certain fabrics be minimised in garment construction?
18. What factors would you consider when choosing a fabric for school uniforms or sportswear?
19. Evaluate a garment made from silk. What makes silk suitable or unsuitable for that garment?
 - a. Type of garment
 - b. Features of silk that suit the garment
 - c. Limitations of silk in that context
 - d. Conclusion based on evaluation

SECTION

5

MASTERING SEWING TOOLS, TECHNIQUES AND GARMENT CONSTRUCTION



CLOTHING AND TEXTILES PRODUCTION TECHNOLOGY

Clothing Construction Processes

Introduction

Have you ever wondered how a beautiful dress or smart shirt is put together? In this section, you will discover the exciting world of **clothing construction**—where fabric, thread, tools, and creativity come together to make garments that are not only stylish but also strong and comfortable. You will explore how to use sewing tools safely, identify and apply stitches, and choose the right **seams and edge finishes** to give your garments a neat and professional look. From understanding the purpose of each **sewing notion** to making real samples of stitches and seams, you will build the skills needed to bring your fashion ideas to life. Every week adds a new skill to your sewing toolbox, helping you become confident and capable in garment making. Whether you dream of designing clothes or simply want to sew well, this section lays the foundation for mastering the art of **sewing and construction**.

KEY IDEAS

- A **neat seam** adds comfort, prevents irritation to the skin, and gives the garment a more **professional and tidy** appearance.
- Besides joining fabrics, some seams also add **beauty** to garments. These are chosen to enhance the **style and visual appeal** of clothing.
- Knowing how and when to use different **seam types** improves your **sewing ability**, garment **durability**, and **presentation**.
- Seam selection depends on the **weight of the fabric**, the **design of the garment**, and **where the seam is placed**. Some seams are best for heavy fabrics, others for light or delicate ones.
- The **plain seam** is the most common and basic seam, used to join two pieces of fabric and then pressed open. It is simple and widely used.
- The **type of seam used** can affect how **strong** a garment is and how **neatly** it looks when worn. Neatly sewn seams improve the overall finish.

CLASSIFICATION OF SEWING TOOLS AND EQUIPMENT BY FUNCTION

Sewing involves different activities such as measuring, cutting, marking, stitching, pressing, and storing materials. To carry out these activities properly, there are special

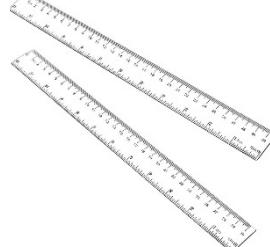
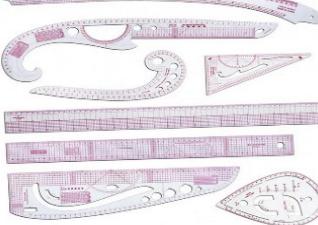
tools and equipment that are used. These tools are grouped based on what they are used for.

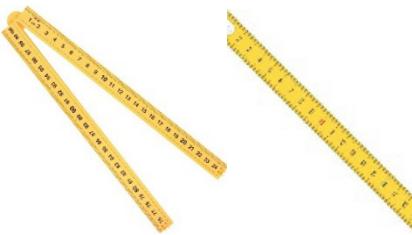
Below is a detailed explanation of each group:

Measuring Tools

Measuring tools are used to take accurate body or fabric measurements. Correct measurements help in making garments that fit well

Table 5.1: Measuring Tools

Tool Name	Image	Use
Measuring Tape	 Figure 5.1: Measuring tape	A flexible tape that is used to take body measurements such as bust, waist, hips, and the length of garments. It can bend around curves easily.
Sewing Gauge	 Figure 5.2: Sewing gauge	A small ruler with a sliding marker used to measure small distances such as hems, pleats, or buttonholes.
Ruler	 Figure 5.3: Ruler	A straight tool used to measure short lengths and to draw straight lines when marking fabric.
French Curve	 Figure 5.4: French curve	A curved tool that helps in drawing smooth, curved lines for necklines, armholes, and hip shapes.

Metre Rule		A long, flat ruler used to measure large pieces of fabric or to mark long straight lines.
Set Square		A tool used to draw right angles (90°) and to check the grain of fabric.

Cutting Tools

Cutting tools in clothing refer to various tools used to cut fabrics, thread and patterns. These tools are essential for achieving precise shapes and patterns in garment construction. Here are some common cutting tools used in the clothing industry:

Table 5.2: Cutting tools

Tool name	Image	Use
Fabric scissors		Used for cutting fabrics accurately when making clothes.
Pinking shears		Pinking shears are specialised scissors with zigzagged blades. Used toneaten and decorate raw edges of garments and other articles.
Thread snippers		Used to trim threads.

Rotary cutter		Used to cut fabrics and for home décor projects. They help in cutting multiple layers of fabric.
Seam ripper		Used to remove unwanted seams.
Stitch ripper		Used to remove unwanted stitches.

Marking Tools

Used to transfer pattern markings or indicate where to sew.

Table 5.3: Examples of Marking tools

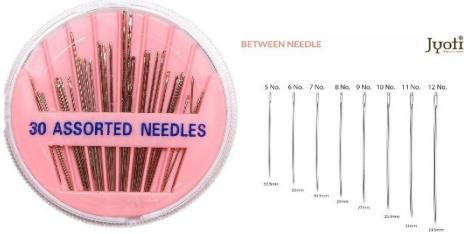
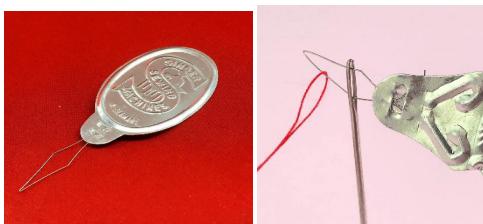
Name	Image	Use
Tailor's chalk		<p>They help mark fabrics so you know where to cut and sew.</p> <p>You can use them to transfer pattern markings onto the fabric.</p> <p>They provide guidelines to follow when doing embroidery designs.</p>
Pencil		For making written notes, drawing pictures, and marking different surfaces.

Fabric markers		Fabric markers are used for decorating clothes, creating custom designs, or adding names and details to fabric items.
Tracing wheel and carbon paper		For transferring pattern markings and making sure markings for sewing are accurate.

Stitching Tools

Used in hand sewing or with machines to create stitches.

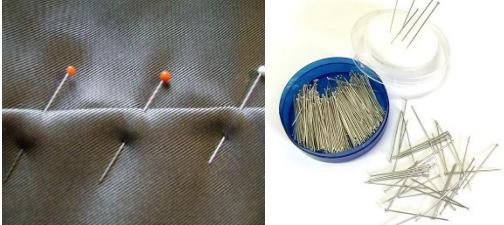
Table 5.4: Stitching tools

Name	Image	Use
Hand sewing needles		For sewing and fixing clothes, doing embroidery and needlework, making patchwork, and making changes or repairs.
Sewing machine		For making clothes, mending articles, creating patchwork, and decorating your home.
Needle threader		Helps to pass the thread through the needle's eye.

Bodkin		Helps put elastic, ribbons, or cords into casings or tunnels in fabric.
Plastic point turner		Used to turn fabric corners right side out and create clean edges on details like collars and cuffs.

Fitting Equipment

Table 5.5: Fitting equipment

Name	Image	Use
Pins		Used to hold fabric layers together, mark patterns, and guide stitches for accuracy.
Dress form		Used by designers to fit and see how clothes look, helping with how the fabric hangs, making adjustments, and getting the right size before finishing a garment.
Dressing mirror		For fitting and alterations, visual inspection and trying on garments during the sewing process.

Pressing Tools

Used to flatten seams and give garments a neat finish.

Table 5.6: Pressing Tools

Name	Image	Use
Iron		For pressing fabrics to remove wrinkles from clothes and help fabric lay flat, making them look neat and smooth.
Ironing board		An ironing board provides a flat, stable surface to make it easier to iron clothes and keep them looking tidy.
Sleeve board		For pressing sleeves, cuffs, and other small areas on clothes.
Tailors ham		It is used for pressing curved seams and darts to give shape.

Storage Equipment

Used for storing, organising and protecting clothing items or fabrics.

Table 5.7: Storage Equipment

Name	Image	Use
Cupboard or Wardrobe		For keeping things safe, organised, and clean by protecting them from dust and damage.
Chest of drawers		For keeping clothes organised and making space by getting rid of extra things.
Hanger and rack		For keeping clothing organised and easily accessible.
Toolbox and bag		For storing and organising tools and supplies.

Activity 5.1 Ama's Discovery

Scenario

Ama is a young girl in Kumasi who dreams of becoming a fashion designer. One Saturday morning, she visited her Auntie Efua, a seamstress in the community. Auntie Efua was busy sewing school uniforms for children.

On the table, Ama noticed different items. Auntie Efua explained:

- “This is a **tape measure**. I use it to measure waist, chest and length.”
- She then picked up a **pair of scissors**. “I use this to cut fabric neatly.”
- She showed Ama a **tailor’s chalk**. “This is for marking lines on the fabric before I cut.”
- Ama also saw **needles and pins** stuck in a small cushion. Auntie Efua smiled and said, “These help me hold fabric together before sewing.”
- Finally, she pointed to her **sewing machine**. “This makes my work faster and neater.”

Ama was excited. She wanted to help, so Auntie Efua asked her to group the tools according to their uses. Together, they sorted them into measuring, cutting, marking and sewing tools.

Ama left Auntie Efua’s shop smiling, ready to tell her friends what she had learned.

1. Join with a friend to make a pair.
2. Share with your partner what you think each item could be used for.
3. Join another pair and agree on at least **three items** and their possible uses.
4. In your group of four, write the names of the tools from the story in your notebooks.
5. Classify them under headings such as **measuring tools, cutting tools, marking tools, sewing tools and accessories** using the table below.

Measuring tools	Cutting tools	Marking tools	Sewing tools	Accessories

6. In your group, select one tool and explain its function to the class. Use your own words in a role-play, a short demonstration or even a drawing.
7. As a class, make a list of any sewing tools you have seen in your community (e.g., at the tailor’s shop, seamstress’s corner or at home).

8. Compare the list with the tools Ama saw in her grandmother's sewing corner. Which ones are the same? Which ones are new to you?
9. Record the final agreed list in your notebook for future reference.

HANDLE AND CARE FOR SEWING TOOLS AND EQUIPMENT

Taking good care of sewing tools and equipment helps them last longer, stay safe to use, and work properly. When tools are handled and maintained well, sewing becomes easier, faster, and more enjoyable. Below is a detailed explanation of how to handle and care for different types of sewing tools.

Cutting Tools

Table 5.8: Care and maintenance of cutting tools

<ol style="list-style-type: none"> 1. Handling Tips <ol style="list-style-type: none"> a. Only use fabric scissors for cutting fabric. Do not use them to cut paper, cardboard, or plastic, as this will make them blunt quickly. b. Always close the blades of scissors or shears after use to prevent injuries. c. Cut fabric carefully and slowly to avoid damaging the tool or the fabric.
<ol style="list-style-type: none"> 2. Maintenance Tips <ol style="list-style-type: none"> a. Wipe the blades with a clean cloth after each use to remove threads, lint, or dust. b. Keep cutting tools in a dry place to prevent rusting, especially metal tools. c. Sharpen blades regularly when they become dull so that they can cut smoothly and neatly.

Measuring Tools

Table 5.9: Care and maintenance of measuring tools

<ol style="list-style-type: none"> 1. Handling Tips <ol style="list-style-type: none"> a. Do not overstretch or pull tape measures too hard. This can stretch or damage the markings. b. Always use rulers and gauges gently and keep them flat to avoid bending or breaking them.
<ol style="list-style-type: none"> 2. Maintenance Tips <ol style="list-style-type: none"> a. Roll up the tape measure gently and keep it in a case or drawer when not in use. b. Store measuring tools away from heat or damp areas to prevent damage and warping.

Marking tools

Table 5.10: Care and maintenance of marking tools

<p>1. Handling tips</p> <ul style="list-style-type: none"> a. Press lightly when using marking tools to avoid making marks that cannot be removed. b. Always test the marking tool on a small scrap of the same fabric before using it on the main fabric.
<p>2. Maintenance tips</p> <ul style="list-style-type: none"> a. Store tailor's chalk in a small box to avoid breaking it. b. Keep fabric pencils and markers in a dry place and away from direct sunlight to prevent drying out.

Sewing machines

Table 5.11: Care and maintenance of sewing machine

<p>1. Handling tips</p> <ul style="list-style-type: none"> a. Always read and follow the sewing machine manual before using it. This helps prevent mistakes and damage. b. Let the machine feed the fabric gently. Do not pull or push the fabric while sewing.
<p>2. Maintenance tips</p> <ul style="list-style-type: none"> a. Remove lint, dust, and loose threads from the machine after each use. Use a small brush to clean inside. b. Oil the moving parts (as instructed in the manual) to keep them running smoothly. c. Change the sewing machine needle regularly, especially if it becomes bent, dull, or breaks. d. Always cover the machine with a cloth or dust cover when not in use to keep it clean.

Pressing Tools

Table 5.12: Care and maintenance of pressing tools

<p>1. Handling Tips</p> <ul style="list-style-type: none"> a. Always check the fabric type before ironing. Use the correct heat setting to avoid burning or damaging the fabric. b. Use a pressing cloth for delicate fabrics to prevent shine or scorch marks.
<p>2. Maintenance Tips</p> <ul style="list-style-type: none"> a. Wipe the iron's soleplate regularly to remove stains, sticky residue, or burnt fibres. b. After using steam, empty any remaining water from the iron to avoid rust and mineral build-up. c. Store the iron upright in a safe place to prevent falls or damage.

Needles and Pins

Table 5.13: Care and maintenance of needles and pins

<p>1. Handling Tips</p> <ul style="list-style-type: none"> a. Use a thimble when hand-sewing to protect your fingers from needle pricks. b. Do not leave pins in fabric for a long time—they may rust or get lost and cause injury.
<p>2. Maintenance Tips</p> <ul style="list-style-type: none"> a. Store needles and pins in a pin cushion or magnetic holder to keep them organised and safe. b. Remove any bent, broken, or rusty needles and throw them away carefully to avoid injuries.

General Tips for All Sewing Tools and Equipment

1. Always store sewing tools in a clean, dry place away from water and dust.
2. Check tools regularly for any signs of damage, rust, or wear and replace if needed.
3. Clean tools after every use and return them to their proper storage to keep them in good working condition.
4. Label storage containers or drawers so that each tool has its own place. This makes them easier to find when needed.

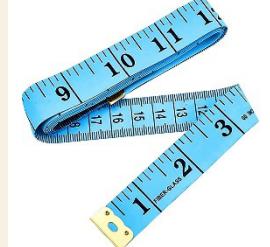
Activity 5.2 Learning from Kwasi's Sewing Shop Experience

Case Study

Kwasi is an apprentice in his aunt's sewing shop in Ajumako. He notices that some of the tools, like scissors, measuring tape and sewing machine, are not well cared for. The scissors are blunt, the tape is torn, and the machine has not been cleaned. Because of this, Kwasi struggles to cut and sew neatly, and his clothes do not come out as expected. His aunt later explains that proper handling and maintenance of tools make work easier, save money and produce neat garments.

Kwasi decides to learn how to handle and maintain tools properly. He also wants to practice measuring, marking and cutting fabric using the correct tools.

1. Read Kwasi's case carefully.
2. On your own, list three problems Kwasi faced because the tools were not well maintained.
3. Join with a partner to complete the table below.
4. For each tool, write **two correct handling and maintenance practices**.

Tool	Correct Handling	Maintenance Practices
 Scissors	1. 2.	1. 2.
 Hand sewing machine	1. 2.	1. 2.
 Tape measure	1. 2.	1. 2.
 Hand sewing needles	1. 2.	1. 2.

5. Check your answers with another pair and add any new ideas to your table.

Activity 5.3 Measuring, marking and cutting fabric

1. Complete this activity by yourself or with a partner.
2. Find a small piece of cloth around you (e.g., old wrapper, shirt, or fabric scrap).
3. Use the correct tools (tape measure, tailor's chalk and scissors). If you don't have all of the tools, write down what you would use instead.
4. Measure and mark a rectangle of 20cm x 30cm, then cut it neatly.

6. Record your work in the table below:

Tool Used	How I used it	Challenge faced	Success achieved
Tape measure			
Tailor's chalk			
Scissors			

7. After cutting, compare your rectangle to the measurement (20cm x 30cm).
8. If it is not correct, note where the mistake happened (measuring, marking or cutting).
9. Write down **one thing you will do to improve next time**.
10. If possible, ask a friend or family member to check your cut piece and give simple feedback (e.g., It is neat or the sides are not straight).

COMPARING HAND SEWING MACHINE AND OTHER SEWING TOOLS IN TERMS OF FUNCTION AND USE

Introduction to Sewing Machines

Sewing machines are essential tools for garment construction, offering different features to suit various sewing needs. They range from basic manual machines to advanced computerised models. Understanding their functions helps you choose the right one for your projects.

Hand sewing tools

Hand sewing tools are used to sew, join, finish, or decorate fabric by hand, without using a sewing machine. Hand sewing tools allow for precise and detailed manual sewing.

Table 5.16: Examples of hand sewing tools and their functions

1. Hand needles: Used for various types of manual stitching, including hemming, mending and decorative work.
2. Thimble: Worn on the finger to safely push the needle through fabric, preventing injury.
3. Pins: Temporarily hold fabric pieces together to maintain alignment before sewing.
4. Pin cushion: Provides a safe and convenient place to store pins and needles when not in use.
5. Scissors: Used for cutting fabric, threads and small trims with precision.
6. Seam ripper: A sharp tool designed to remove unwanted stitches cleanly without damaging the fabric.

7. Tailor's chalk: Used to make temporary markings on fabric for sewing guides, such as seam lines and dart placements.
8. Measuring tape: A flexible ruler for taking body measurements and measuring fabric dimensions accurately.
9. Thread: The essential material used with a needle to join pieces of fabric by hand.

Key Features

- a. They are lightweight and easy to take anywhere.
- b. Great for detailed work, especially on delicate fabrics.
- c. They need very little care or training to use.
- d. They do not require electricity, so you can use them anywhere.

Machine sewing tools

Machine sewing tools work with a sewing machine to create stitches faster, more evenly, and more professionally than sewing by hand.

Table 5.17: Examples of machine sewing tools and their functions

1. Sewing machine: The main tool for stitching fabric quickly and evenly.
2. Presser foot: Holds the fabric in place against the feed dog so it stitches smoothly.
3. Bobbin and bobbin case: Provide the lower thread that works with the upper thread to form strong stitches.
4. Machine needles: Special needles for the sewing machine, made for different fabrics and types of stitches.
5. Foot pedal: Controls how fast the machine sews, letting you change the speed as needed.
6. Seam guide or plate markings: Help you keep even seam allowances for a professional look.
7. Thread spool: Holds the upper thread used in machine stitching.
8. Oil and maintenance tools: Keep the machine working well by reducing friction and preventing wear.
9. Machine light: Lights up the sewing area, making it easier to see details and avoid mistakes.

Key Features

- a. They help you to sew much faster than by hand.
- b. They make strong, even stitches that last longer.
- c. They can easily handle heavy or multiple layers of fabric.
- d. They need electricity (or manual power for treadle machines) to work. They require regular care, like cleaning and oiling, to keep running smoothly.

Comparison of Hand and Machine Sewing Tools

Table 5.18: Comparison of hand and machine sewing tools

1. Function
<ul style="list-style-type: none"> a. Hand tools allow manual stitching, marking, and measuring. b. Machine tools enable fast, consistent mechanical stitching and fabric handling.
2. Use
<ul style="list-style-type: none"> a. Hand tools are best for small repairs, detailed finishes and delicate fabrics. b. Machine tools are ideal for constructing garments, sewing large sections and producing strong seams quickly.
3. Speed
<ul style="list-style-type: none"> a. Hand sewing is slower and more controlled, suitable for precise tasks. b. Machine sewing dramatically increases production speed.
4. Precision
<ul style="list-style-type: none"> a. Hand tools excel at detailed, delicate work that requires careful control. b. Machine tools deliver consistent, even stitches over long seams.
5. Cost
<ul style="list-style-type: none"> a. Hand tools are generally less expensive and widely accessible. b. Machines involve a higher upfront investment and maintenance costs.
6. Portability
<ul style="list-style-type: none"> a. Hand tools are lightweight and easy to carry anywhere. b. Machines are bulkier and less portable.
7. Skill required
<ul style="list-style-type: none"> a. Hand sewing demands basic manual dexterity and patience. b. Machine sewing requires familiarity with machine operation and care.
8. Maintenance
<ul style="list-style-type: none"> a. Hand tools need little maintenance beyond keeping them clean and sharp. b. Machines require regular oiling, cleaning and occasional part replacement.

When to Use Each Sewing Tool

1. Hand sewing tools

- a. Great for finishing hems neatly and without being seen.
- b. Good for securely attaching buttons.
- c. Used for basting, which means making temporary stitches to hold pieces together before final sewing.
- d. Perfect for adding decorative embroidery or embellishments.
- e. Handy for small repairs anywhere without needing electricity.

2. Machine sewing tools

- a. Quickly and evenly sewing the main seams in clothes.
- b. Making long, straight seams on big projects like quilts.
- c. Effectively working with thick or several layers of fabric.
- d. Efficiently producing many identical items in a production setting.

Types of Sewing Machines

Table 5.19: Types of Sewing Machines

S/N	Type of machine	Image	Use
1.	Manual/hand sewing machine		<p>Operated with a hand wheel.</p> <p>No electricity needed.</p> <p>Best for small projects, repairs.</p>
2.	Treadle sewing machine		<p>Operated with a foot pedal.</p> <p>No electricity required.</p> <p>Steady stitching for medium-sized projects</p>
3.	Electric sewing machine		<p>Used for both home and commercial sewing.</p> <p>It is faster and more efficient.</p> <p>Uses electricity and a foot pedal for speed and control.</p> <p>Offers multiple stitch options.</p>

4.	Computerised sewing machine		<p>Has advanced features like automatic stitching and built-in patterns.</p> <p>Includes LCD screens for easier use.</p> <p>Great for detailed embroidery, quilting, and professional sewing.</p>
5.	Overlock (Serger) machine		<p>Trims and finishes seams in one step, helping to prevent fraying.</p> <p>Ideal for professional seam finishing, working with knit fabrics, and speeding up production.</p>

Advantages and Disadvantages of Different Types of Sewing Machines

Sewing machines come in different types, and each one has its own benefits and challenges. Understanding these can help you choose the most suitable machine for your sewing needs.

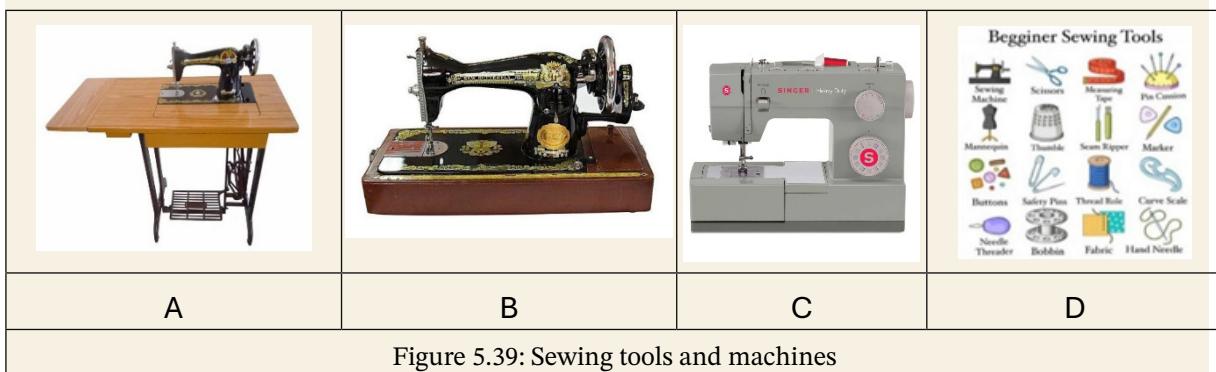
Table 5.20: Advantages and Disadvantages of different Types of Sewing Machines

Type of Sewing Machine	Advantages (Pros)	Disadvantages (Cons)
Hand Sewing Machine	<p>Affordable and budget friendly.</p> <p>Lightweight and easy to carry.</p> <p>No electricity needed. Suitable for remote areas.</p> <p>Simple design. ideal for beginners.</p>	<p>Only straight stitch available.</p> <p>Needs one hand to operate, reducing fabric control</p> <p>Not user-friendly for left-handed individual.</p>
Treadle Sewing Machine	<p>Works without electricity.</p> <p>Built-in stand and flat surface for cutting and sewing.</p> <p>Some models offer zigzag stitching.</p> <p>Durable and long-lasting.</p>	<p>Heavy and difficult to move.</p> <p>More expensive than hand machines.</p> <p>Pedal use can be difficult for beginners.</p>

Electric Sewing Machine	<p>Fast and time-saving.</p> <p>Has multiple functions (Example, zigzag and buttonholes stitches)</p> <p>Both hands are free to guide fabric.</p> <p>Good for various sewing projects.</p>	<p>Needs constant electricity.</p> <p>Higher cost than hand sewing machines.</p> <p>Speed may be too fast for beginners to control.</p>
Computerised Sewing Machine	<p>Advanced automatic features (Example, buttonholes and embroidery stitches)</p> <p>Very precise and neat stitching.</p> <p>Can store stitch patterns for future use.</p> <p>Ideal for decorative and complex sewing.</p>	<p>Very expensive.</p> <p>Requires technical knowledge and practice.</p> <p>Repairs may require a specialist.</p>
Overlock (Serger) Machine	<p>Gives professional edge finishing.</p> <p>Trims, stitches, and finishes in one step.</p> <p>Excellent for sewing stretch and knit fabrics.</p> <p>Saves time and improves the appearance of garments.</p>	<p>Cannot perform general sewing tasks.</p> <p>Threading can be complicated.</p> <p>More expensive than basic machines.</p>

Activity 5.4 Comparing Tools and Machines for Sewing

1. Form a group of 3-5 members.
2. Discuss the pictures below, labelled A-D and answer the questions that follow.



- a. From the pictures labelled A-C, name the types of sewing machines.

- b.** Discuss and write one function of each.
- c.** Which machine is most used in your area? Why?
- d.** From the picture labelled **D**, discuss and list all the tools shown.
- e.** Match each tool with its function (cutting, sewing, measuring, and marking).

3. Draw two of the tools you have seen before.

4. Compare the **hand sewing machine and the treadle machine**.

- a.** Discuss one similarity and one difference.
- b.** Compare the **needle and pin**:
- c.** Discuss one similarity and one difference.

5. Copy and complete the table below into your exercise book.

Tool/Machine	Similarities	Differences
Hand & Treadle machine		
Needle & Pin		

Common Sewing Notions

Sewing notions are the **small but essential tools and accessories** that make garment construction possible. While they may seem minor, they play a **crucial role** in ensuring professional, durable, and polished results. Below is a breakdown of common notions and their uses in sewing.

Table 5.22: Examples of notions and their uses in garment construction

Notion	Use in garment construction
Thread	Used to stitches fabric pieces together temporarily or permanently. Examples: Polyester all-purpose), cotton (natural fabrics), upholstery (heavy-duty).
Zippers	Fastens openings in dresses, trousers, skirts, and jackets. Examples: Invisible zippers (dresses), metal zippers (jeans), plastic zippers (lightweight garments).
Buttons	Provides closures for shirts, coats, and blouses. Examples: Flat buttons (shirts), shank buttons (coats), decorative buttons (embellishment).
Elastic Bands	Adds stretch to waistbands, cuffs, and necklines. Examples: Braided elastic (underwear), knit elastic (casual wear), clear elastic (lingerie).
Hooks & Eyes	Secures openings discreetly (e.g., dresses, bras). Examples: Small hooks (necklines), large hooks (skirts), bra hooks (underwear).

Velcro	Offers easy fastening (ideal for children's wear and sportswear). Examples: Sew-on (reinforced), adhesive (temporary).
Bias Tape	Finishes raw edges smoothly, especially on curves. Examples: Single-fold (seam binding), double-fold (hem finishes).
Snaps (Press Studs)	Alternative to buttons, especially in baby clothes. Examples: Pearl snaps (denim), plastic snaps (light fabrics).
Seam Binding	Covers raw edges to prevent fraying. Examples: Satin (luxury finish), grosgrain (structured garments).
Ribbons	Adds decorative or functional ties to garments. Examples: Grosgrain (belts), satin (bows), jacquard (trim).
Lace Trims	Enhances garments with decorative edges. Example: Chantilly (lingerie), guipure (evening wear).
Interfacing	Adds structure to collars, cuffs, and waistbands. Examples: Fusible (easy application), sew-in (tailoring).
Needles & Pins	Essential for hand sewing and fabric preparation. Examples: Sharps (general sewing), ballpoint (knits), quilting pins (layered fabrics).

Examples of sewing notions



Thread



Zippers



Buttons



Elastic band



Hook and eye/band



Velcro

Bias tape
Snaps (Press stud)

Seam binding



Ribbons



Lace trims



Interfacing



Needles and pins

Figure 5.40: Examples of sewing notions

Activity 5.5 Discovering notions

1. Read the story below and answer the following questions.

Ama visited her auntie, who is a seamstress. She saw her auntie sewing a school shirt. Beside the sewing machine, Ama noticed small items in a basket: a spool of thread, some buttons, a zipper, elastic, and a piece of bias tape.

Ama asked, “*Auntie, what are these things?*”

Her auntie replied, “*These are called sewing notions. They are the small things that help us finish clothes, make them strong and easy to wear.*”



- a.** In your own words, define sewing notions using these key words as a clue: “small items,” “help in sewing,” “finishing clothes,” “make strong,” “easy to wear.”
- b.** From Ama’s story, list three sewing notions.
- c.** Look at your clothes and point out one notion to the person sitting on your right.
- d.** Match each notion in the picture with its use (e.g., button, zip).
- 2.** Draw and label two notions in your notebook.
- 3.** Complete this table

Sewing Notion	Role
Thread	Used to stitch fabric pieces together.
Button	Fastens shirts, dresses or trousers
Zippers	
Elastic band	
Hook and eye	

Velcro	
Bias tape	
Snaps	
Seam binding	
Ribbon	
Lace trim	
Interfacing	

Activity 5.6 Comparing Garments

1. Form a group of 3-5 members.
2. Choose one garment (e.g., school shirt, trousers or smock).
3. Identify two notions on it.
4. Discuss how those notions improve the garment.

Example

Garment: School Shirt

Notions Identified: Buttons and Interfacing (collar and cuffs).

How They Improve the Garment

- Buttons make the shirt easy to open and close.
- Interfacing makes the collar and cuffs stiff, neat and long-lasting.

5. Make a note of your group's findings in your notebook.

THE CONCEPT OF STITCHES

Stitches are rows or patterns of thread created by passing a needle through a fabric. Stitches help to hold different pieces of fabric together or decorate the fabric to make it more attractive. They are an essential part of sewing and garment construction. Stitches are generally categorised into two main types: temporary stitches and permanent stitches.

Types of Stitches

Stitches are categorised into two main types.

1. Temporary Stitches (Also called Basting Stitches)

Purpose

- a. These stitches are used to temporarily hold fabric pieces in place.

- b. They help to check fit, position patterns, or hold parts together before using permanent stitches.

Key Features

- a. Removed after the permanent stitching is done.
- b. Made using long, loose stitches so they can be pulled out easily.
- c. Often sewn with a contrasting colour thread to make them easier to see.

Common Types of Temporary Stitches

- a. **Even Tacking:** Regular and evenly spaced stitches used for general holding.
- b. **Diagonal Tacking:** Slanted stitches used when holding several fabric layers together.
- c. **Tailor's Tacks:** Small loops of thread used to transfer pattern markings to fabric.

2. Permanent Stitches

Purpose

- a. These stitches are meant to stay in the garment permanently.
- b. They are used to join seams, finish hems, or decorate the garment.

Key Features

- a. They are strong and meant to last through wear and washing.
- b. Some are mainly for joining (functional), and others add beauty (decorative).



Common Embroidery Stitches

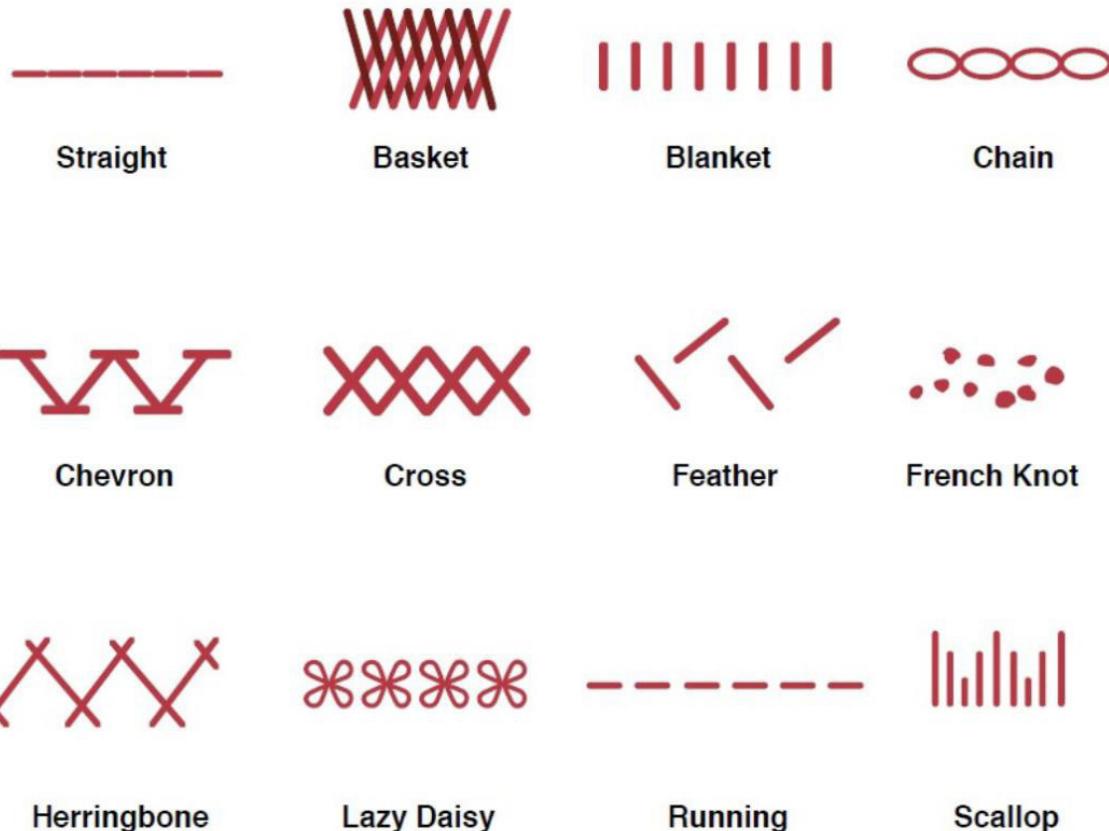


Figure 5.42: Samples of stitches

Activity 5.7 Understanding Stitches

1. With a partner, think about sewing (e.g., mending clothes).
2. Write two words that describe what stitches do.
3. Share and agree on one sentence about what stitches are.
4. Join another pair (group of 4). Write a group definition of stitches, then refine it into a final meaning.

*(Clue: Make sure the definition contains these key words: **needle**, **thread**, **join**, **secure** or **decorate fabric**, **hand** or **machine**.)*

Activity 5.8 Types and uses of stitches

1. Form a group of 3-5 members.
2. Look at the clothes of your group members. Point out visible stitches (e.g., hem, neckline, pocket, button).
3. Talk about what each stitch does (e.g., joins, strengthens, decorates).
4. Make a two-column table in your notebook and complete it with the stitches seen and what they do.

Function of stitches

Stitch seen	What it does
Hem stitch (uniform hem)	Holds fabric edge neatly
Running stitch (side seam)	Joins fabric pieces

CATEGORISATION OF STITCHES BASED ON THEIR FUNCTIONS

Classification of Stitches by Their Functions

In sewing, stitches are not just random patterns of thread. Each stitch is used for a specific reason or purpose. To help understand them better, we can group or classify stitches into four main categories based on what they are used for. These are:

1. Temporary stitches
2. Joining stitches
3. Neatening (finishing) stitches
4. Decorative stitches

The key terms to remember in this process are ‘temporary’, ‘joining’, ‘neatening’ and ‘decorative’. Understanding how each group works will help you sew more neatly, accurately, and creatively.

Detailed Explanation of Each Category and Function

Temporary Stitches

These stitches are used for short-term purposes. They are mainly used during the preparation or fitting stage and are removed after permanent stitching is done. Common types of temporary stitches are:

- a. **Even tacking:** Equal stitch lengths; used for basic holding
- b. **Long and short tacking:** Uneven lengths for quick basting
- c. **Diagonal tacking:** Used on large areas or thick fabrics
- d. **Tailor's tacks:** Used to transfer markings between fabric layers

Joining Stitches (Permanent)

These are strong stitches that stay in the garment and hold the parts together permanently. They are used to fix fabric pieces together securely and to create seams and structure. Common types are:

- a. **Backstitch:** Very strong and durable; good for seams
- b. **Running stitch:** Quick and simple; used in many garments
- c. **Oversewing:** Joins edges or closes small openings
- d. **Ladder stitch:** Invisible stitch for hand-sewn finishes
- e. **Herringbone stitch:** Sometimes used for joining and decorating

Neatening (Finishing) Stitches (Permanent)

These are used to clean up the raw or cut edges of fabric to prevent fraying and give the garment a neat look. Used to secure raw edges, to prevent threads from coming loose, to give a clean, finished look. Common types are:

- a. **Loop stitch:** Wraps around the edge of the fabric
- b. **Overcasting:** Simple way to prevent fraying
- c. **Slip hemming:** For neatly finishing hems with minimal visibility
- d. **Hemming stitch:** Invisible stitch used in hand finishing
- e. **Herringbone stitch:** Neat and firm for lining and hems
- f. **Buttonhole stitch:** Used around buttonholes and for strengthening

Decorative Stitches (Permanent)

These stitches are used to add beauty and artistic detail to garments and textile items. Some decorative stitches can also strengthen or Neaten fabric.

Functions

- a. To improve appearance
- b. To show creativity or personal style
- c. Sometimes used along with embroidery

Common Types

- a. **Satin stitch:** Dense and shiny; covers designs fully

- b. **Chain stitch:** Looks like chains; often used in embroidery
- c. **Herringbone stitch:** Stylish and useful
- d. **Loop stitch:** Adds texture and canneaten
- e. **Cross stitch:** Forms an “X”; used in patterns
- f. **Stem stitch:** Looks like a stem; used for outlines
- g. **Lazy-daisy stitch:** Petal shape; adds a floral touch

Note: *Some stitches have more than one; stitches, like the blanket stitch, herringbone stitch, and ladder stitch, can serve more than one function. For example, the herringbone stitch can be used to join, neaten, or decorate.*

Table: 5.25: Classification of stitches by function

Category	Stitch Type	Function
Temporary Stitches	Basting (or tacking) stitch, tailor's tacks.	Used to hold fabric pieces together temporarily before final stitching.
Permanent Stitches	Running stitch, backstitch.	Used to join fabric pieces permanently.
Decorative Stitches	Blanket stitch, chain stitch, satin stitch.	Used to enhance the aesthetic appeal of garments or fabric items.
Seam Finishing Stitches (neatening)	Overcast stitch, zigzag stitch	Used to prevent fabric edges from fraying.
Hemming Stitches	Slip stitch, blind hem stitch	Used to finish the edges of garments neatly, especially hems.
Reinforcement Stitches	Double stitch, backstitch	Used to strengthen stress points (Example, pockets, and underarms).
Stretch Stitches	Stretch stitch, zigzag stitch	Used on knit or stretchy fabrics to prevent thread breakage.

Activity 5.9 Identifying the Functions of Stitches

Case Study: Afia's Sewing Workshop

Afia, a young seamstress in Mankesim, is sewing school uniforms and dresses for her community. She noticed that some stitches in her garments did not hold firmly, while others were only needed temporarily before final sewing. She realised she must understand different stitches, their functions and how to apply them properly. Afia wants to teach her apprentices about the *functions of stitches, how to classify them and the guidelines for creating neat and strong stitches.*

1. Why did some stitches not hold firmly?
2. Which stitches are only temporary?
3. Which ones are permanent?
4. Use the table below to describe and list functions of stitches (e.g., joining fabric, neatening edges, decorating, and temporary holding). (Clue: look for pictures in magazines, on the internet, on items of clothing to help you).
5. Share your answers with your class in a class discussion.

Description and functions of stitches

Stitch name	Description	Functions
Basting Stitch	Long, loose stitches to hold layers	For holding temporary seams, gathering fabric
Decorating stitches, Chain Stitch	Looks like a chain of loops	Decorative borders, embroidery.

Activity 5.10 Classifying Stitches by Functions

Using the scenario from **Activity 5.9** above, do the following tasks with a group of 3-5 members you form with your friends.

1. Classify stitches Afia can use
 - a. Temporary stitches – hold fabric temporarily.
 - b. Permanent stitches – hold fabric permanently.
 - c. Decorative stitches – beautify garments.
2. Copy and complete the table below in your notebook.

Classification of stitches by function

Stitch Type	Function	Example
Temporary stitches, e.g. tacking	Hold the fabric temporarily	Basting stitch
Permanent stitches, e.g. back stitch	Join fabrics permanently	Backstitch

Decorative stitches, e.g chain stitch	Beautify garment	Embroidery stitch

3. As a group, present your table to your class for discussion.
4. After your presentation, answer the following questions in your group.
 - a. What stitches are best for school uniforms?
 - b. How should needles and thread be handled?
 - c. How should stitches be fastened?
5. Write points on chart paper or sticky notes.
6. Join with another group to compare and refine your answers.
7. Create a whole-class “Guidelines Poster” including:
8. Stitches and their uses.
 - a. The correct use of needle and thread.
 - b. How to fasten stitches securely.
 - c. How to cut thread correctly (e.g., with scissors, not teeth).

How to Make Samples and Functions of Stitches

Learning how to sew different types of stitches is very important in garment construction. Each stitch has a special job it does and knowing when and how to use them helps you create strong, neat, and beautiful clothing. Below are common stitches, their uses, and simple steps to make them.

Running Stitch

Function: This is one of the easiest stitches. It is used for sewing seams, gathering fabric, or for temporary holding.

How to Make It: Use your needle to go in and out of the fabric in a straight line. Try to keep the stitch lengths even so it looks neat.

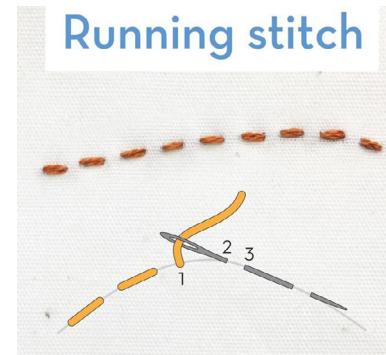


Figure 5.43: Running Stitch

Backstitch

Function: It is a strong stitch used for permanent seams that need to hold firmly.

How to Make It: Bring your needle back into the hole of the previous stitch, then bring it out a little ahead of the last stitch. This creates a tight and secure line of stitching.

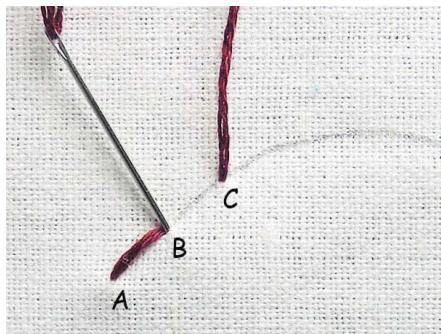


Figure 5.44: Backstitch

Basting (Tacking) Stitch

Function: This is a temporary stitch that helps to hold two or more pieces of fabric together before the final sewing.

How to Make It: Make long and loose stitches so that they are easy to remove after the permanent stitches are done.

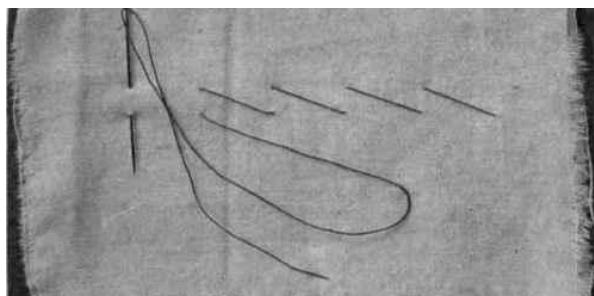


Figure 5.45: Basting (Tacking) Stitch

Overcast Stitch

Function: This stitch is used to finish off raw fabric edges and stop them from fraying.

How to Make It: Sew over the edge of the fabric using slanted loops. Make sure the stitches are close enough to cover the raw edge.

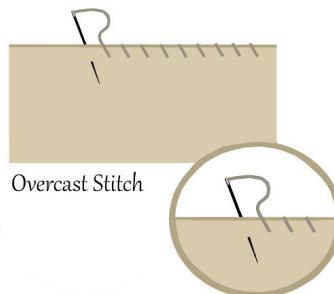


Figure 5.46: Overcast Stitch

Blanket Stitch

Function: This stitch decorates the edge of fabric and also stops it from fraying.

How to Make It: Make evenly spaced loops along the edge of the fabric. The thread forms a line across the edge that looks like a “blanket” border.

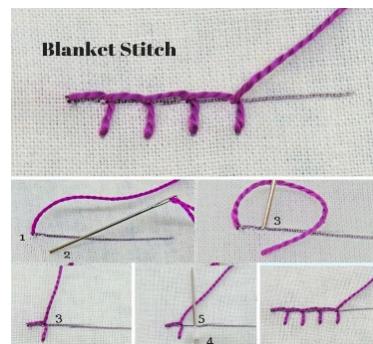


Figure 5.47: Blanket Stitch

Chain Stitch

Function: This is a decorative stitch often used in embroidery.

How to Make It: Bring the needle up, then down near the same hole, catching the thread underneath to make a loop. Continue linking loops together so they look like a chain.

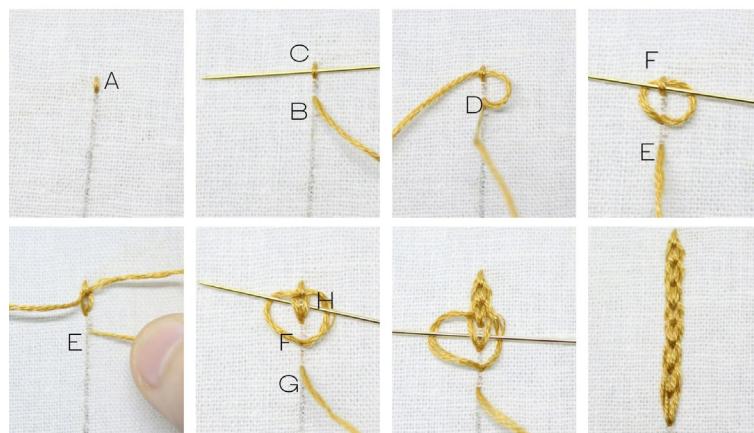


Figure 5.48: Chain Stitch

Tailor's Tacking

Function: This stitch helps transfer pattern markings (like darts or lines) from the pattern paper to both layers of the fabric.

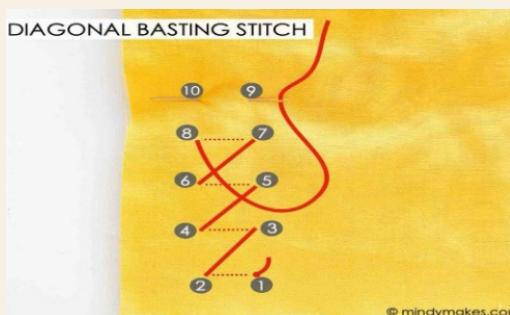
How to Make It: Use a double thread to make loose loops through both layers of fabric. Then gently pull the layers apart and cut between the loops, leaving short threads (tufts) on each side.



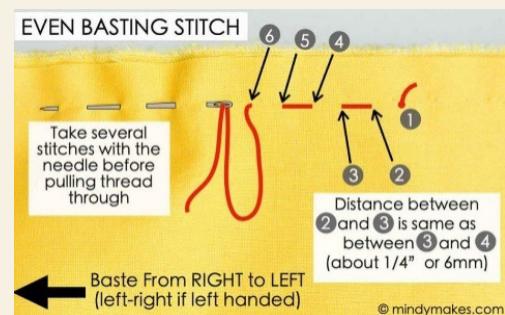
Figure 5.49: Tailor's Tacking

Activity 5.11 Practising temporary stitches (Making a stitch sampler)

1. Form a group of 3-5 members.
2. Gather a needle, thread and a small piece of plain fabric for each group member.
3. Recall what you know about temporary stitches (e.g., holding fabric before sewing).
4. Practise the following stitches on the fabric.
 - a. Diagonal tacking
 - b. Even tacking
 - c. Long and short tacking



Diagonal tacking



Even tacking

5. Everyone should try all stitches and help one another if needed.
6. Share the final results with your group and make suggestions for improvement where appropriate.
7. Display your final work for your classmates to view. Walk around the room to view others' work.

Note: When diagonal stitches are made longer, they act as long tacking. Used when fabric will only be held briefly, making removal easy. When diagonal stitches are made shorter, they serve as short tacking. Stronger and more secure, useful when fabric pieces need to stay in place longer before stitching.

Make Samples of Stitches

In sewing, stitches are important for joining fabrics, decorating garments, and finishing edges neatly. Each stitch has a specific use, and knowing how to make them helps improve the quality and appearance of your garment

Faggotting Stitch

Description: This is a decorative hand stitch used to join two folded fabric edges with a little space in between. It creates an attractive openwork effect.

Use: Faggotting is often used in fine sewing, such as lingerie, blouses, or traditional dresses, to achieve a delicate and elegant look.

How to Sew: Place two folded edges of fabric slightly apart. Use a needle and thread to stitch from one fold to the other in a crisscross (X-shape) or figure-eight motion. The space between gives it a lace-like finish.

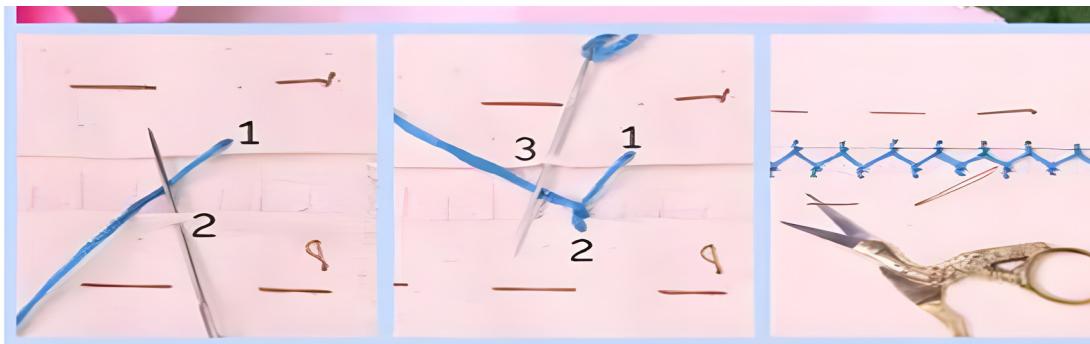


Figure 5.52: Faggotting stitches

Slip Stitch

Description: A fine hand stitch that is almost invisible on the outside of a garment.

Use: Slip stitch is used for hemming skirts or trousers and for neatly closing small openings, especially in lined garments.

How to Sew: Insert the needle into the fold of the hem, then catch a tiny thread from the main garment. Repeat this process to make tiny, hidden stitches that hold the hem in place without showing outside.



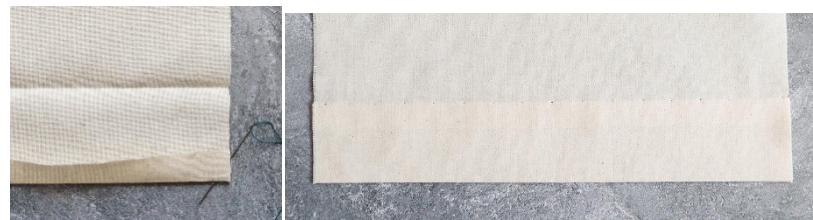


Figure 5.53: Slip stitch

Oversewing stitch (Overcast stitch)

Description: This is a looped stitch made along the edge of fabric to prevent it from fraying.

Use: It is useful for finishing raw edges in hand-sewn garments where a machine is not used.

How to Sew: Bring your needle over the fabric edge and insert it a short distance along. Keep making loops that go over the edge in even spacing until the edge is fully covered. Refer to **Figure 5.54**

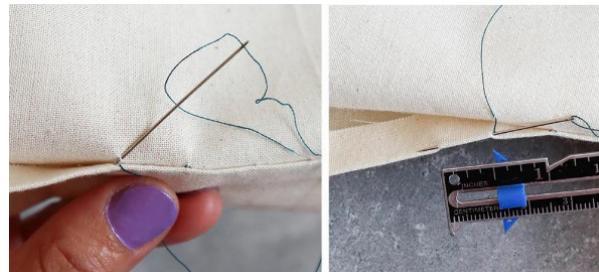


Figure 5.54: Oversewing stitch (Overcast stitch)

Buttonhole stitch

Description: A strong and close stitch made around the edge of a buttonhole to make it neat and long-lasting.

Use: This stitch is used when making buttonholes on shirts, skirts, or jackets to stop the fabric from tearing.

How to Sew: Sew closely packed stitches around the edge of the buttonhole. Each stitch should form a tiny loop or knot at the edge to stop it from fraying with use.

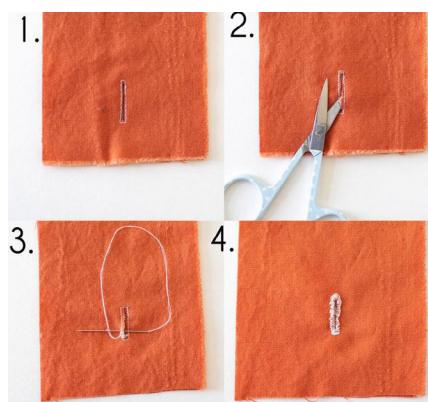


Figure 5.55: Buttonhole stitch

Herringbone Stitch

Description: A decorative stitch that looks like a row of crossed lines or zigzags.

Use: Used in hems or as a decorative feature in smocking, embroidery, or on the wrong side of garments.

How to Sew: Stitch diagonally across the fabric in one direction, then stitch back in the opposite direction. Each new stitch crosses the old one, forming a “V” or X pattern.

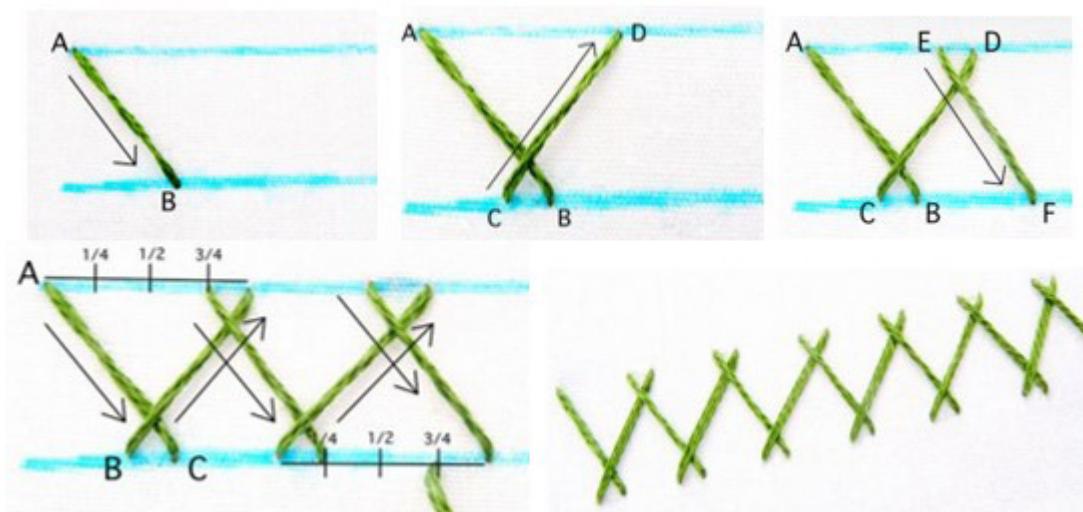


Figure 5.57: Herringbone stitch

Hemming Stitch

Description: A slanted stitch used to attach a hem to the garment in a nearly invisible way.

Use: It helps to hold hems in place without leaving visible stitches on the outside.

How to Sew: Take a small stitch from the garment, then a stitch through the folded edge of the hem. Continue this pattern using small diagonal stitches.

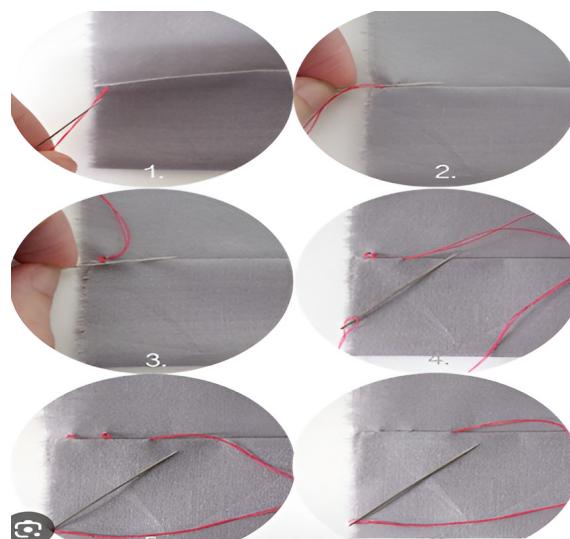


Figure 5.58: Hemming stitch

Neatening Stitch (Edge Finish Stitch)

Description: These are stitches used to tidy up raw fabric edges and stop them from fraying or unravelling.

Use: They help make the inside of garments neat and increase the garment's durability.

How to Sew: You can use hand stitches like overcasting or machine stitches like zigzag. These stitches go along the fabric edge and hold the threads in place.

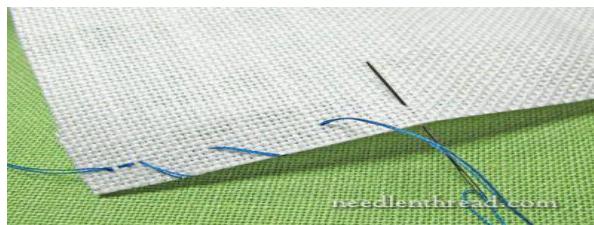


Figure 5.59: Neatening stitch (Edge finish stitch)

Activity 5.12 Making Samples of Stitches

Recap: Steps for Marking Stitches

1. Form a group of 3-5 members.
2. Before making permanent stitches on **graybaft fabric**, remember these steps:
 - a. Gather sewing tools (needle, thread, graybaft fabric, chalk/pencil) for each team member to use.
 - b. Use chalk/pencil to mark straight lines or sections on your graybaft fabric.
 - c. Label each section with the stitch name.
 - d. Sew neatly along the marked lines, keeping stitches even.
 - e. Review your work and correct any mistakes.



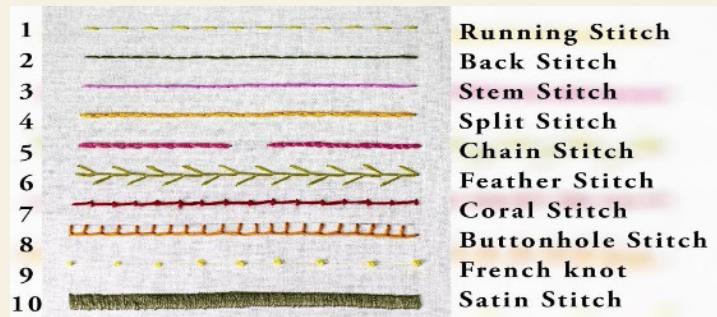
Marking stitches

3. On **pieces of graybaft fabric**, practise at least three hand stitches (e.g., chain, satin, blanket).
 - a. If available, add one machine stitch on the graybaft fabric. If not, draw and label it in your notebook.

b. Mount your stitched graybaft samples neatly on cardboard or paper.

4. Label each stitch clearly.
5. Write where it is mostly used (e.g., blanket stitch → finishing edges).

Note: Refer to the stitch sampler below for guidance.



Stitch sampler

6. Everyone should try all stitches and help one another if needed.
7. Share the final results with your group and make suggestions for improvement where appropriate.
8. Display your final work for your classmates to view. Walk around the room to view others work.

IDENTIFICATION AND CONSTRUCTION OF SEAMS IN GARMENT MAKING

Concept of Seams

A seam is the line where two or more pieces of fabric are joined together by stitching. Seams are very important in making clothes because they hold the garment together and give it shape. Seams can also be decorative and make clothes look neat or stylish.

Table 5.28: Types of seams used in garment construction

S/N	Type of Seam	Function / Use
1.	Plain seam	<p>The most common seam. It joins two fabric pieces neatly edge to edge.</p> <p>Example of Application: Side seams of shirts, skirts, and trousers.</p>
2.	French seam	<p>A neat seam with raw edges enclosed, best for lightweight and see-through fabrics.</p> <p>Example of Application: Seams on blouses, dresses, and children's clothes.</p>

3.	Flat-felled seam	A strong seam that lies flat and is very durable. Example of Application: Inner leg seams of jeans, seams on school uniforms.
4.	Double-stitched seam	Two lines of stitching give extra strength where needed. Example of Application: Underarm seams of shirts, back seams of trousers.
5.	Lapped seam	One fabric piece overlaps the other. Used for strong or thick materials. Example of Application: Seams in leather jackets, denim wear, or overalls.
6.	Bound seam	Raw edges are enclosed with a binding (like bias tape). Decorative as well. Example of Application: Inside seams of unlined coats or jackets, armholes.
7.	Zigzag seam	A stretchy seam that allows fabric to expand. Example of Application: Seams in T-shirts, dancewear, and stretchy knit fabrics.
8.	Overlocked seam	Uses a machine to sew and Neaten edges quickly. Example of Application: Seams in factory-made dresses, shirts, and trousers.

Groups of Seams

Seams are grouped based on how they appear on the garment

1. **Conspicuous Seams:** These seams are visible on the outside and are often used to decorate the garment.

Examples

- a. Flat-felled seam on the outside of denim jeans
- b. Lapped seam on designer tops or jackets

2. **Inconspicuous Seams:** These seams are hidden and give a neat finish to the garment.

Examples

- a. French seam in a blouse or lightweight dress
- b. Plain seam on the inside of a skirt or shirt

FACTORS THAT AFFECT THE CHOICE OF SEAMS

Type of Fabric

The type of fabric being used is very important when choosing a seam. Thin and light fabrics like chiffon or organza need seams that will not show through or tear easily. A French seam is good for such fabrics because it hides the raw edges and looks neat. Thick or heavy fabrics like denim or canvas need strong seams that can hold them well. A flat-felled seam is best for these materials because it is very strong and prevents fraying. *Example:* A chiffon blouse may need a French seam, while denim trousers may require a flat-felled seam.

Garment Style

Some garments are designed to look fancy or stylish. In such cases, the seam should not only hold the fabric together but also add to the beauty of the garment. Decorative seams, like bound seams, can make clothes more attractive.

Example: A party dress may use a bound seam with colourful tape to create a stylish finish.

Strength Needed

Certain parts of a garment, like the underarms or the crotch of trousers, experience a lot of pulling and stretching. These areas need very strong seams that will not tear easily. A double-stitched seam is often used because it gives extra strength.

Example: The crotch area of trousers may use a double-stitched seam to prevent tearing.

Appearance

Sometimes, the way a seam looks on the outside of a garment is very important. A well-chosen seam can make the garment look more attractive and professional. Seams like lapped seams or topstitched seams can be used for style.

Example: A designer top may use a lapped seam to give a neat and fashionable appearance.

Ease of Construction

Some seams are more difficult to sew than others. Beginners or those sewing at home may prefer to use simple seams that are easier to make. A plain seam is quick and easy to sew and is good for simple projects.

Example: A home-sewn apron may use a plain seam because it is easy to make and still neat.

Importance of Seams in Clothing Construction

- Joining Fabric Pieces:** Seams are important for joining pieces of fabric to make a complete garment. Without seams, the fabric pieces will not stay together, and the garment will not be whole. For example, Joining the front and back of a shirt.
- Durability and Strength:** Seams keep garments strong and long-lasting.
- Shape and Fit:** Seams help to shape the fabric to fit the body well. For example, darts and side seams in a fitted dress.
- Finishing Edges:** Seams hide raw edges and make garments look clean inside. For example, a French seam inside a blouse hides the raw edges of the fabric.
- Aesthetic Appeal:** Some seams are used to add beauty to clothes. For example, a bound seam on the edge of a kimono sleeve.
- Ease of Alterations:** Garments can be resized or reshaped by working on the seams. Seams make it easier to adjust or alter a garment for a better fit.
- Support and Functionality:** Seams can also provide support in certain areas of the garment, such as in the construction of pockets, zippers, and armholes. For example, inserting a zip into the side seam of a dress or attaching a shirt sleeve.

Activity 5.13 Identification of seams

- Form a group of 4-6 members.
- In your group, discuss and answer the following question:
 - What is a seam?

In your answer, include key words such as '**two or more pieces of fabric**' '**'securely joined'**', '**'with permanent stitches'**'.

- Identify examples of different seam types (e.g., plain seam with running/backstitches, French seam, run and fell, overlaid seam).

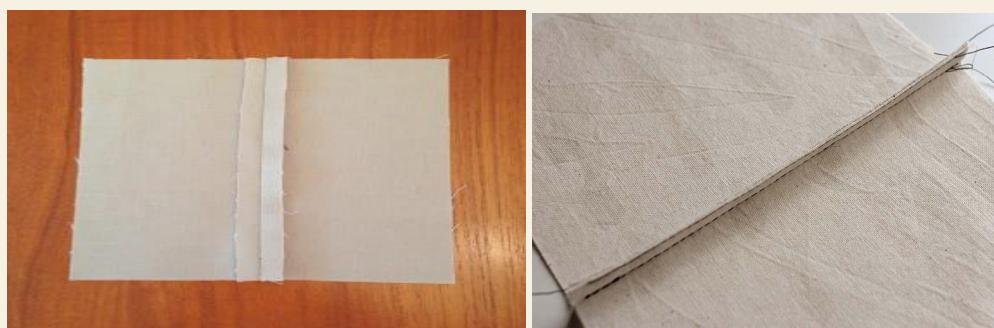


Figure 5.61: Samples of Plain and French seam

Note: A plain seam and a French seam are shown in the pictures below.

4. Identify two **seams on your school uniform and the stitches used.**

Example: French seam → neat inside finish, often stitched with backstitch.

Display your answers using the table below.

Seams

Seam	Purpose	Example clothing	Stitch used

5. What are the advantages/pros and disadvantages/cons of each type of seam identified?

6. Share your groups' ideas with your classmates.

Activity 5.14 Construction of seams in garment making

1. Visit a sewing shop: observe at least two seams.
2. Ask the seamstress why she chose those seams and which stitches she used.
3. Back in class, share (orally) what you observed with your friends.
4. In your notebooks, complete the table below based on what you observed at the sewing shop.

Construction of seams

Clothing article	Seam type	Stitch used	Reason for choice

Note: Real-life seamstresses combine stitches and seams for strength, neatness and design

MAKING SAMPLES OF SELECTED SEAMS

General Rules for Making Seams

1. Choose the right fabric

Different seam types work better with different fabrics. Some seams are good for light fabrics like cotton, while others are better for thick fabrics like jeans. Always match the seam to the fabric you are using.

2. Use the right seam allowance

Seam allowance is the space between the stitching and the edge of the fabric. It is usually about $\frac{1}{4}$ to $\frac{1}{2}$ inch. Follow the correct amount for your project or pattern.

3. Pin fabric properly

Before sewing, pin your fabric pieces together neatly. This helps the edges stay in place and makes your stitching straight.

4. Press as you sew

Use an iron to press the seam flat after sewing. This helps the seam lie neatly and makes your work look neat and professional.

5. Finish raw edges

The cut edges of fabric (raw edges) can fray. Use a zigzag stitch, overlocking or binding to stop this from happening.

6. Keep stitching even.

Sew slowly and carefully to make sure your stitches are the same length and neat. This helps your seam to be strong and look good.

7. Use the right thread tension.

Adjust the sewing machine so the thread is not too tight or too loose. This helps your stitches to be smooth and even.

Samples of Selected Seams

Plain Seam

This is the most basic seam used in garment construction. It joins two pieces of fabric together.

Materials Needed: Two pieces of fabric, a sewing machine, pins, scissors, iron

Steps to Make a Plain Seam

1. Place the two fabric pieces right sides together.
2. Pin along the edges to hold them in place.
3. Sew along the edge using a straight stitch (usually $\frac{1}{4}$ inch from the edge).
4. Finish the raw edges to prevent fraying.
5. Press the seam flat — either open or to one side.





Figure 5.63: Steps to make a plain seam

Types of Plain Seam

1. Open Plain Seam

A simple seam where the seam allowances are pressed open after sewing.

Good for light fabrics like cotton and in shirts, dresses, or blouses where a flat look is needed.

Steps

- Sew fabric right sides together.
- Press the seam open so both edges lie flat.



Figure 5.64: Open plain seam

2. Closed plain seam

Like the open plain seam, but the seam allowances are pressed to one side. Best for thicker fabrics like jackets or trousers, where a stronger seam is needed.

Steps

- Sew fabric right sides together.
- Press both seam allowances to one side.



Figure 5.65: Closed plain seam

3. Double-stitched seam

This seam uses two rows of stitches to make it stronger.

Materials needed: Fabric, pins, scissors, sewing machine

Steps:

1. Place fabric pieces right sides together and pin.
2. Sew the first seam ($\frac{1}{4}$ inch from the edge).
3. Sew a second line next to the first seam, closer to the edge.
4. Press the seam open or to one side.

Where it is used:

Used in areas that need extra strength, like underarm seams or seat of trousers.

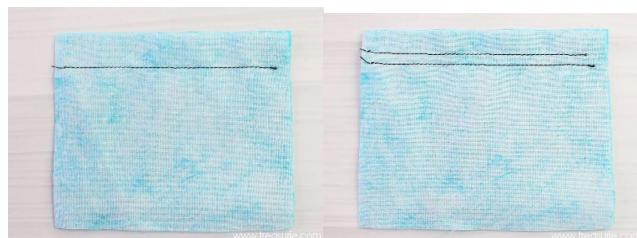


Figure 5.66: Double-stitched seam

4. Flat-felled seam

This seam hides the raw edges completely and is very strong and neat.

Materials Needed: Fabric, pins, scissors, sewing machine, and iron.

Steps

1. Pin fabric pieces with right sides together.
2. Sew a straight stitch ($\frac{1}{4}$ inch seam allowance).
3. Trim one of the seam allowances to half its size.
4. Fold the longer seam over the trimmed one to hide the raw edge.
5. Sew down the folded edge to secure.
6. Press flat with an iron.

Where it is used: Common in jeans, shirts, and sportswear, where strong and neat seams are needed.





Figure 5.67: Flat-Felled Seam

Activity 5.15 Making Seam Samples

1. Form groups of 3 members.
2. In your group, discuss the general rules for making seams and write these in your notebook. For example, the thread used should be suitable for the fabric type.
3. Share your rules with your classmates to come up with one rules list.

Create seams using the rules list as a guide.

Creating your seams

- Use Graybaft fabric pieces.
- Mark 1.5 cm seam allowance with chalk.

4. In your group, sew the following samples.
 - a. *Plain seam*: join two pieces together.
 - b. *French seam*: sew twice to cover raw edges.
 - c. *Overlaid seam*: place one fabric edge on top of another and stitch.

Note: Each group member should sew at least one seam type.

5. After sewing, check these.
 - a. Which seam is the neatest?
 - b. Which feels the strongest?
6. Record your answers in a table as shown below.

Samples of seams

Type of seam	Neat or untidy	Strong or weak	Example of use
Plain seam			
French seam			
Overlaid seam			

Activity 5.16 Seam Samples Project

1. In your group from the previous activity.
2. Use your work to create a seams sample display.
3. Check each other's work for neatness and strength.
4. Mount all samples on a manila card or fabric board.
5. Label them clearly (e.g., Plain Seam, French Seam).
6. Display your project for your class to view.
7. Walk around to view other groups' work. Ask questions and provide friendly feedback as you walk around.

MAKING SAMPLES OF SELECTED SEAMS

French seam

This is a neat and strong seam that hides raw edges inside. It is great for lightweight fabrics like chiffon or silk.

Materials needed: Two pieces of fabric, a sewing machine, pins, and scissors.

Steps to make it

1. Place the two fabric pieces with the **wrong sides facing** each other and pin them.
2. Sew a straight line along the edge using a **1/4-inch seam allowance**.
3. Trim the seam to make it **narrower (about 1/8 inch)**.
4. Open the fabric and press the seam flat.
5. Now fold the fabric with the **right sides together** and pin.
6. Sew another straight line using a **3/8-inch seam allowance** to hide the raw edges.
7. Press the seam flat again for a clean finish.

Use: Good for delicate garments like blouses and nightwear.



Figure 5.68: French seam

Tacked Seam

This is a basic seam held temporarily or permanently with long, loose stitches called tacking.

How to make It

1. Place two fabric pieces **right sides together**.
2. Sew a plain seam using a **1.5 cm seam allowance**.
3. Use **long running stitches** (by hand or machine) to hold the seam in place.
4. Press the seam open or to one side.

Use: Helpful for trying out the fit before final sewing. Common in light dresses or temporary fittings.



Figure 5.69: Tacked seam

Welt Seam

This seam is strong and flat, with one edge folded over and stitched down.

How to make it

1. Place two fabric pieces right sides together.
2. Sew a plain seam with a 1.5 cm seam allowance.
3. Trim one of the seam allowances to half its size.
4. Fold the longer one over the trimmed one and press.
5. Stitch along the folded edge through all layers.

Use: Perfect for strong garments like trousers, uniforms, and work clothes.





Figure 5.70: Welt seam

Overlaid Seam

This is a seam where one piece of fabric is folded and stitched over another. It is often used to decorate clothes.

How to make it

1. Fold one edge of the fabric inward by 1 cm.
2. Place it on top of another fabric piece, overlapping by 1–1.5 cm.
3. Pin or baste to hold it in place.
4. Sew along the folded edge.

Use: Seen in sportswear, leather garments, or decorative fashion pieces.

Counter Seam

This seam has two visible topstitches, making it strong and good-looking from both sides.

How to make it

1. Sew a plain seam using a 1.5 cm seam allowance.
2. Press each seam allowance to a different side.
3. Stitch along both sides of the seam to keep it flat.

Use: Ideal for reversible clothing or stylish outerwear.



Figure 5.71: Counter seam

Activity 5.17 Group Seam Project

1. Form a group of 3-5 members. For this activity share roles within your group: cutter, sewer, recorder, presenter.
2. Each person should make at least **one** sample of a seam different from the one made in the previous lesson.
3. As a group do the following tasks.
 - a. Select the two neatest seams and explain why these were chosen.
 - b. Mount our samples neatly on cardboard/manila sheet.

Activity 5.18 Class Display and Appraisal

1. Working in your group from the previous activity, display your samples of seams on a table or wall.
2. Walk around and look at other groups' work.
3. Pick one seam you admire.
4. Back in your group, discuss the following points.
 - a. Two strengths you saw.
 - b. One way your group can improve.
5. Record your observation using the appraisal chart below.

Observation chart

Criteria	Rating (1-5)	Comments
Neatness		
Strength		
Creativity		

6. Reflect individually on the following questions.
 - a. What went well?
 - b. What would you do differently to improve your work in the future?

THE CONCEPT OF EDGE FINISHES

Edge finishes are essential sewing techniques applied to the raw edges of fabric to create a polished, durable garment. These processes are the final step in garment construction, ensuring your creation looks professional and lasts through many wears and washes. Without proper edge finishing, fabric edges would fray and unravel, weakening the garment's structure and appearance.

Importance of Edge Finishes

1. Prevents fraying

- a. Secures loose threads to stop fabric from unravelling over time.
- b. Example: A raw edge on a cotton skirt would quickly fray without a hem.

2. Enhances durability

- a. Reinforces seams and edges, making the garment last longer.
- b. Example: Double-stitched binding on a quilt edge prevents wear and tear.

3. Improves aesthetics

- a. Gives a neat, professional finish to visible edges (like necklines and hems).
- b. Example: A well-sewn blind hem on dress pants looks clean and polished.

4. Provides comfort

- a. Prevents scratchy or rough edges from irritating the skin.
- b. Example: A bias-bound armhole feels smoother than an unfinished edge.

5. Strengthens seams

- a. Reinforces high-stress areas (armholes, crotch seams) to prevent tearing.
- b. Example: Facing on a jacket's front placket keeps the edges from stretching out.

Types of Edge Finishes

Facing

1. **Description:** A fabric piece sewn to the inside of a garment to conceal raw edges.
2. **Use:** Necklines, armholes, waistbands, and button plackets.
3. **Types**
 - a. Shaped Facing – Cut to match curved edges (e.g., round necklines).
 - b. Extended Facing – Part of the garment folded inward (common in blazers).
 - c. Bias Facing – Made from stretchy bias-cut strips for flexibility.

Binding

1. **Description:** A fabric strip (often bias-cut) wrapped around the edge for a clean finish.
2. **Use:** Necklines, armholes, quilts, and aprons.
3. **Types**
 - a. Single-Fold Binding – Lightweight, for delicate fabrics.
 - b. Double-Fold Binding – More durable, ideal for thick fabrics like denim.
 - c. Bias Binding – Flexible, perfect for curved edges.

Hem

1. **Description:** A folded and stitched edge at the bottom of a garment.
2. **Use:** Skirts, pants, sleeves, and dresses.
3. **Types**
 - a. Double-fold hem – Folded twice for durability (great for casual wear).
 - b. Rolled hem – Narrow and delicate (used on chiffon scarves).
 - c. Blind hem – Nearly invisible stitches (ideal for formal trousers).
 - d. Narrow hem – Tight, small fold for lightweight fabrics like silk.

Lace trim

1. **Description:** Decorative lace sewn along the edge for a delicate touch.
2. **Use:** Lingerie, blouses, children's clothing, and home décor.
3. **Application:** Can be stitched over the edge or sandwiched between fabric layers.

Scalloping with embroidery

1. **Description:** A decorative edge where fabric is cut into curves and secured with embroidery.
2. **Use:** Handkerchiefs, table linens, and lightweight blouses.
3. **How it is done**
 - a. Stitch scallop designs along the edge.
 - b. Trim excess fabric after embroidery.

Facing & Collars

1. **Description:** Used to finish and shape necklines or add style details.
2. **Facing** – Reinforces necklines and armholes from the inside.
3. **Collars** – A folded fabric piece that finishes the neckline.

4. Types of Collars

- Peter Pan collar** – Rounded and flat (feminine styles).
- Mandarin collar** – Short, stand-up (Asian-inspired designs).
- Shirt collar** – Classic folded collar (dress shirts).

Examples of Edge Finishes



Scalloping



Frills

Dress shirt collar styles



Collar



Fringed edge



Attached lace



Bias binding



Hem



Facing

Figure 5.72: Samples of edge finishes

Activity 5.19 Handling Greybaft Fabric

- Form a group of 4-6 members.
- Take a piece of greybaft fabric with raw edges.
- Rub or pull gently at the edge.
 - What happens to the edge?
 - How does this affect strength and neatness?
- Compare your piece with samples or pictures of articles with finished edges. What is different?
- In your group, write a short definition of edge finishing from what you saw and felt (Include key words such as 'sewing processes' 'raw edges of articles' 'fraying').

6. Share your ideas and improve them together.
7. Complete this sentence: “Edge finishing is ...”
8. In your group, how many types of edges with different finishes can you think of? Copy the table below into your notebook and complete it as a group.

Type of Edge Finish	How is it made

Activity 5.20 Choosing the Best Edge Finish

1. Imagine you are sewing a graybaft school uniform.
2. From a range of samples or pictures of articles with finished edges, choose one edge finish that will meet the following requirements.
 - a. Stop fraying.
 - b. Make the uniform strong.
 - c. Look neat.
3. Explain why this finish is best for graybaft fabric.
4. Share your ideas with a partner.

STRENGTH AND APPEARANCE OF DIFFERENT EDGE FINISHES IN CLOTHING CONSTRUCTION

In sewing, edge finishes help to make the garment strong and neat. They stop the fabric from fraying and help the garment last longer. Below are some common edge finishes and their strengths and appearance.

Table 5.32: Strength and appearance of different edge finishes

1. **Overlocking (Serger Stitch)**
 - a. **Strength:** Very strong. It prevents the fabric edges from fraying and is ideal for clothes that will be washed or used frequently.
 - b. **Appearance:** Tidy, giving a professional look. It can be done using matching or different thread colours.

2. Pinking Shears

- a. **Strength:** Fairly strong. Not as strong as overlocking, but still helps reduce fraying. Best for light to medium-weight fabrics.
- b. **Appearance:** Leaves a zigzag or jagged edge. Looks simple and decorative, suitable for casual clothing.

3. Bias Binding

- a. **Strength:** Medium strength. It covers the fabric edge and makes it stronger, especially for light fabrics.
- b. **Appearance:** Very neat and can be used in a matching or different colour. Often used around necklines and armholes to look nice.

4. French Seam

- a. **Strength:** Strong and durable. The raw edges are hidden inside the seam, making the garment last longer.
- b. **Appearance:** Very clean and smart. Both the inside and outside of the garment look neat. Perfect for light or transparent fabrics.

5. Rolled Hem

- a. **Strength:** Medium strength. Keeps the edge neat, but not very strong for heavy use.
- b. **Appearance:** Thin and tidy. Looks nice on light fabrics like silk or chiffon, giving a soft and polished finish.

6. Hong Kong Finish

- a. **Strength:** Very strong. It is great for heavy fabrics like wool and denim.
- b. **Appearance:** The edge is covered with a bias strip, giving a clean and professional finish. Often used in expensive garments.

7. Zigzag Stitch

- a. **Strength:** Fairly strong. Helps prevent fraying, though not as strong as overlocking.
- b. **Appearance:** Makes a wavy stitch along the edge. It is functional, but not as neat as bias binding or French seams.

Factors to Consider When Choosing An Edge Finish

Fabric Type

Choose an edge finish based on the fabric you are using. For example, soft and light fabrics like chiffon work best with French seams or rolled hems. Strong and heavy fabrics like denim need strong finishes like overlocking.

Purpose of the Garment

Think about how the garment will be used. If it is for everyday use, like school uniforms or sportswear, use a strong edge finish like serging or zigzag stitch. For special clothes like party dresses, you can use pretty finishes like rolled hems or binding.

1. Durability needed

If the garment will be worn and washed often, use edge finishes that last long, such as overlocking or a Hong Kong finish. They help the garment stay strong even after many washes.

2. Look or style

Some edge finishes also make the garment look beautiful. For example, bias binding and French seams give a smart, neat look. Pick an edge finish that matches the style you want.

3. Tools and skills available

Some edge finishes need special tools like an overlocker machine, while others like pinking shears or zigzag stitches can be done with basic tools. Choose the one that matches the sewing tools you have and what you can do.

Activity 5.21 Appearance and strength of garment edges

1. Observe the seams/edges on your school uniform, kaba, slit, smock or trousers.
2. Turn to a partner and say if the edges look **strong, weak, neat or untidy** (this is about finishes like zigzag, hemming, binding, or overcasting).
3. With a partner, decide: “Why do you think this type of edge finish was selected?”

(Clue: Think about fabric type, the kind of garment and how it is used, the shape of the edge and how to care for the garment).

4. Write two short sentences about your chosen edge finishes.

Activity 5.22 Pros and Cons of Edge Finishes

1. Form a group of 3-4 members.
2. Choose **two edge finishes** from the previous samples or pictures.
3. Complete an Advantages/Pros and Disadvantages/Cons Table for each edge finish.
4. Present your findings with a chart, drawing or oral explanation.
5. Listen respectfully and ask one question after each group’s presentation.

EXTENDED READING

- Forster, P. (2014). *Clothing and textiles*. Winmat Publishers Limited: Accra.
- Smith, J. (2019). *Textiles and their properties*. New York, NY: Textile Press. pp. 45-67.

Review Questions

1. List four categories of sewing tools and give one example under each category.
2. Explain why it is important to classify sewing tools and equipment according to their functions when preparing for sewing tasks.
3. A student needs to sew a basic skirt. Identify and justify the selection of tools from each category that would be most useful for completing the task efficiently.
4. Design a sewing toolkit for someone new to sewing. Include five different tools from different categories and explain the rationale for each choice, considering their functions, safety and frequency of use.
5. Identify three basic sewing tools and state their primary functions.
6. Match each sewing tool with its correct function.

Sewing tool	Function
Seam ripper	Protects fingers while hand sewing
Pinking shears	Neatly cuts fabric edges to prevent fraying
Thimble	Removes unwanted stitches

7. Explain how regular cleaning of sewing tools improves their lifespan and effectiveness.
8. Describe three ways poor maintenance of a sewing machine can affect garment construction.
9. Analyse the effects of poor handling of sharp tools like scissors or needles during a class project.
10. Akosua left her sewing tools scattered after class. Some became rusty and others got broken. How could this situation have been prevented?
11. What is the function of a manual or hand sewing machine? Name one type of project it is best suited for.
12. Match each sewing machine with its correct function

A. Manual/Hand sewing machine	i. Uses foot power to operate without electricity
B. Treadle sewing machine	ii. Uses electricity and can perform multiple automatic stitches
C. Electric sewing machine	iii. Portable and suitable for light repairs
D. Computerised sewing machine	iv. Needs programming and has a touch screen panel

13. How does a computerised sewing machine differ from a treadle sewing machine in terms of operation and use? In which sewing activities is each type more useful?
14. Describe two ways using the right type of sewing machine improves the quality and speed of sewing projects.
15. Compare an overlock machine and an electric sewing machine. How can each one be integrated into the construction of a school uniform for the best results?
16. You are designing a project for your class group to sew cushion covers. Which type of sewing machine(s) would you select and why?
17. List three sewing tools that can be seen in the sewing room.
18. Identify two functions of measuring tools in garment construction.
19. Explain how the use of cutting tools differs from the use of marking tools in sewing.
20. Describe how the absence of a specific tool (e.g., scissors or a tape measure) could affect the sewing process.
21. Imagine you are preparing a sewing starter kit for a beginner. Select at least five tools and justify why each one is essential for a successful garment project.
22. What is a 'stitch' in sewing?
23. Explain why different types of stitches are used in sewing. Give at least three reasons.
24. Which basic stitch would you choose to sew a hemline on a skirt, and why? Explain your choice in 2–3 sentences.
25. Ama wants to sew the side seams of a cotton dress and also hem the neckline neatly. Choose two appropriate stitches for each part and explain how they are suitable.
26. Design a simple item like a handkerchief or a pillowcase.
 - a. Draw it and label the areas where stitches will be applied.
 - b. Explain which types of stitches you would use for each part and how they will improve both durability and appearance.
27. List four types of stitches and their primary functions.
28. Compare and contrast decorative stitches and reinforcement stitches, providing one example of each.
29. A customer wants to sew a durable backpack. Recommend two types of stitches that would be most suitable and explain why.

30. Design a stitching plan for a denim jacket that includes at least three different stitch types (e.g., construction, decorative, reinforcement). Justify your choices based on durability, function, and aesthetics.

31. What is the main purpose of tailor's tacking in garment construction?

32. Mention two differences between permanent stitches and temporary stitches.

33. Choose a suitable stitch for neatening the raw edges of a cotton fabric and explain why it is the best choice.

34. A student wants to sew a table napkin. Which stitches would you advise them to use for:

a. Construction

b. Reinforcement

c. Decoration

Explain your reasons.

35. What is the purpose of the Buttonhole Stitch in garment construction?

36. Why is the Hemming Stitch a good choice for finishing the bottom edge of a skirt?

37. Explain the difference between a tacking stitch and a permanent hand stitch. Give one example of each.

38. You are sewing a lightweight blouse by hand. Which stitches would you choose to hem, finish edges and close the lining? Explain your choices.

39. A classmate is working on a sampler that includes running stitch, backstitch, hemming stitch, and blanket stitch. She wants to know which stitch is best for decoration and which one is best for strength. What would you advise and why?

40. Create a small sewing sampler or item (like a pin cushion or small pouch) using at least four different hand stitches. Reflect on how your stitch choices affected the neatness, strength, and appearance of the item.

41. List three basic types of seams used in garment construction.

42. State two main differences between a plain seam and other seam types.

43. Explain the steps involved in making a plain seam and how it functions in garment construction.

44. Create a sewing plan for a delicate fabric garment. Select the most suitable seam type, explain your choice, and justify how it improves both durability and appearance of the garment.

45. What is a seam in garment construction?

46. How do seams help improve the strength and durability of a garment?
47. Explain how seam type can affect the way a garment fits or looks on the body.
48. When designing a sportswear outfit, what three factors would you consider in choosing the best seam type?
49. Why would a flat-felled seam be more suitable for a pair of jeans than a plain seam?
50. Describe how a welt seam is formed and state where it is best used in garment construction.
51. What is the purpose of an overlaid seam? Give one example of a garment where it might be used.
52. Explain what a counter seam is. In which part of a garment would this seam be most suitable, and why?
53. You are designing a jacket made of heavy fabric. Which of these seams (tacked, welt, overlaid, counter) would you choose for the main body and why?
54. Compare the uses of a welt seam and an overlaid seam. In what situations would one be better than the other?
55. What are edge finishes, and why are they important in garment construction?
56. Explain two reasons why edge finishes help prevent fraying and improve the overall quality of a garment.
57. How do different types of edge finishes (such as pinked edges, double-stitched, bound, or overlocked) affect both the strength and look of a garment? Give two examples.
58. A fashion designer is creating a light summer blouse using chiffon and a work apron using denim. Which edge finish would be most appropriate for each fabric and why?
59. Create a table showing four types of edge finishes, their suitable fabric types, and one garment where each can be used effectively.
60. Explain how the type of fabric used affects the choice of edge finish in garment construction.
61. Compare the strengths and weaknesses of two different edge finishes, such as zigzag stitch and overlock stitch, in terms of garment durability. Why might one be preferred for a particular clothing type?
62. When designing a garment meant for frequent wear and movement, such as sportswear, which edge finish would be most appropriate? Explain your choice using factors like fabric type, durability, and comfort.

SECTION

6

TECHNIQUES OF FULLNESS, OPENINGS AND FASTENINGS IN FASHION DESIGN AND GARMENT CONSTRUCTION



CLOTHING AND TEXTILES PRODUCTION TECHNOLOGY

Fashion Design and Garment Construction Technology

Introduction

In garment construction, making clothes fit well and look attractive involves more than just sewing fabric together. This section focuses on key sewing techniques that help shape, open, and fasten garments neatly and securely. You will explore how **fullness** is used to give garments extra space and shape through gathers, pleats, darts, and tucks. You will also learn about **garment openings** such as slashes, plackets, and fly fronts, and how they help in wearing and removing clothing easily. The section further teaches the different **fasteners** like buttons, zippers, Velcro, snaps, hooks and eyes and how to attach them properly. You will also learn to **evaluate fasteners** for strength and beauty, to match the garment's function and design. These skills are important for creating clothes that are not only comfortable and durable but also fashionable. By the end of this section, you will be able to make, apply, and assess these garment features with care and confidence.

KEY IDEAS

- Fullness improves the way clothes fit the body and adds beauty to their appearance. It allows for ease of movement and gives garments a better shape.
- Fullness is added to garments using methods like gathers, pleats, darts, and tucks. These techniques give extra space, shape, and style to clothes, making them more comfortable and attractive to wear.
- Garment openings are spaces left in clothes to help people wear and remove them easily. They are often finished with facings or fasteners to make them neat.
- Making a good garment opening involves cutting, reinforcing, finishing edges, and attaching fasteners neatly. This ensures that the opening is strong and attractive.
- Openings such as slashes, plackets, and fly fronts are used in different garments. Each type is chosen depending on the design and where the opening is needed.
- Some common methods of adding fullness include gathering fabric, folding pleats, sewing darts, and making tucks. Each technique is used based on the style and part of the garment.

ARRANGEMENT OF FULLNESS IN CLOTHING CONSTRUCTION

Fullness in Clothing

Fullness in clothing is like giving your garment room to breathe and move. It means adding extra fabric to certain parts of the outfit to make it **more comfortable, stylish, and easy to wear**. Whether it is a flowing skirt or puffed sleeves, fullness helps clothes fit better, allows movement, and brings shape, beauty, and flair to the design. The way fullness is added depends on the **fabric type, body shape, garment style**, and **why the garment is being made**.

Purpose of fullness in garment construction

Fullness is added to garments for the following reasons.

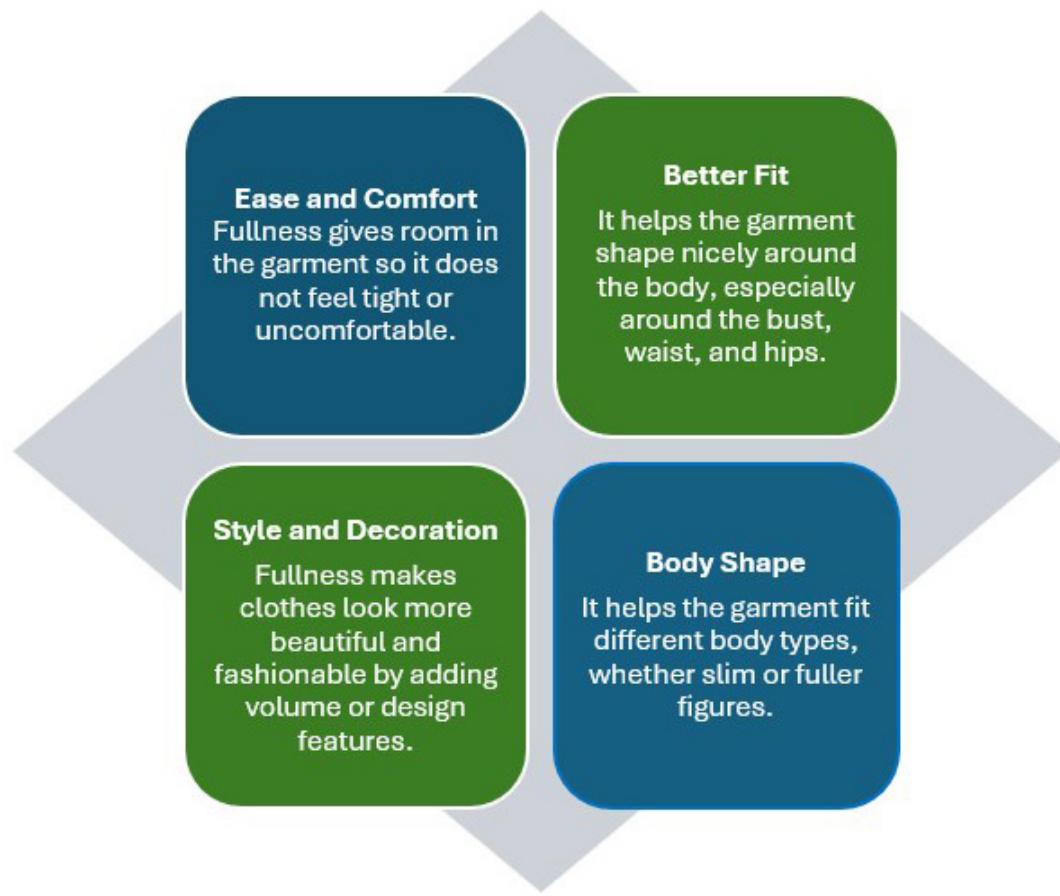


Figure 6.1: Purpose of fullness in garment construction

Factors to Consider When Choosing Fullness Methods

Fabric Type

Different fabrics behave differently when fullness is added

1. Lightweight fabrics like chiffon and organza are soft and flowy, so they work best with gathers, Shirring, and smocking, which create soft folds.
2. Medium to heavy fabrics like cotton, wool, and denim are thicker, so they look better with pleats, darts, or tucks, which give structure.
3. The way the fabric hangs (drape) and its thickness will affect how the fullness looks.

Body shape (Figure type)

Fullness can make some body areas stand out or look smaller

1. For curvy or fuller body types, too much gathering around the waist or hips can add bulk, which may not be flattering.
2. Instead, pleats and darts can be used to shape the garment nicely and fit the body well, especially around the bust or waist.

Purpose of the Garment

Think about why the garment is being made

1. Every day or work clothes, like school uniforms or sportswear, need only a small amount of fullness to make movement easy and ensure comfort.
2. Fashionable or party clothes can include more decorative fullness using godets, tucks, or smocking to make the design more eye-catching.

Style of the Garment

The design or look of the clothing helps decide how to arrange fullness.

1. Soft, flowing styles use gathers, Shirring, and smocking to create a relaxed look.
2. Neat and formal styles use pleats and darts for a clean, smart appearance.
3. The kind of look you want, modern, romantic, or classic, will help you choose the right fullness method.

Placement of Fullness in A Garment

Fullness can be added to different parts of a garment depending on the style and design. Common areas include the following listed below.

1. Waist – for skirts and dresses
2. Shoulders – in blouses and dresses
3. Cuffs – to add puffiness to sleeves
4. Bust – for shaping and fit
5. Hips and Back – for comfort or design

Methods of Arranging Fullness in Clothing Construction

Gathers

- a. Created by sewing two rows of long (loose) stitches and pulling the threads to form small, soft folds.
- b. Common in skirts, sleeves, and yokes to give a soft, flowing look.

Pleats

- a. Neat folds of fabric, stitched at the top and left hanging below.
- b. Come in different types: knife pleats (all facing one way), box pleats (folds meet in the middle), and inverted pleats (folds go outward).
- c. Used in school uniforms, skirts, and blouses.

Darts

- a. Triangular folds of fabric sewn to help shape the garment to the body's curves, especially around the bust, waist, and hips.
- b. Used in dresses, blouses, and jackets.

Tucks

- a. Narrow folds of fabric sewn in place. They can be decorative or help control fullness.
- b. Common types include pin tucks (very small) and spaced tucks (wider apart).
- c. Used in blouses, shirts, and children's clothes.

Shirring

- a. A type of gathering done in several rows close together. It may use elastic thread to allow for stretch.
- b. Seen in bodices, sleeves, and waist areas for a fitted but stretchy look.

Godets

- a. Triangle-shaped fabric pieces added into seams or slashes.

- b.** They add flare and volume to skirts or dresses, making them fuller and more decorative.

Smocking

- a.** A type of hand stitching that gathers fabric into small, even folds, usually for decoration.
- b.** Common in traditional children's clothes and peasant-style blouses.

Other methods of arranging fullness

- a. Easing:** Slight gathering used to join different parts of a garment smoothly, such as sleeves to armholes.
- b. Casing:** A folded-over section of fabric that holds elastic or a drawstring to create gentle fullness.
- c. Ruffles/Frills:** Strips of fabric that are gathered and sewn onto the garment for decoration.
- d. Ruching:** Gathering fabric in a way that creates a rippled effect, often seen in decorative bodices



Figure 6.3: Examples of methods of arranging fullness

Activity 6.1 Finding Fullness Around You

1. Form a group of 4-6 members
2. Look around your environment. Select any of the following articles: Pleated school uniform, gathered curtains, smocked sleeves, elastic waistbands.
3. Discuss the following questions.
 - a. Where do you see fabric pulled together or arranged in lines?
 - b. How does it change the look or fit of the garment or item?
 - c. Why do you think fullness is used in these cases?

Activity 6.2 Demonstrating with Cloth

1. Form a group of 4-6 members.
2. Surf the internet, look in magazines, on posters, in videos, etc, to identify different types of fullness. Write these in your notebook alongside what type of garment you found them in.
3. Take a piece of cloth or a graybaft strip.
4. Hold one edge and push it together with your fingers.
5. Observe the following:
 - a. What happens when the fabric is pushed together?
 - b. How does it change in size and shape?
6. Compare this with curtains being gathered or skirts being pleated.
7. Share your findings in a whole-class discussion.

MAKING SAMPLES OF FULLNESS IN CLOTHING CONSTRUCTION

In clothing construction, fullness is added to give shape, style, or comfort to a garment. You can practise this by creating samples of the different methods used to arrange fullness. These hands-on samples help you understand how fullness works and where it is used in real garments.

Gathers

Gathers are small, even folds made by pulling stitching threads to draw the fabric together.

How to make gathers

- Sew two rows of long stitches using a sewing machine, side by side.
- Gently pull the threads to gather the fabric.
- Spread the gathers evenly so they look neat.



Figure 6.4: How to make gathers

Pleats

Pleats are neat folds in the fabric that are sewn at the top and left to hang below. They make the garment look smart and stylish.

How to Make Pleats

- Mark the pleat lines on your fabric.
- Fold the fabric carefully into pleats.
- Pin and press the folds to hold them in place.
- Stitch along the top to secure them.

Types of Pleats in Clothing Construction

a. Knife Pleat

Description: All folds go in one direction and overlap neatly.

Use: Seen in school skirts, dresses, and smart outfits.

b. Box Pleat

Description: Two folds face away from each other, forming a box shape in the middle.

Use: Common in skirts, blouses, coats, and decorative garment areas.

c. Inverted Pleat

Description: The opposite of a box pleat has two folds that face toward each other and meet at the centre.

Use: Found in skirts, tunics, jackets, and the back of shirts.

How to make pleats

a. Knife pleats



Figure 6.5: Knife pleats

b. Box pleats



Figure 6.6: Box pleats

c. Inverted pleats



Figure 6.7: Inverted pleats

Darts

Darts are triangle-shaped folds sewn into a garment to help it fit the curves of the body, especially at the bust, waist, or hips.

How to make darts

- Mark the dart outline with chalk.
- Fold the fabric along the marked line.

- c. Stitch from the wide end to the narrow point.
- d. Press the dart flat, usually toward the centre or as needed.



Figure 6.8: How to sew darts

Activity 6.3 Making Samples of Fullness

1. Join with a friend to form a pair.
2. Use graybaft fabric strips to create the following fullness samples
 - a. Gathers – running stitch and pull.
 - b. Pleats – fold equally and tack.
 - c. Darts – fold triangle and stitch.
 - d. Tucks – fold a narrow piece and sew.
3. Write in your notebook: “The sample I found easiest was ... because ...”
4. Display finished samples on your desk or classroom wall.
5. Walk around and observe others’ samples.
6. As you walk around, give one positive comment and one suggestion for improvement.

Make Samples of Fullness Used in Clothing Construction

Fullness in clothing construction is created by adding extra fabric in certain parts of a garment. This makes the garment more comfortable, stylish, or suitable for different

body shapes. Making practical samples of different fullness methods helps you understand how each technique is done and where it is best used in garment design.

Here are four key methods you should learn and practise:

Tucks

Tucks are small, stitched folds made by folding the fabric. They can be used to give shape to a garment or simply as decoration. Tucks can be very narrow, like pin tucks, or they can be wider for a more noticeable design.

Steps to Make Tucks

- a. Fold the fabric in a straight line.
- b. Press the fold flat using an iron.
- c. Sew a straight stitch close to the folded edge.
- d. For wider tucks, leave more space between the folds.

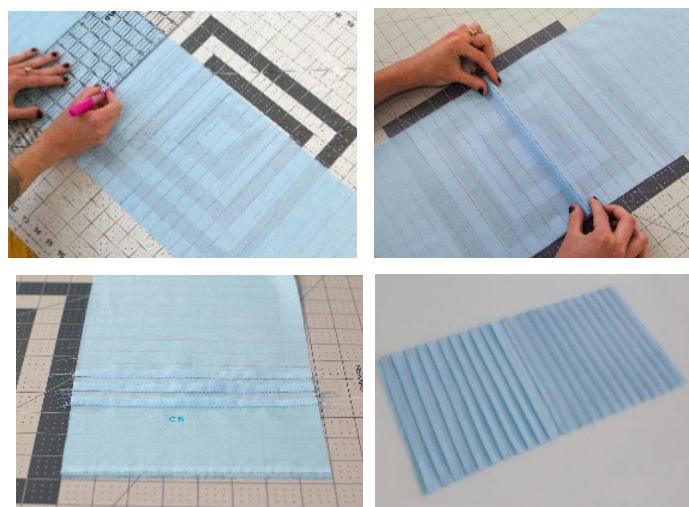


Figure 6.9: Steps to make tucks

Shirring

Shirring is made by sewing several rows of stitches with **elastic thread**, which causes the fabric to gather and stretch. This makes the garment fit snugly but comfortably.

Steps to Make Shirring

- a. Use elastic thread in the bobbin (bottom part of the sewing machine).
- b. Use a normal thread at the top.
- c. Sew multiple rows side by side.
- d. As you stitch, the elastic thread pulls the fabric together to create soft, stretchy gathers.



Figure 6.10: How to make shirring

Smocking

Smocking is a decorative way to control fullness by using hand embroidery over gathered fabric. It is both beautiful and useful, as it holds the fabric in place and adds detail to the garment.

Steps to make basic smocking

- Draw a grid of small squares on the fabric.
- Use small hand stitches to gather the fabric along each row.
- Once gathered, use coloured embroidery thread to sew decorative patterns across the gathered area.
- The smocking stitches should be even and neat.



Figure 6.11: Steps to make basic smocking

Godet

A godet is a triangular fabric piece added into a slit in the garment to give extra width or flare. It makes a garment fuller and allows more freedom of movement.

Steps to make a godet sample

- Cut a slit in your main fabric piece
- Prepare a triangle-shaped fabric piece (the godet)

- c. Insert the godet into the slit and sew along the sides
- d. Press the seams flat to give it a smooth, neat look



Figure 6.12: Steps to make a godet sample

Activity 6.4 Fullness All Around

1. With a partner, recall types of fullness: pleats, gathers, darts, tucks, etc.
2. Identify where fullness is used in everyday clothing (e.g., shirring in waistbands, godets in skirts).
3. Write two examples seen in your environment and explain how fullness changes clothing's appearance. (e.g., Gathered waistline in the dress - Effect on Appearance: The gathers at the waistline create a fuller skirt part, making the outfit appear elegant and suitable for special occasions. It also makes the wearer look graceful and fashionable).

Activity 6.5 Practising Fullness

1. Complete this activity either by yourself or with a partner.
2. Use fabric strips to make samples of:

- a. **Tucks:** fold, stitch, press.
- b. **Shirring:** stitch with elastic thread or thread to create gathers.
- c. **Smocking:** stitch dots decoratively to form folds.
- d. **Godet:** insert triangular piece for flare.
3. Reflect: “The fullness I enjoyed making most was..... because
4. Display all samples for your classmates to view (tucks, shirring, smocking, godet).
5. Walk around observing your classmates' work.
6. As you walk around, give feedback: one strength and one suggestion for improvement.

THE IMPACT OF FULLNESS TECHNIQUES ON THE FIT AND APPEARANCE OF GARMENTS

Fullness is when extra fabric is added or controlled in parts of a garment to help it fit well and look beautiful. This is done using techniques like **tucks**, **darts**, **gathers**, **pleats**, **smocking**, **shirring**, and **godets**. Each technique adds shape or decoration to different parts of clothing, such as the waist, bust, hips, sleeves, and hemline.

Fit of the garment

Fit refers to how well a garment matches the shape of the body. Fullness techniques help improve fit by shaping the fabric to fit curves or by allowing movement and comfort.

1. **Darts and tucks:** These are stitched folds that help the garment fit snugly around the bust, waist, and hips. They make the outfit look neat and well-shaped on the body.
2. **Gathers and shirring:** These make a garment more comfortable and flexible. They add volume and allow movement, especially in places like the chest (bodice), sleeve tops, or waistlines. Shirring uses elastic thread to pull the fabric together.
3. **Smocking:** This combines gathering and embroidery to hold the fabric together in a decorative way. It stretches and fits well while still looking neat, often used in baby clothes and fitted tops.
4. **Godets:** A godet is a triangle-shaped piece of fabric inserted into a slit to add flare. It gives more space for movement, especially in skirts and dresses, making them more flowing and dramatic.

5. **Pleats:** Pleats are folds that are stitched or pressed in place. They control fullness and can either add volume or slim the look, depending on their direction and how they are sewn.

Appearance and Style of The Garment

Fullness not only helps a garment fit better but also affects how it **looks**. It changes how the garment **drapes**, **moves**, and **attracts attention**. Designers use fullness to give different styles and moods to clothes.

1. **Gathers and pleats:** These make the garment look stylish and soft. Gathers create a full, feminine appearance while pleats give a smart and sometimes formal look.
2. **Tucks:** Tucks make neat lines and are both decorative and functional. They shape the fabric and add detail to areas like the chest or sleeves.
3. **Shirring and smocking:** These add lovely patterns and texture while also allowing the garment to stretch and fit. They are often seen in casual or romantic-style clothing.
4. **Godets:** Godets add beauty and motion to skirts and dresses. They make the fabric swing or flare out as the wearer moves, which is attractive and elegant.

Importance of Fullness in Clothing Construction

Understanding and using fullness techniques correctly is important for making high-quality garments. These techniques:

1. Help clothes **fit the body** properly.
2. Allow for **comfort and movement** during wear.
3. Add **beauty and design** to the outfit.
4. Improve the **shape and silhouette** of the garment.
5. Are useful in making **children's and maternity wear** where extra room is needed.
6. Provide **ease and flexibility** in areas like bust, waist, sleeves, and hips.

Activity 6.6 Adwoa's New Dress – Why Fullness Matters

Scenario

Adwoa was preparing for her cousin's wedding. She went to the seamstress with two different styles in mind.

- The first style was a *fitted kaba and slit* that showed her shape.
- The second style was a *gathered dress with pleats at the waist* that looked fuller and freer.

When she tried on the fitted dress, it looked very smart, but she could not walk or dance freely. The seamstress explained that although it was neat, it might be uncomfortable for long hours.

When she tried on the gathered dress with pleats, it flowed beautifully and allowed her to move, dance and sit comfortably. The seamstress smiled and said, *“Fullness adds not only beauty but also comfort to a dress. It makes the cloth come alive.”*

Adwoa finally chose the dress with gathers and pleats. On the wedding day, she danced happily, and everyone admired how stylish yet comfortable she looked.

1. Read the above short story about Adwoa choosing between a fitted dress and one with gathers/pleats.
2. Form a group of 4-6 members and discuss: Why do you think the seamstress added fullness? (Clue: think about comfort, etc).
3. Identify fullness techniques: e.g., shirring.
4. Try small fabric scraps (wax print, lining, graybaft). Pull, fold or stitch slightly to see how the fabric reacts to fullness.
5. Record your observations in your notebook.

Activity 6.7 Bringing Fullness to Life

1. Complete this activity by yourself.
2. Sketch a **mini garment design** that uses at least **two fullness techniques**.
3. Use scraps to **make a small garment piece or doll-sized sample** by pinning or stitching gathers, pleats, darts, or tucks.

Clue: *A hand-sewn running stitch can create gathers when pulled.*

4. Display the sample in class.
5. Explain how the chosen fullness techniques affect **movement, shape and design**.
6. Give your classmates supportive comments on what you think worked well.

Activity 6.8 Fashion Designers' Round Table

1. Form a group of 4-6 members.
2. Imagine you are **fashion designers** preparing clothes for a local wedding or festival.
3. Discuss how **gathers, pleats or darts** make the outfit more attractive and comfortable.

Clue: *Think of the free movement needed for dancing or the beauty needed for special occasions.*

4. Test small scraps of **wax print, lace, lining and graybaft** to see how each fabric reacts when folded, tucked or gathered.
5. Share group findings with the whole class in a short presentation.

UNDERSTANDING GARMENT OPENINGS

Garment openings are special parts of clothing designed to help you easily wear and remove the garment. Without them, it would be difficult or uncomfortable to put on clothes, especially those that fit closely to the body. Openings also add to the style and comfort of the garment. They are usually closed with fasteners like buttons, zippers, hooks, or loops to keep the clothing secure when worn.

Types of Garment Openings

There are different types of openings in garments. Each type is suitable for specific styles, fabrics, and functions:

Table 6.1: Types of garment openings

1. Continuous wrap opening

This opening wraps around the body and overlaps at the front or side. It is usually seen in garments like wrap dresses and skirts. It allows flexibility in fitting and gives a soft, flowing look.

Example: A wrap dress that ties at the waist.



Figure 6.13: Continuous wrap opening

2. Faced slit opening

This is a small, neat slit in the garment that is finished with extra fabric (called facing) to prevent fraying. It is often added to skirts or dresses for comfort and ease of movement.

Example: A slit on the side of a skirt.



Figure 6.14: Faced slit opening

3. Box pleat opening

A box pleat is formed when two folds of fabric are turned away from each other. It creates space and ease of movement, especially in skirts and dresses.

Example: A pleated skirt with a box pleat at the back.



Figure 6.15: Box pleat opening

4. Fly-front opening

This type of opening is common in trousers or jeans. It has a flap of fabric that covers a zipper or buttons, giving a neat finish.

Example: The front of jeans with a zipper.



Figure 6.16: Fly-front opening.

5. Bound opening

In a bound opening, fabric is used to neatly cover the raw edge of the opening. It is often used around necklines and armholes.

Example: A sleeveless blouse with neatly bound armholes.



Figure 6.17: Bound opening

6. Hem opening

The hem is the bottom edge of a garment. When slightly opened or loosened, it allows for better movement and fit. It also finishes the edge to stop fraying.

Example: A hemmed skirt with a small side opening.



Figure 6.18: Hem opening

7. Buttonhole or button-and-loop opening

This opening is made by sewing small slits or loops for buttons to pass through. It is one of the most common ways to fasten shirts, dresses, and jackets.

Example: The front buttons on a school shirt.



Figure 6.19: Buttonhole or button-and-loop opening

8. Slit opening

A slit is a simple vertical cut in the fabric. It may be finished with a facing or binding and is usually added for ease of movement and style.

Example: A back slit in a tight-fitting skirt.



Figure 6.20: Slit opening

Classification of Openings

Garment openings can be grouped based on how the two fabric edges come together:

1. Overlap Openings

In this type, one fabric edge lies over the other. It is secure and often used in stylish garments.

Examples: Fly-front, continuous wrap, placket, box pleat, and hem.

2. Meet Openings

Here, the two edges meet but do not overlap. They are held together with fasteners like buttons or zippers.

Examples: Bound, hem, and faced slit openings.

Factors that Influence the Choice of Openings

When designing or choosing an opening for a garment, some important things to consider include:

Table 6.2: Factors that influence the choice of openings

1. Garment type: The style of the garment determines which type of opening is best. For example, trousers usually need fly-fronts, while dresses may use buttons or zippers.
2. Fabric type: Heavy fabrics need strong openings like zippers, while soft or stretchy fabrics can use buttons or loops.
3. Aesthetic and style: The look of the garment also affects the choice. A flowing wrap dress may need a continuous wrap opening, while a formal shirt may use buttonholes.
4. Ease of use: It should be easy for the wearer to open and close the garment. Zippers are quick to use, while buttons may take more time.
5. Functionality: The opening should match the purpose of the garment. For example, a sports dress may need slits for movement.
6. Durability: Openings in high-stress areas like trousers need to be strong and long-lasting to prevent tearing or damage.

Activity 6.9 Garment Openings

1. Turn to the person on your left to form a pair.
2. With your partner, identify the part of your shirt, blouse, skirt or trousers that allows you to wear and remove it.
3. Point to where this opening is (front, back, side or neckline).
4. Say aloud: *“An opening is the part of a garment left unstitched or cut open to allow the body to pass in and out.”*

5. Share one garment you own and where its opening is found as indicated in the pictures below.



Figure 6.21: Samples of front openings

Clue: Look at your school uniform, church clothes or home wear.

6. With your partner, identify as many different types of openings as possible.
7. Join with another pair and share your list. Add any additional ideas from the other pair to your list.
8. In your new group of four, think of three factors that might influence the choice of opening in a garment and write these in your notebook.
9. Share your group's factors in a class discussion.

CONSTRUCTION OF SELECTED TYPES OF GARMENT OPENINGS

Making Openings in Garments

When making garments, openings are very important because they help us to wear and remove clothes easily. Openings can be placed at different parts of a garment, such as the front, back, side, neckline or hem, depending on the design. To make a good opening, there are several important things to think about.

Factors to consider when making openings

Length of the opening

- a. The length of the opening depends on what the garment is used for and the type of opening.
- b. For example, a **buttonhole** may be about 2 to 3 inches long, but a **zipper opening** must match the size of the zipper.
- c. **Side slits** or **hem openings** can be longer, especially in skirts or dresses, to allow easy movement.

Type of Openings

- a. **Vertical openings:** Found at the front, back, or side of garments like dresses, shirts, or jackets.
- b. **Horizontal openings:** Common at the waist, neckline, or sleeve.
- c. **Slits and zippers:** These are used at sides, hems or sleeves to make dressing easier and to add beauty.

Flatness of the Opening

- a. Openings should lie flat and neat against the body, especially for formal wear.
- b. Some openings like **gathers** or **pleats** are meant to give volume, but they still need to be neat and balanced.

Width of the opening

- a. The width should suit the purpose. For example, a **fly-front** in trousers needs to be wide enough for comfort and easy wearing.
- b. Slits may be narrower for a clean look, while **box pleats** need to be wide enough to fold properly.

Weight of the Opening

- a. The fabric's weight affects the type of opening to use.
- b. Heavy fabrics like **denim or wool** need stronger openings with reinforcement.
- c. Light fabrics like **cotton or silk** may only need a light facing or bias tape for neatness.

Type of stitches used

Different types of stitches are used depending on the kind of opening

- a. **Straight stitch:** For simple seams and slits.
- b. **Zigzag stitch:** For finishing raw edges and preventing fraying.
- c. **Blind Hem stitch:** Used to make stitches invisible from the outside.
- d. **Buttonhole stitch:** Used to make strong and neat buttonholes.
- e. **Topstitching:** Decorative and strong stitching seen on zippers or pleats.

CONSTRUCTION OF SELECTED TYPES OF GARMENT OPENINGS

Hem opening construction

A **hem opening** is used to finish the lower edge of clothes like skirts and trousers. It helps the edge look clean and allows movement.

Steps

1. Mark the desired hem length.
2. Fold the raw edge up (1–1.5 cm) and press.
3. Pin the fold evenly all around.
4. Sew with a straight, zigzag or blind hem stitch.
5. Press again for a neat look.

Note: Thicker fabrics need wider hems, while smart outfits may have narrow, tidy hems.



Figure 6.22: Hem opening construction

Box Pleat Opening Construction

A **box pleat** is made by folding fabric in opposite directions to form a box-like shape. It gives shape and style to garments like skirts and uniforms.

Steps

1. Mark the pleat positions on the fabric.
2. Fold the fabric to form box pleats.
3. Pin the folds in place and press.
4. Sew across the top to hold the pleats.

5. Press again to keep the shape firm.

Note: Pleats can be narrow or wide depending on the design. They add volume and structure to the garment.

Continuous wrap opening construction

A **continuous wrap opening** is used in wrap-around dresses, skirts or tops. It helps the garment overlap and close neatly without zippers or buttons.

Steps

1. Cut fabric with one part longer than the other for overlapping.
2. Fold and press the raw edge of the longer piece (1–2 cm).
3. Place the longer side over the shorter one and align them.
4. Add fasteners like buttons, ties or hooks to close the wrap.
5. Topstitch around the edge to keep it strong and neat.

Note: Wrap openings make dressing easier and more flexible. They also give a stylish and modern look.

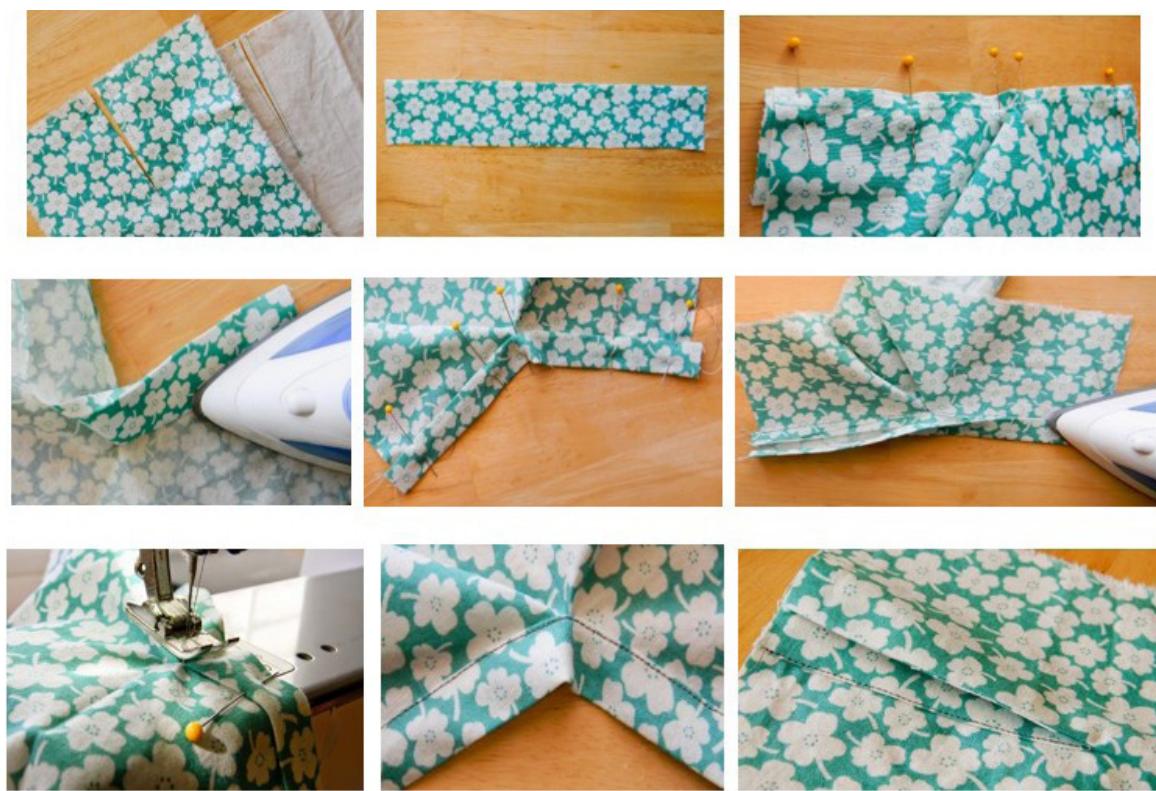


Figure 6.23: Continuous wrap opening construction

Activity 6.10 Costume Team Challenge

Read the scenario below and answer the questions that follow

Scenario

A youth group in your community has been invited to prepare costumes for a cultural dance performance. Some dancers' costumes need different types of openings and fasteners so that they can dress and undress quickly during the performance. You are part of the design team, and your task is to help decide the best types of openings, construct them neatly and fix appropriate fasteners to make the costumes functional and attractive.

1. Organise yourself into a group of 4, and decide which openings are best for costumes.

(Clue: Consider fabric weight, neatness, speed of dressing, type of fastener).

2. **Construct Samples:** Make two opening types as a team.

- a. **Box Pleat Opening** (slit → fold into pleat → stitch → attach fastener).
- b. **Continuous Wrap Opening** (slit → add bias strip → fold & stitch → attach fastener).
- c. Work together with a partner to fix the most suitable opening and fastener on an actual costume piece.

(Clue: Assign roles—cutter, stitcher, fastener fixer, recorder, timekeeper.)

Reflection and Sharing

1. Display and try your samples as if dancers are dressing quickly.
2. Are the openings neat, strong and comfortable?
3. Each group should explain:
 - a. The most difficult part of making the openings.
 - b. One way to improve next time.

(Clue: Could be stronger stitches, neater cutting or faster fasteners.)

Activity 6.11 Observing and Practising Garment Openings

1. **Complete this activity by yourself.**
2. **Observe:** Look at different garment openings (hem, box pleat, continuous wrap) and fasteners (button, hook, and zipper).
(Clue: Look at items of clothing, videos, in magazines, etc).
3. **Practice:** On scrap fabric, make a **hem opening** and attach one fastener.

(Clue: Fold edges neatly, press flat, stitch, then fix fastener).

4. Reflect: Write why a hem opening is important in clothing.

(Clue: It makes the garment neat).

CONSTRUCTION OF SELECTED TYPES OF GARMENT OPENINGS

When making clothes, there are parts where we need to leave an opening. These openings help the wearer put on or remove the garment easily. They are also designed to look neat and attractive. There are many ways to make garment openings, and each method gives a different finish depending on the type of clothing. Below are three common types of openings you will learn how to construct.

Bound Opening

A bound opening is a simple but neat finish where a strip of fabric is used to cover the raw edge of the opening. The strip is usually cut on the bias (slanted direction of the fabric) to allow flexibility and a smooth curve.

Bound opening construction

1. Mark where the opening will go on the fabric and cut it open.
2. Cut a strip of fabric on the bias, which may be the same or a different colour as the garment.
3. Place the strip and the garment right sides together and sew along the edge of the opening.
4. Fold the strip over the cut edge, turn in the raw edge, and sew it down neatly to cover and secure the opening.

Where it is used: This type of opening is commonly used in **sleeve openings**, **necklines**, and as a **decorative detail** on dresses and blouses.

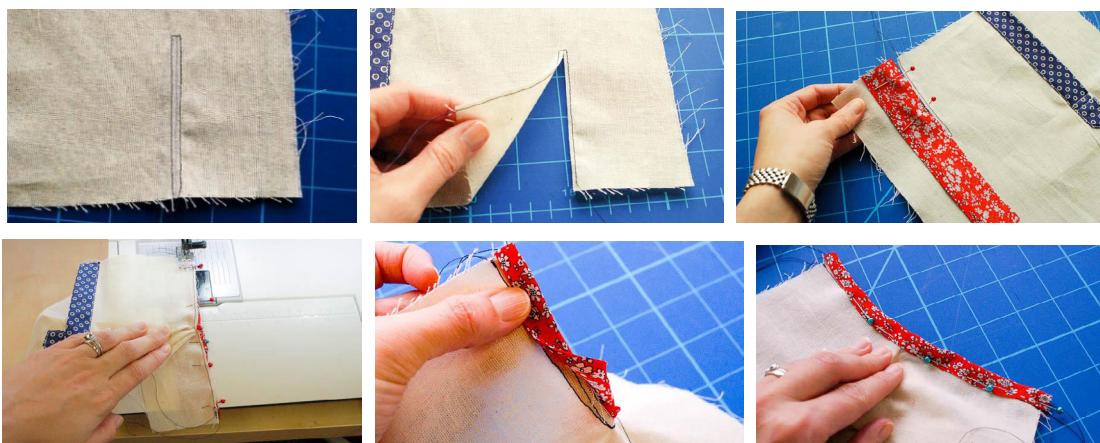




Figure 6.24: Bound opening construction

Faced Slit Opening

A faced slit opening is a narrow slit in the fabric that is finished with a facing to give it a clean and tidy look on both sides. A facing is an extra piece of fabric that is sewn around the edge to cover the raw parts inside.

Faced slit opening construction

1. Cut a slit where the opening is needed.
2. Cut a facing piece and place it right sides together with the slit.
3. Sew around the slit edge, then clip carefully into the corners to allow the facing to turn easily.
4. Turn the facing to the inside of the garment and press it flat.
5. If needed, topstitch the edges to hold the facing in place and give a finished look.

Where it is used: This opening is mostly found in **skirts**, **dresses**, and **blouses**, usually at the front, back, or side, where a little extra space is needed for wearing comfort.





Figure 6.25: Faced slit opening construction

Keyhole opening

A keyhole opening is a small, rounded or teardrop-shaped cut usually placed at the back of the neck or in front of a dress or blouse. It is both functional and decorative, often used where buttons or ties are added.

Construction of keyhole opening

1. Mark the shape of the keyhole on the garment. It can be oval, round, or teardrop-shaped.
2. Sew a facing around the marked shape with right sides together.
3. Cut along the inside of the shape and carefully clip the curves so it turns smoothly.
4. Turn the facing to the inside and press well to make the edges lie flat.

Where it is used: This type of opening is mostly used at the **back neckline** of blouses and dresses, but sometimes in the **front** as a **fashion detail**.

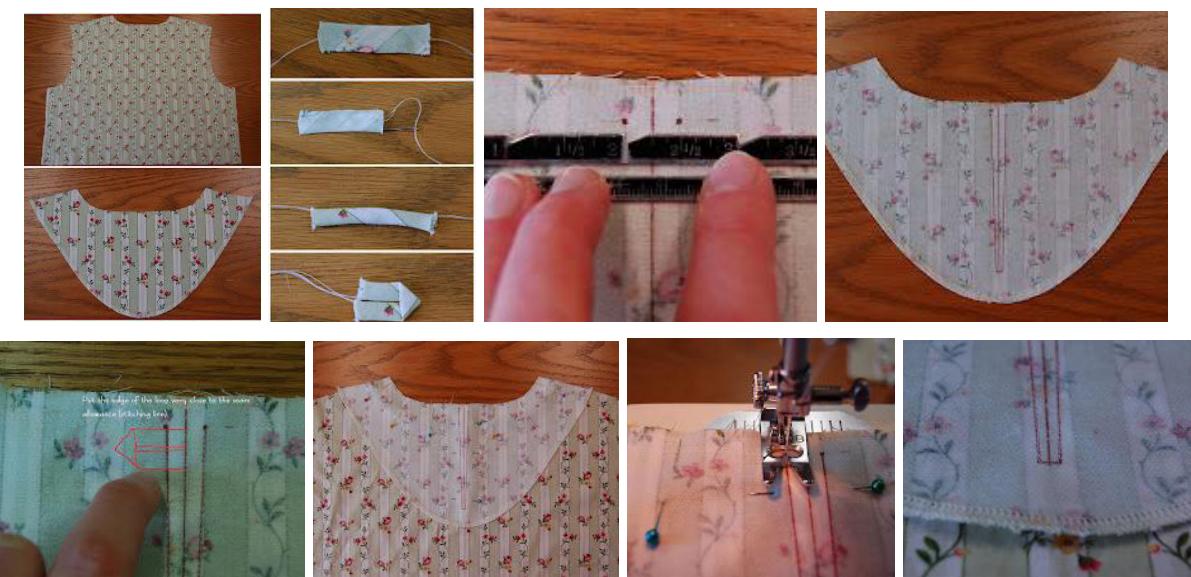




Figure 6.26: Construction of keyhole opening

Activity 6.12 Choosing Openings in Everyday Clothing

1. Look at your school shirt or trousers. Identify the opening.
2. Write **why the opening is important** and how it helps in wearing the garment.
3. List **3 points** to consider when choosing an opening.
(*Clue: Fabric weight, neatness, strength of stitches, ease of fastening*).
4. Real-life: If you were sewing a **kente kaba blouse for church**, which opening would you use? Write your reason.

Activity 6.13 Practising the Faced Slit Opening

1. Form a group of 4 members.
2. Use a **scrap fabric** (old shirt, graybaft or headscarf).
3. Practice these steps:
 - a. Mark and cut a 3-inch slit.
 - b. Place the facing fabric right sides together.
 - c. Stitch around the slit.
 - d. Cut into a slit and turn facing inside.
 - e. Press and stitch neatly.
4. In your notebook, write one garment that uses a faced slit.
(*Clue: Back of blouse*).

FACTORS THAT INFLUENCE THE SUITABILITY OF DIFFERENT OPENINGS ON GARMENTS AND ARTICLES

When designing or sewing clothes, the type of **opening** you choose (like zippers, buttons, or slits) is very important. The right opening helps the garment to fit well, be easy to wear, and last longer. It also adds to the beauty and style of the garment. Several factors help you decide which type of opening to use.

Type of Fabric

The fabric's weight and texture matter when choosing an opening.

- a. **Lightweight fabrics** (like chiffon or voile) are soft and delicate. They need simple openings like **keyholes**, **loops**, or **faced slits**, which do not damage the fabric or make it bulky.
- b. **Heavy fabrics** (like denim or wool) are thick and strong. They need stronger openings, such as **zippers**, **bound edges**, or **fly fronts**, to hold the garment together firmly.

Purpose of the garment

What the garment is used for determines the type of opening.

- a. **Everyday or working clothes** (for example school uniforms, overalls) need **durable openings** like zippers and buttons that do not come off easily.
- b. **Fashion or occasional wear** can have **creative openings** like lace-up styles, wraps, or stylish slits that look attractive but may not be very strong.

Style and Design of The Garment

The opening should match the garment's design and not spoil its shape.

- a. A **wrap dress** works best with a full wrap opening that ties at the waist.
- b. A **shirt** usually has a **button placket** to suit its neat and formal look.
- c. The opening should add to the design without spoiling the look or comfort.

Position or Placement of The Opening

Where the opening is placed on the garment matters.

- a. **Front openings** (like on shirts and jackets) should be **easy to reach and fasten**. Common types include **zippers** and **buttons**.
- b. **Back or side openings** (used in dresses and tight tops) should be less visible and smooth. **Invisible zippers**, **faced slits**, or **hooks** are usually best.

Ease of wearing and comfort

The opening should help people wear and remove the garment easily.

- a. **Children's clothing** often uses **Velcro**, **elastic**, or **snaps** so they can dress themselves.
- b. Clothes for the **elderly or people with special needs** must have **easy-to-use openings** to give them comfort and independence.

Durability and strength

The opening must stay strong after many uses and washes.

- a. **Trousers and workwear** need **reinforced zippers**, **fly fronts**, or **bound openings** that can handle stress.
- b. Sewing the opening with a **strong thread** and **neat finishing** helps make the garment last longer.

Activity 6.14 Openings Around Us

1. Form a group of 3-5 members.
2. Recall what garment openings are (from last lesson).
3. Look at the opening on your school shirt, kaba blouse, trousers, or smock.
4. Write **two reasons** why that opening is suitable. (*Clue: Consider fabric type, comfort, and neatness*).
5. Share with members of your group: “The opening on my shirt is suitable because...”
6. As a class, list 10 factors that affect openings (e.g., fabric type, style, function, comfort).

TYPES AND APPLICATIONS OF FASTENERS

Fasteners are devices used to open, close, secure, or adjust clothing. They make it easier to wear clothes, help them fit better, and can also add style or decoration to a garment. They make dressing up easier and more comfortable. The following sections highlight the different types of fasteners and what makes each one special.

Table 6.3: Types of fasteners and their applications

Type of Fastener	Description	Common Applications
Buttons	Small discs passed through buttonholes or loops	Shirts, blouses, trousers, jackets
Zippers	Interlocking teeth with a slider for quick fastening	Pants, jackets, dresses, skirts

Snaps (Press Studs)	Two interlocking discs (metal or plastic) that click into place	Baby clothes, pockets, cuffs
Hooks and Eyes	A hook and loop closure is often used in invisible or secure fastening	Waistbands, dresses, and lingerie
Velcro (Hook and Loop)	Fabric fastener with two strips that stick together	Kids' clothing, shoes, adaptive wear
Toggles	Rod and loop fasteners are used for both utility and decoration	Coats, outerwear, traditional wear
Eyelets and Lacing	Reinforced holes with a lace passed through	Corsets, hoodies, shoes
Frogs	Ornamental closures made of decorative cord loops and buttons	Cheongsams, coats, gowns

Points to Consider When Choosing Fasteners

When making or selecting clothes, it's important to choose the right fastener.

Not all fasteners work well for every fabric or design. Below are some key points to guide you in choosing the best fastener for your garment.

1. **Fabric type and weight:** The type and weight of the fabric help determine which fastener will work best.
 - a. Heavier fabrics like denim, wool, or thick cotton need strong and secure fasteners. These fabrics support fasteners like zippers, toggles, or large buttons, which can handle the weight and hold the garment firmly.
 - b. Lighter fabrics such as silk, voile, or chiffon are best matched with soft and light fasteners like small buttons, snaps, or hooks and eyes, which won't weigh down or damage the fabric.
2. **Garment design and function:** The fastener should suit the purpose and style of the garment.
 - a. For formal wear like suits or dresses, fasteners should be neat and often hidden or discreet, so they don't distract from the garment's elegance.
 - b. For casual or sporty wear, use fasteners that are strong, visible, and easy to use, such as zippers, Velcro, or snaps, to allow for quick dressing and flexibility during movement.
3. **Ease of use:** The fastener should be easy for the person wearing the garment to use.
 - a. For young children, choose fasteners like Velcro or snaps, which are simple to open and close without much effort.

- b.** For the elderly or individuals with limited hand movement, use adaptive fasteners like magnetic closures or large buttons that are easy to grip.
- 4. Position and placement:** Where the fastener is placed affects how comfortable the garment is.
 - a.** Make sure fasteners lie flat against the body and do not add bulk or press uncomfortably, especially at sensitive areas like the neck, waist, or under the arms.
 - b.** Avoid placing bulky fasteners near joints like elbows and knees, where they may cause irritation or limit movement.
- 5. Aesthetics and style:** Fasteners can also be part of the design and beauty of a garment.
 - a.** Choose fasteners that match or enhance the style of the garment. For example, a colourful button can add fun to a child's shirt, while a gold hook may add elegance to a dress.
 - b.** Fasteners come in different materials and finishes such as metal, plastic, wood, or fabric-covered types, allowing you to match the garment's theme.
- 6. Durability and maintenance:** Think about how often the garment will be used and how it will be washed.
 - a.** Clothes that are worn or washed frequently should have strong fasteners like zippers or metal snaps that will not wear out easily.
 - b.** For clothes that are delicate or only worn occasionally, fasteners that are gentle or decorative may be more suitable.
- 7. Age of the wearer:** The user's age and ability affect what kind of fastener is best.
 - a.** Children need fasteners that are simple, safe, and easy to manage on their own.
 - b.** Teenagers and adults can use a wider variety of fasteners, including those that are more secure or stylish.
 - c.** Older people or those with disabilities may benefit from fasteners that are easy to handle, such as large buttons, magnetic snaps, or Velcro.

Activity 6.15 Exploring Fasteners in Everyday Life

Scenario

Ama noticed her school bag zipper was broken. She thought of replacing it with press-studs or Velcro. Later, she compared this with the buttons on her shirt and the hooks on her grandmother's kaba blouse. This made her wonder why different garments use different fasteners.

Use Ama's experience to explore types of fasteners and their uses.

1. Identify common fasteners

- In pairs, check your clothes, bags or shoes.
- List the fasteners you see (e.g., zipper, hooks, buttons, press-studs, Velcro, ribbons).

(*Clue: Look at your school shirt, shoes, bags or even traditional wear*).

2. Describe and match fasteners with garments

Join with another pair to form a group of 4 members. Describe at least four fasteners. Example:

- Zipper:** used for bags or trousers, quick to open/close.
- Button and Buttonhole:** on shirts or blouses, secure and replaceable.
- Hook and Eye:** on kaba blouses, small and invisible.
- Velcro:** on children's shoes, easy to use.

- Copy the following table into your notebook and complete it based on your group discussion.

Common fasteners

Fastener	Garment Example	Reason for Use
Zipper	Bag/trousers	Strong, quick to use

- Choose one garment (shirt, trousers, kaba, or smock):* In your group, discuss the following;
 - Why was this fastener chosen?
 - Is it because of the fabric thickness, strength or design?. (*Clue: A kaba blouse uses hook & eye because the fabric is light and needs an invisible closure*).
- Share Group Findings (Inclusive Sharing):* In your group, explain one fastener and its garment application to your classmates.

Techniques for Attaching Fasteners

Fasteners are used to open, close, adjust, or decorate garments. The way you attach them is essential. It must be done neatly and securely so that the garment is strong, comfortable, and looks good. The technique you use depends on the type of fastener and the fabric.

Table 6.5: Techniques by type of fastener

Fastener	How to attach it
Buttons	<ul style="list-style-type: none"> a. Mark where each button will go. b. Use a strong thread to sew through the holes (2 or 4). c. If the fabric is thick, create a shank (space under the button) for flexibility.
Zippers	<ul style="list-style-type: none"> a. Use a zipper foot on the sewing machine. b. Pin and baste the zipper in place. c. Stitch close to the zipper teeth. d. Use facing or a fly if the design needs it.
Snaps (Press Studs)	<ul style="list-style-type: none"> a. <i>Sew-on:</i> Stitch around the holes of both the male and female sides. b. <i>Press-on:</i> Use a snap tool to attach them firmly.
Hooks and Eyes	<ul style="list-style-type: none"> a. Sew the hook on one side and the eye on the other. b. Use small whip stitches around each part to hold them in place.
Velcro (Hook and Loop)	<ul style="list-style-type: none"> a. Stitch all around the edges of both strips. b. Add X-shaped stitches in the middle for extra strength.
Toggles	<ul style="list-style-type: none"> a. Sew the loops and toggles tightly. b. If the fabric is soft, add interfacing to make the area stronger.
Eyelets and Lacing	<ul style="list-style-type: none"> a. Reinforce the area where you want to add the hole. b. Use eyelet pliers to insert the eyelets. c. Stitch or press them in, then lace through.
Frogs	<ul style="list-style-type: none"> a. Sew both the loops and the knot by hand. b. Make sure they are neat and placed evenly.

General Tips for Neat and Secure Fastening

1. Always attach fasteners to double layers of fabric.
2. Use longer or extra fasteners for tight-fitting clothes.
3. Apply interfacing behind the area to make it strong.
4. Mark positions carefully to keep fasteners straight and aligned.
5. Use a suitable thread and needle for your fabric type.
6. Test-fit before sewing, finally.
7. At stress points, use backstitch or double stitch to stop tearing.
8. After sewing, press gently with an iron to smooth the area

Common Types of Fasteners You May Use



Press studs (Snaps)



Buttons



Rouleau loops and buttons



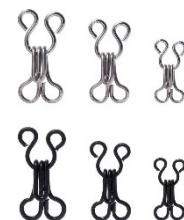
Hook and bar



Chinese balls and loops



Zippers



Hook and eye



Velcro

Figure 6.27: Common types of fasteners you may use

Activity 6.16 Discovering Fasteners Around Us

1. Watch a **teacher demonstration** or video on attaching fasteners:
 - a. How a flat button and a shank button are sewn.
 - b. How hooks and eyes are attached neatly.
 - c. How a zipper is stitched in the middle of fabric.

(Clue: Note the step-by-step process in your notebook).
2. Form a group of 3 to 5 members. In your group, have a discussion considering the points below.
 - a. Which fastener looked easiest to attach?
 - b. Which fastener looked the strongest?
 - c. Which fastener looked the neatest?
3. Copy the table below into your notebook and write your answers in the table

Discovering fasteners

Fastener	Easy/Hard?	Strong?	Neat?
Button	Easy	Strong	Neat
Zipper	Hard	Very Strong	Neat

Activity 6.17 Practising and creating a fastener album

1. Complete this activity by yourself.
2. Select **two types of fasteners** (button, zipper or hook and eye).
 - a. Cut a small fabric piece (scrap kente, wax print or old school uniform).
 - b. Practice attaching the fastener securely and neatly.
3. In your notebook, write **one challenge** you faced and how you solved it.
4. Form a group of 4 members to prepare a fastener album.
 - a. Attach different fasteners (button, zipper, hook, Velcro) to fabric pieces.
 - b. Label each with:
 - i. Fastener type
 - ii. Where it is commonly used (shirt, kaba, bag, trousers).
5. Display your album during your end-of-year exhibition
 - a. A volunteer from the group should explain how a fastener was attached.
 - b. Another volunteer should explain why it is suitable for a garment.
 - c. Others support by showing the fabric sample.

(Clue: Set up a “Fastener Corner” in the classroom for the exhibition).

TECHNIQUES FOR ATTACHING FASTENERS

Preparation for Attaching Fasteners

Before attaching any fastener to a garment, good preparation is very important. It helps make the fastening strong, neat, and suitable for the fabric and design. Follow the steps below to prepare well.

Choosing the right fastener

1. **Fabric Type and Weight**
 - a. Light fabrics like cotton, silk or chiffon work best with light and small fasteners such as tiny buttons, snaps, or soft Velcro.
 - b. Heavy fabrics like denim, wool or corduroy need stronger fasteners such as zippers, large buttons, or toggles.

2. Garment Design and Purpose

- a. For formal occasions, use simple, neat fasteners like invisible zippers or fabric-covered buttons.
- b. For casual or sporty clothes, practical fasteners like press studs or plastic zippers are better.

3. Age and Ability of the Wearer

- a. Children benefit from easy fasteners like Velcro or press studs. Adults can handle zippers, buttons, or hooks.
- b. Elderly or people with limited movement may need soft closures like Velcro or magnetic fasteners.

Reinforcing the fastener area

1. **Use Interfacing:** Place interfacing (a stiff fabric layer) under the area where the fastener will be sewn. It gives extra strength and support.
2. **Stay Stitching:** Sew a line of stitches around the fastener area to stop the fabric from pulling or losing shape.
3. **Mark the Fastener Placement:** Use chalk, pins or washable markers to mark the exact position of fasteners. This helps with correct alignment and even spacing.

Table 6.7: Step-by-step techniques for attaching common fasteners

Fastener Type	Step-by-Step Technique
Buttons	<ol style="list-style-type: none"> 1. Mark where the button should go. 2. Use a needle and thread to sew through the holes (2 or 4 holes). 3. Create a button shank if fabric is thick. 4. Tie off the thread securely at the back.
Zippers	<ol style="list-style-type: none"> 1. Pin or baste the zipper in place. 2. Attach the zipper foot on the machine. 3. Stitch along both sides of the zipper tape. 4. Press the area flat.
Press Studs	<ol style="list-style-type: none"> 1. Mark spots for both snap parts. 2. Sew-on: Stitch around holes. 3. Press-on: Use snap tool to fix.
Velcro	<ol style="list-style-type: none"> 1. Pin hook and loop strips in place. 2. Stitch all around the edges. 3. For extra hold, sew X-shape or square.
Hooks and Eyes	<ol style="list-style-type: none"> 1. Mark the hook and eye positions. 2. Sew the hook with tight stitches. 3. Sew the eye so they meet evenly.
Toggles	<ol style="list-style-type: none"> 1. Attach a toggle button on one side. 2. Sew a strong loop on the other side. 3. Use interfacing if the fabric is stretchy.

Eyelets and Lacing	1. Reinforce with interfacing. 2. Use eyelet tools to create holes. 3. Insert and secure eyelet. Lace through holes.
Frogs	1. Hand-sew the loop and knot in position. 2. Use small stitches. 3. Ensure both sides are even.

Activity 6.18 Attaching Fasteners to Articles

1. With a partner, look at your school uniform, kaba, smock, trousers or bag.
 - a. List at least **four fasteners** you can see (e.g., button, zipper, hook and eye, Velcro).
2. With your partner, discuss why fasteners are important (strength, decoration, comfort, easy use).
3. Present your findings to the class for feedback.

EVALUATING THE DURABILITY AND AESTHETIC APPEAL OF FASTENERS IN GARMENT DESIGN

Fasteners are important parts of garments. They help to hold clothes together and also add beauty. When choosing a fastener for a garment, it is good to think about two things

- a. **Durability:** How long it can last and how strong it is.
- b. **Aesthetic appeal:** How nice or attractive it looks on the garment.

Below are some common fasteners and how they perform based on these two qualities.

Zippers

1. **Durability:** Zippers are among the strongest fasteners. Metal and moulded plastic zippers last a very long time, even with regular washing or pulling. Nylon zippers are flexible and smooth but may not last as long as metal ones.
2. **Aesthetic appeal:** Zippers can be very stylish. Some are hidden (invisible zippers), giving a smooth and neat finish, especially in dresses. Others are bold and exposed, like the ones on jeans and jackets, making the garment look modern.
3. **Common Uses:** Jackets, jeans, dresses, sportswear, skirts.
4. **Durability Rating:** Very High
5. **Aesthetic Rating:** High

Buttons

1. **Durability:** Buttons made from metal, wood, or corozo (a natural nut) last longer. Plastic buttons are common but can break or fade after some time, especially if not sewn well.
2. **Aesthetic appeal:** Buttons come in many shapes, sizes, and colours. They are used not only to fasten garments but also to decorate them. A beautiful button can make a plain shirt look stylish.
3. **Common uses:** Shirts, dresses, coats, school uniforms.
4. **Durability rating:** High
5. **Aesthetic rating:** Very High

Snaps (Press Studs)

1. **Durability:** Snaps are metal or plastic fasteners that click together. Metal snaps are stronger than plastic ones. They are easy to open and close, making them ideal for children's clothing and sportswear.
2. **Aesthetic appeal:** Snaps are not very decorative unless designed that way. Most times, they are hidden inside the garment.
3. **Common uses:** Baby clothes, jackets, sportswear.
4. **Durability rating:** Moderate to High
5. **Aesthetic rating:** Moderate

Hook and Eye / Hook and Bar

1. **Durability:** These small fasteners are strong when sewn well. They are mostly used at waistbands and on formal wear to hold clothes neatly in place.
2. **Aesthetic appeal:** Hook and eye fasteners are hidden when used, giving the garment a clean and neat look. They are not meant to be seen.
3. **Common uses:** Skirts, trousers, blazers, formal dresses.
4. **Durability rating:** High
5. **Aesthetic rating:** Moderate to High

Velcro (Hook and Loop)

1. **Durability:** Velcro is easy to use and works well for everyday wear. But after many uses, it can wear out or gather lint, which makes it less effective.
2. **Aesthetic appeal:** Velcro does not look very nice on clothes and is often used for practical purposes. It is thick and not suitable for formal wear.
3. **Common uses:** Children's clothing, medical clothes, shoes, sportswear.
4. **Durability rating:** Moderate
5. **Aesthetic rating:** Low

Magnetic Closures

- Durability:** Magnetic fasteners are easy to use but may lose strength after some time. They are not good for tight or heavy garments.
- Aesthetic appeal:** They are smooth, modern, and almost invisible on the outside. This makes them a good choice for neat and stylish designs.
- Common uses:** Adaptive clothing, bags, modern formal wear.
- Durability rating:** Moderate
- Aesthetic rating:** High

Table 6.8: Garment-fastener matching table

Garment type	Best-suited fasteners	Reason
Formalwear	Invisible zippers, buttons, hooks and eyes	They give a clean, smart and professional look.
Casual wear	Buttons, plastic zippers	They are comfortable and easy to use for everyday activities.
Sportswear	Plastic zippers, Velcro, snaps	Light and easy to fasten during sports or movement.
Children's Wear	Velcro, plastic snaps	They are easy for children to open and close and are safe.
Outerwear	Metal zippers, snaps, toggles	Strong and can withstand weather and frequent use.
Adaptive Clothing	Magnetic closures, Velcro, zippers	Easy to handle by people with limited hand movement.

Activity 6.19 Investigating Fastener Durability and Design Suitability

Case Study

Akua and Kwaku are apprentice tailors in Kumasi. They have been asked to sew school uniforms for junior high school. Their challenge is to select fasteners that will survive daily washing and wearing, while also looking neat and professional. They recently heard that zippers on jeans wear out quickly after a few washes. To avoid this mistake, they must carefully evaluate different fasteners before choosing one.

1. Form a group with 4 members.

2. Read Akua and Kwaku's challenge:
 - a. Recall the jeans zipper that spoiled.
 - b. Find a better option for school uniforms.
3. Select **one fastener type** and research/write a short group report
 - a. Durability, e.g. material, frequency of use, strength.
 - b. Aesthetic appeal, e.g. neatness, visibility, suitability for casual, traditional or formal wear.
 - c. Best uses, e.g., kaba and slit, jeans, shirts, dresses.

(Clue: Insert sketches, drawings or photos of fasteners where possible).
4. Test your fastener (if samples are available)
 - a. Fasten and unfasten it several times.
 - b. Copy the following table into your notebook and write your results in the table.

Testing Fasteners

Fastener	Number of Times Tested	Still Working? (Yes/No)	Appearance After Test

5. Write your **recommendation** to Ama and Kwaku:
 - a. Which fastener is best for school uniforms?
 - b. Why is it better than the jeans zipper that spoiled?
6. Present your report to the class.

Activity 6.20 Assessing Fasteners in Local Sewing Shops

1. From a group of 4 members.
2. In your group, visit a nearby sewing or tailoring shop.
 - a. Identify at least three fasteners (e.g., button, zipper, hook & eye, Velcro).
 - b. Examine by touching, looking at the appearance and fastening/unfastening them.

(Note: Remember to ask for permission before examining the fasteners.)
3. Copy the following table into your notebook and write your results in the table:

Observation of Fasteners

Type of Fastener	Durability (High/Medium/Low)	Aesthetic Appeal	Remarks

4. Prepare a group presentation to answer the following:
 - a. What makes a fastener durable?
 - b. How do fasteners affect the overall appearance of a garment?

EXTENDED READING

- Forster, P. (2014). *Clothing and Textiles*. Winmat Publishers Limited: Accra.

Review Questions

1. List four main factors to consider when choosing a method for arranging fullness in a garment.
2. Explain how the type of fabric and the figure of the wearer can affect the way fullness is added to a garment.
3. You are designing a dress for a young girl with a petite figure using soft, flowing cotton voile. Which method of arranging fullness would you choose and why?
4. Design a simple skirt or blouse for a tall, slim person using medium-weight fabric for a formal event. Describe how to add fullness to the design and explain your reasons for each design choice.
5. List four different methods of arranging fullness in garments and state one specific garment part where each can be applied.
6. Differentiate between gathers and Shirring and explain how each method changes the appearance and comfort of a garment.
7. Explain how the weight and texture of fabric can influence the choice of fullness arrangement, giving one example each for lightweight and heavy fabric.
8. If you are tasked to design a blouse for a plus-size figure, which fullness method would you apply at the bust area, and why would this be more effective than another method?
9. A client requests a traditional outfit with a fitted bodice and a wide, dramatic skirt for a wedding. Propose which fullness methods you would combine for both the bodice and the skirt and explain how these methods together will achieve both comfort and elegance
10. List the steps involved in making Shirring.
11. Explain how smocking and Shirring differ in both technique and purpose.
12. A client requests a blouse with vintage appeal and fine decorative shape. Would you choose tucks or smocking for this design? Justify your choice.
13. List the steps involved in making a godet insertion.
14. Design a simple dress that combines tucks and Shirring. Describe where each method would be placed and how they will complement each other in terms of style and comfort.
15. List four fullness techniques used in garment construction. For each technique, state one way it affects the fit of a garment.

16. Explain how pleats and tucks influence both the fit and the appearance of a garment. Give one example of where each might be used.

17. You are designing a blouse with a fitted bodice and decorative detailing. Which two fullness techniques would you use to achieve both a shaped fit and visual appeal?

Explain why you chose each technique.

18. Create a design concept for a two-piece outfit (e.g., blouse and skirt) using three different fullness techniques. For each technique, explain the following:

Where it will be applied.

How will it improve the fit?

How it enhances the style or visual appearance of the garment

Why does it suit the selected fabric and design purpose

19. List three methods of arranging fullness in clothing construction and give one example of when each method is used.

20. Explain the difference between pleats and darts. How does each method contribute to the fit and shape of a garment?

21. In designing a skirt that requires added fullness at the hem, which method would be most suitable: pleats, gathers, or darts? Justify the choice by explaining how the selected method would influence the design and fit of the skirt.

22. You are designing a custom-made dress for a client who needs structure at the waist and a flowing look at the bottom. What fullness techniques would you use for the bodice and skirt? Explain how these techniques work together to achieve a balanced and attractive appearance.

23. Use a table to compare gathers, darts, and pleats using these headings: Shape/Effect on Garment, Where Commonly Used, and Type of Garment Best Suited. Then explain how the wrong use of any of these methods may spoil the garment's look or fit.

24. List four types of garment openings and give one example of a garment where each can be used.

25. Explain how fabric weight and flatness influence the method of constructing a garment opening.

26. You are designing a lightweight summer blouse. Which type of opening would you choose between hem, box pleat or continuous wrap? Justify your choice based on fabric, garment purpose and appearance.

27. Evaluate the suitability of using a box pleat and a continuous wrap opening in a formal dress and a school uniform. Consider garment style, ease of wear, durability, and aesthetics. Support your answer with detailed reasoning.

- 28.** Name three types of garment openings and give one example where each is commonly used.
- 29.** Explain why a bound opening might be more appropriate than a faced slit opening for a blouse made of lightweight fabric.
- 30.** A designer is making a formal dress with a high neckline and no zippers. What type of opening would you recommend and why?
- 31.** Evaluate the use of faced slit, bound, and keyhole openings in terms of aesthetics, ease of construction, and durability. Which would be most suitable for a school uniform blouse? Support your answer with reasons.
- 32.** List four types of garment openings and state one factor that can influence the selection of each.
- 33.** Explain how fabric type and garment function influence the choice of opening in clothing construction.
- 34.** You are designing a dress for a child. Which type of opening would be most suitable and why? Consider ease of wear, safety, and the fabric used.
- 35.** Evaluate three different types of garment openings for use in an activewear jacket made from stretch fabric. Discuss their suitability based on comfort, durability, ease of construction and design appeal. Recommend the best option and justify your choice.
- 36.** List four types of garment fasteners. For each fastener, give one example of a garment that uses it.
- 37.** Explain three factors that influence the choice of fasteners in garment construction.
- 38.** You are designing a lightweight summer blouse. Which fastener would you choose and why?
- 39.** Evaluate the suitability of the following fasteners for children's clothing: Zipper, Snap, Velcro. Based on your evaluation, recommend the most appropriate one.
- 40.** Name three types of fasteners used in children's clothing and identify one advantage of each type.
- 41.** Explain how fabric thickness influences whether to use buttons or snaps as fasteners.
- 42.** A winter coat's zipper keeps separating. Analyse two possible causes and propose solutions to prevent this issue.
- 43.** Create a table comparing buttons, zippers, and Velcro fasteners. Use these headings: Ease of Use, Durability, and Best Fabric Match. Provide one example for each category.

- 44.** Evaluate hook and eye, snap, and magnetic closures for an elderly patient's cardigan. Recommend the best option with three justified reasons focusing on safety, accessibility, and care requirements.
- 45.** What is the purpose of reinforcing the area where a fastener will be attached?
- 46.** State two examples of fasteners that are suitable for lightweight fabrics.
- 47.** Why is it important to match the type of fastener to the fabric used?
- 48.** Explain how the purpose of a garment affects the choice of fastener.
- 49.** Describe two problems that may occur if the wrong fastener is attached to a garment.
- 50.** Explain the correct process for attaching a zipper to a skirt and mention two mistakes to avoid.
- 51.** Outline three steps to follow when attaching press studs and explain why each step is important.
- 52.** List three fasteners that are commonly used in children's clothing.
- 53.** Explain how durability and appearance affect the choice between zippers, buttons, and Velcro in garment design.
- 54.** Name four fasteners and match each to the type of garment it is best suited for.
- 55.** Observe a school uniform or dorm wear you have. Which fasteners are used, and why do you think they were chosen?
- 56.** Imagine your zip got stuck while dressing for class. What steps would you take to solve the problem and prevent it from happening again?

GLOSSARY

Absorbency	How well a fabric takes in moisture.
Accessories	Extra items like belts or jewellery that complete an outfit.
Aesthetic Appeal	How attractive or pleasing a garment or its parts look.
Age appropriateness	Wearing clothes that suit your age.
Application	The use of a fabric for a specific item (e.g., sportswear).
Breathability	Allowing air to pass through fabric.
Budget	A set amount of money planned for spending.
Care instructions	Guidelines on how to wash and handle a garment.
Climatic conditions	Weather patterns that affect clothing choices.
Clothing	Items worn to cover the body.
Comfort	How pleasant a fabric feels when worn.
Community standards	What is accepted in a society regarding dressing.
Construction Technique	The method used to put parts of a garment together neatly.
Darts	Stitched folds that shape a garment to fit the body better.
Decorative Seam	A seam that adds beauty or design to a garment in addition to joining fabric pieces.
Double-stitched Seam	A seam made with two rows of stitches to give extra strength, used in areas under stress.
Drape	How a fabric hangs or flows.
Durability (Fabric)	How long a fabric can last without damage.
Durability (Seam/ Garment)	The ability of a seam or garment to last through wear and washing.
Elasticity	A fabric's ability to stretch and return to its original shape.

Fabric Type	The kind or nature of fabric used, which affects how a seam should be chosen and sewn.
Fabric	A material produced by weaving or knitting fibres together.
Fashion	Popular trends in clothing and appearance.
Fastener	Any device used to close a garment, such as buttons, zippers, or hooks.
Fibre	A thin thread-like material used to make fabrics.
Flat-felled Seam	A strong seam where raw edges are tucked in and stitched flat, often used in jeans and shirts.
Fly Front	An overlapping opening used mostly in trousers and skirts.
French Seam	A seam that encloses raw edges, giving a neat inside finish, often used on lightweight fabrics.
Fullness	Extra fabric added to a garment to give it shape or decoration.
Functionality	How well fabric performs for a specific use.
Garment Construction	The process of joining fabric pieces to form a finished item of clothing.
Gathers	Small folds made by pulling stitches in fabric to create softness or space.
Grooming	Taking care of your appearance through cleanliness and dressing.
Grooming Items	Products used to improve appearance (Example, lotion, comb).
Hook and Eye	A small metal fastening made of a hook and a loop.
Insulation	Keeping heat in to stay warm.
Knitting	Making fabric by looping yarns together.
Lifestyle	Daily habits that influence your clothing choices.
Maintenance	The act of keeping clothes clean and in good condition.

Mix-and-match	Choosing clothes that can be worn in different combinations.
Moisture-wicking	Moving sweat away from the skin.
Natural fibres	Fibres from plants or animals (e.g., cotton, wool).
Neatness (Appearance)	Being tidy and well-arranged in appearance.
Neatness (Stitching)	The tidiness and clean finish of stitching that adds to the garment's appearance and comfort.
Occasion	A special event or activity that may affect clothing choice.
Occupation	A person's job, which may influence their clothing needs.
Opening	A space in clothing that allows it to be worn or removed easily.
Personal hygiene	Keeping the body clean to stay healthy and look good.
Placket	A finished part of an opening that often holds fasteners like buttons or zips.
Pleats	Neatly folded sections of fabric that add style or control the shape of clothing.
Plain Seam	The most basic seam, where two fabric pieces are sewn together and the seam allowances are pressed open.
Posture	The way one stands or sits, affecting overall appearance.
Resilience	The ability to return to shape after bending or stretching.
Seam Allowance	The extra fabric added along edges for sewing, which helps hold the seam securely.
Seam	The line of stitching where two pieces of fabric are joined together.
Self-esteem	Confidence in oneself, often shown in grooming and dressing.
Shrinkage	The reduction in fabric size after washing.

Softness	The gentle and smooth feel of fabric on the skin.
Stress Points	Areas of a garment that receive more strain, like the underarms, knees, and crotch.
Style	A particular way clothes are designed or worn.
Sustainability	Making choices that are good for the environment.
Synthetic fibres	Man-made fibres (e.g., nylon, polyester).
Tensile strength	The strength of a fabric when pulled.
Texture (Feel)	How a fabric feels (e.g., smooth, rough).
Texture match	Choosing the right feel of fabric for specific garments.
Thermal regulation	How fabric manages heat or cold.
Tucks	Narrow stitched folds used for shaping or decorating fabric.
Velcro	A fastening tape made of two fabric strips that stick together easily.
Wardrobe	A well-planned collection of clothing.
Weaving	Interlacing threads to make fabric.
Wrinkle resistance	A fabric's ability to stay smooth after wear or wash.

This book is intended to be used for the Year One Clothing And Textiles 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.



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