

WEEK 1

Date-

TOPIC: Consumer challenges and right

SUB-TOPIC: Redress option for the consumer, procedure for seeking redress.

Consumer redress is a set of guidelines that protect all consumers. It is a way of making sure that all consumers are treated the same and it provides a method of how to deal with it if one feels he/she has been treated poorly. Some of the consumer redress options include the following:

- i. Public authorities: for example Consumer Protection Council (CPC). The primary function of this body is to protect buyers of goods and services against low quality or dangerous products and advertisements that deceive people. Consumer Protection Council is among the first point of call to aggrieved consumer. It is the best of all redress option because it can result in a positive response from suppliers in term or providing compensations.
- ii. Individual court action: this is very common especially where consumer is a victim of serious fraud. For example government failure to provide infrastructure but will intimidate consumers to pay using all forceful means, sale of land with forged document etc. this process demands money, time and it is frustrating because of time delays in court.
- iii. Consumer organization: examples of these are market associations and associations of interest groups (motor parts association, yam sellers association, Nigeria Union of teachers, etc.) this have helped in bring action against companies on behalf of consumers.
- iv. Alternative Dispute Resolution (ADR): In this case mediators between suppliers and consumers are appointed by court or organizations. Mediators should be persons of proven integrity. He should also be neutral in his judgment. This process is prone to abuse in some cases.
- v. Collective court action: this is also very common especially with association of interest groups, usually against government agencies. It is very convenient for consumers because they employ the service of a lawyer, pay little and save time of going to court.



SUB-TOPIC 2: procedures for seeking redress

Companies use different methods to advertise their products and make them look attractive to consumers. Consumers will purchase these products based on the claims of the companies and expect a certain level of satisfaction. However the products do not always meet the sellers' claims or the customers' expectation. The consumer has a right to be satisfied with a purchase and there are ways or procedure to enforce consumers' rights. The following procedure is usually employed in seeking redress.

- i. Make photocopies of all documents that support your complaint e. g. receipts of transaction.
- ii. Check the policies of the company and make sure you are acting within your rights.
- iii. Make a complaint at the right place through letter, e-mail, phone call or a visit to the company.
- iv. Show your supporting document and other evidence e.g. unsatisfactory item purchased. Take picture of the item and include it in the letter or scan to include in e-mail.
- v. Seek the service of a mediator if not successful on your own. Mediator helps to resolve issues between two parties but has no legal power to enforce the final decision.
- vi. Seek legal consultation; a lawyer can advise you to proceed with the case or not, your chances of winning or other alternative methods of solving the problem.

WEEK 2

TOPIC: Child development and care

SUB-TOPIC 1: Meaning and stages of child development

Meaning and stages of child development

Growth is an increase in the physical size of the whole body. It is measured in metres and kilograms.

Development is an increase in skill and complexity of function.

Child development is the story of how infants become toddlers, preschoolers, school-age children, and preadolescents. **It traces how they develop social, emotional, physical and intellectual abilities that will serve them for the rest of their lives.** Child development also involves other areas such as language, symbolic thought, logic, memory, emotional awareness, empathy, a moral sense, and self-identity. Children develop at different rates. Some may be fast and others slow.



Stages of child development

Ages	Development
1 st month –	Head sags needs support. Hands tightly curled or fisted. Sleeps most of the time, feeds and cries.
2 nd month -	Weaves arms about when lying on his back. Turn head towards direction of sounds. Have a regular routine such as sleeping all night.
3 rd month-	Looks at people and follows their movements. Hearing is fairly developed. Smiles and enjoys colours and light. Can hold head up slightly. Hold an object placed in his hand e.g. a rattle.
4 th month –	Hold head erect. Smiles and shows excitement. Eyes can follow moving objects slowly. Can reach for his toes.

- 5th month- Reaches for an object.
Puts everything within reach into the mouth.
Sits with slight support.
Becomes selective in taste.
Birth- weight may be doubled.
- 6th month – Birth – weight doubled.
Recognizes constant members of the family.
Sits without support.
Hands and eyes work more together.
Starts teething (milk teeth)
- 7th-8th month- Transfers objects from one hand to the other.
Begins to associate words with people, ideas or objects.
Uses toys freely.
Sits confidently and crawls.
- 9th-12th month- Understands some words and can say very few.
Birth-weight triples.
Crawls very well, stands holding on to objects.
Gradually stands unaided
Takes first steps.
More teeth appear.

SUB-TOPIC 2: Factors that influence child development, Conditions necessary for child development

There are two major factors that influence development:

- (i) Heredity**
- (ii) Environment**

Heredity: is the tendency for a parent to transfer his/her characteristics to his/her child such as colour of skin, eyes, noses, etc. The units which bear heredity in our body cells are called GENES.

Environment – It includes everything that is outside the child e.g. Love and care he/she receives, the family, feeding, toys, home surrounding, clothing, shelter, etc.

Conditions necessary for child development

The following environmental conditions are necessary for normal development of a child:

1. Love and care from family.
 2. Good nutrition: Children are growing at a rapid rate and need plenty of nutritious foods to help them grow and develop strong, healthy bodies. Their meals must always be balanced.
 3. Clothing: They need clothing that is suitable for different weather conditions.
 4. Exercise: Children demand plenty of opportunities for exercises. These help them to develop strong bones, muscles and motor skills.
 5. Rest: Children bodies need plenty of rest due to their activeness and rapid growth. Good sleep habits promote health and well- being.
 6. Medical care: This is necessary for the development of the children.
 7. A safe and conducive environment: Safety is needed for children to develop. Therefore parents must provide safe and conducive environment.
 8. Good school: When the child has reached school age, the school should provide him with an environment that stimulates his physical, mental, emotional and social abilities.
 9. Society; It is a child's widest environment that helps him to learn those things which the school and home do not teach.
1. Which of the following is a tendency for a parent to transfer his/her character to his/her child? A. affection B. affection C. heredity
 2. A child's birth weight may be doubled by the age of..... A. six months B. twelve months C. Two months

WEEK 3

TOPIC: Child development and care

SUB-TOPIC 1: care of the child, Common childhood ailments.



Care of the child

The care given to a baby influences his/her development. A baby needs love, warmth, food, clothing etc.

1. GOOD NUTRITION

The child needs good food that can promote growth and development. A baby can be fed by the use of feeding either by the breast or bottle. The breast milk is the best. Suitable semi- solid foods (cereals) are introduced as baby grows.

Breast feeding (natural feeding)

This can be started immediately after birth. A baby can be fed exclusively on breast milk from birth to six months.

Colostrums

Colostrums are the first milk produced in the first few days by a nursing mother. Yellowish in colour, it helps to clear the baby's first sticky stool called **meconium**.

Advantages of breast feeding

1. Breast milk contains all the nutrients needed by a baby more than any other food.
2. It contains antibodies which protect the child against disease infection.
3. It is sterile and free from disease germs.

4. It prevents constipation.
5. It is cheaper than artificial feeding.
6. It brings mother and child very close.
7. It is produced in the right temperature.
8. It is easily digested and absorbed by the baby.
9. It does not require any elaborate preparation.
10. Breast-feeding helps some mothers to protect themselves against another pregnancy.

Guidelines for breast feeding

The mother has to:

1. Wash her hands and clean her breast before feeding the baby.
2. Sit comfortably and carry the baby close to herself.
3. Hold the breast properly and away from the baby's nose.
4. Let the baby feed at both breasts, one at a time.
5. Wind the baby at the end of the feeding.
6. Clean nipples brassiere always.

Weaning is the process of introducing the baby gradually to foods other than milk. Suitable weaning foods are cereals, root, fruit juice/drink, peas and beans, animal source (egg, fish, milk etc), vegetables.

Artificial or bottle feeding

This is the process of feeding a baby with artificial milk, often through the feeding bottle.

Disadvantages of bottle-feeding

1. It is expensive.
2. The milk can be contaminated by disease germs.
3. Constipation is common with bottle-fed babies.
4. It does not contain antibodies.
5. It requires elaborate preparation and sterilization unit.

2. Bathing the baby

The baby's skin is delicate. It should not be allowed to get dirty.

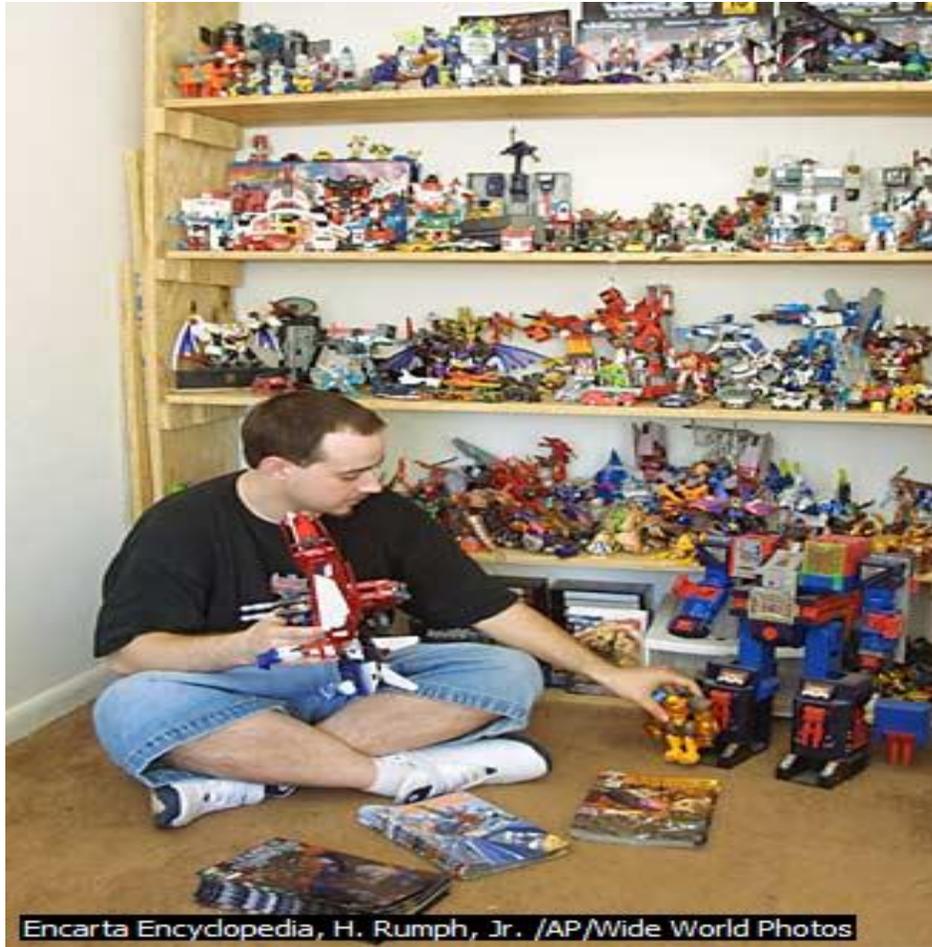
Materials needed for baby's bath.

1. Baby's bath tub
2. Large soft for covering
3. Small towel for drying the baby's skin.
4. Face towel
5. Soft sponge
6. Baby's comb and brush
7. Baby's oil, cream or lotion and powder.
8. Clean clothes for dressing baby after bath.

3. Clothing the baby

The baby requires good clothes for protection, warmth, comfort and good appearance. The clothes should be attractive, flat seams should be used. Selection should be on the basis of the weather conditions.

4. Toys for children



Encarta Encyclopedia, H. Rumph, Jr. /AP/Wide World Photos

A young baby needs only very few toys like rattles. As he/she needs large toys, such as a push-around toy which can help him to walk or a toy car.



Uses of toys

- i. Keep children busy.
- ii. Help them to learn
- iii. Help them to exercise themselves in different ways.
- iv. Make children happy.

Points to consider when choosing toys for children

Children's toys should:

1. be safe
2. suit the child's age
3. be easy to clean
4. have no metal or sharp edges that can injure the child.
5. be strong, durable and simple
6. not be boring to the child

Common childhood ailments.

COMMON AILMENTS IN CHILDREN:

1. **Colic** is caused by cramps in the intestines of the baby. It causes the baby real discomfort or pains. It is common during the first 3 to 4 months.

2. **Constipation** involves the passing of hard stool at long intervals or not passing it all. Constipation could be common with bottle-fed babies.

Treatment

- i. Give the child extra water to drink.
 - ii. Add very small sugar or glucose to his feed.
 - iii. Serious cases should be taken to doctor.
3. **Diarrhea** is a sudden increase in the number of bowel movement, especially if they are loose and watery.

Causes are unsuitable diet, overfeeding and infection or disease.

Treatment

- i. Give oral Rehydration Therapy (O.R.T) after each stool.
(ORT = 1 level tsp of salt + 10 level tsp of sugar + ½ litre of boiled water)
 - ii. See the doctor if it persists.
4. **Nappy rash** – it occurs when a child has rashes in the nappy area. It could be caused by using dirty napkins, leaving soiled napkin on the baby and improper rinsing of baby's napkin after washing.

Treatment

- i. Keep the areas clean.
- ii. Expose the area until rashes disappear.
- iii. Apply special nappy rash lotions or ointment.

. **SUB-TOPIC 2: Immunization for children.**

Immunization is the procedure by which immunities to diseases are produced in a person. This is done through vaccines and toxoids. Immunization prevents children against diseases. Children can be immunized against the following diseases: diphtheria, tetanus, whooping cough, polio, smallpox, measles and tuberculosis. Immunization is administered to protect children from 0-2 years old. It is given to children in infant welfare clinics, immunization centres and hospitals.



1. **B. C.G** – vaccine protects the body against tuberculosis.
2. **Triple vaccine (D.T.P)** – mixture of three vaccines- the tetanus, whooping cough and diphtheria vaccines. It is given by injection for protection against the three diseases.

Polio vaccine – for protection against polio.



3. **Smallpox vaccine**- to protect against smallpox. It is given by injection.



4. **Measles** – to protect against measles. It is given by injection.
5. **Quadruple vaccine** – mixture of four vaccines – diphtheria, tetanus, whooping cough and polio vaccines. It protects the child from the four diseases.

Time - Immunization

1. At birth - B. C.G.
2. At 2 months – first dose of D.T.P, first dose of polio vaccine.
3. At 3 month – second dose of D.T.P, second dose of polio vaccine.
4. At 4 months – third dose of D. T.P, third dose of polio vaccine.
5. At 9 months – measles vaccine.

WEEK 4

Date-

TOPIC: Textiles: Types, properties, production, uses, and care

SUB-TOPIC 1: Definition of textiles with examples, Basic textile terms

Definition of textiles with examples

The word textile is derived from the Latin verb *texere*, meaning “to weave”. Originally, therefore only to woven fabrics and specifically excluded knitted cloth, lace, netting, felt, braid, and cord. Today textile has become a generic term for all fiber materials which therefore **refers to any raw material that is used in making fabrics e.g. fibre, yarn, thread, etc.** whether made by weaving, knitting, bonding, laminating, felting, or other processes. It can even refer to paper like materials, but it excludes leather and plastic sheeting.

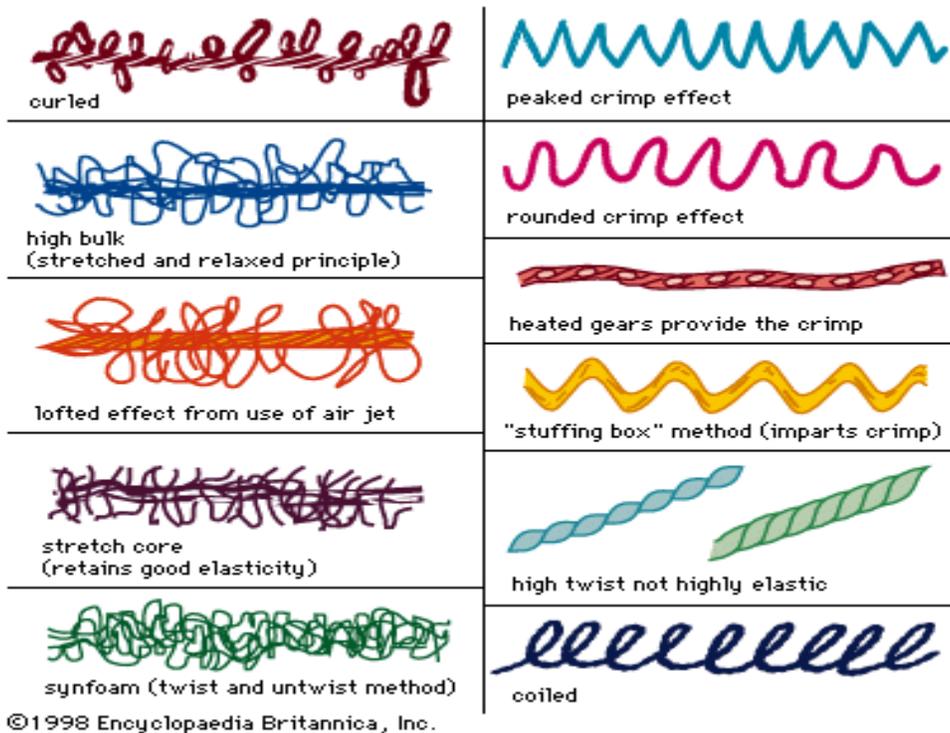


Basic textile terms

1. **Fiber:** is a hair-like basic unit of raw material used in the making of yarns and fabrics e.g. cotton, linen, silk, wool, nylon fibres.



2. **Yarn:** is a thread made by twisting or spinning fibres.



3. **Fabric:** is cloth constructed with yarn or directly from fibres by weaving, knitting, crocheting, felting, etc. A woven fabric is made up of two sets of yarn or thread—the warp and the weft.



4. **The warp:** is the yarn or thread which runs length-wise in a woven fabric. It is parallel to the selvedge.
5. **The weft** is the yarn that runs cross-wise in a fabric. It runs at right angles across the selvedge grain.
6. **The selvedge** is the edge of the fabric made by the weft thread or yarn by turning over the warp thread. It is the **mill-finish edge** of a fabric which runs in a length-wise direction.
7. **Bias** is the diagonal direction across the two grain lines, warp and weft.
8. **True bias** makes an angle of 45° across the length-wise and crosswise grains. It has the greatest stretch.
9. **Grain** of the fabric refers to the direction of yarns or threads in a fabric.
10. **The right side (RS)** of the fabric is the side to be worn out. It has better finish and more distinct print than the other side.
11. **The wrong side (WS)** of the fabric is the side to be worn inside.

SUB-TOPIC 2: Reasons for studying textiles

The study of textiles will help you in the following:

1. Identifying different types of fabrics/textiles and their characteristics or properties.

2. Selecting or choosing the suitable fabric for a given purpose. For instance you can only choose good quality fabrics for personal dresses, bed sheets, curtains, etc., when you understand the qualities to look out for in textiles.
3. Using fabrics intelligently. You will be enabled to use fabrics correctly. For instance you will know when to cut fabric along the grain or on bias.
4. Taking proper care of the fabric. It is the knowledge of the properties of the fabric that will enable you to select the best methods for washing or dry cleaning it. Proper care of fabrics make them look better and last long.
5. Handling the fabric properly. For instance, the loosely woven woolen fabrics will require special handling.
6. Making you a wise consumer.
7. Making you happier with your clothing and fabric purchases. This will give you confidence when you dress up.
8. You can develop interest in clothing and textiles careers.

WEEK 5

Date-

TOPIC: Textiles: Types, properties, production, uses, and care

SUB-TOPIC 1: Importance of textiles.

Importance of textiles

1. Various clothing are made from textiles such as jeans, blouses, jackets, dresses,, coats, trousers, shirts, T-shirts, sweaters, lingerie, pants, socks, hats, swim suits, etc.
2. Household articles e.g. bed sheets, curtains, towels, cushion covers, cloths, table cloths, place mats and so on.
3. Various house/soft furnishing e.g. carpets, upholstery, rugs, mats, nets, cushion.
4. Medicare products such as bandages, plasters, artificial blood vessels, inner lining for artificial hearts, inflatable field hospital for soldiers having all supplies needed for operation stored in sterile containers, etc.
5. Hospitals are reducing the chances of infections with disposable operating gowns and bed linens.

6. Shelter- both temporary and permanent shelters for many public gathering places such as outdoor restaurants canopies.
7. Transport- such as huge conveyer belts made of woven cotton and nylon to carry people, from parking lots into the core cities, sails for boats.
8. A Nylon “whale” to suck up oil spill from ocean.
9. Police officers protective vests to protect them from bullets. They are made from aramid fibers- seven layers, but light weight and tougher than steel.
10. A waterproof bonded fabric which will not tear is used for children’s books.

Sub Topic 2: Differences between natural and synthetic fibers

CLASSIFICATION OF FIBRES:

Fibres are classified into two main classes,

(a) The natural fibres

(b) Man-made (Artificial/synthetic) fibres

Each class is further classified into sub-classes. Fabrics are made from fibres. Therefore fabrics are normally classified according to their fibres. The fabrics have the same properties as the fibres from which they are made.

Natural fibres: These are gotten from either plant e.g. cotton and linen, or from animals e.g. wool and silk.





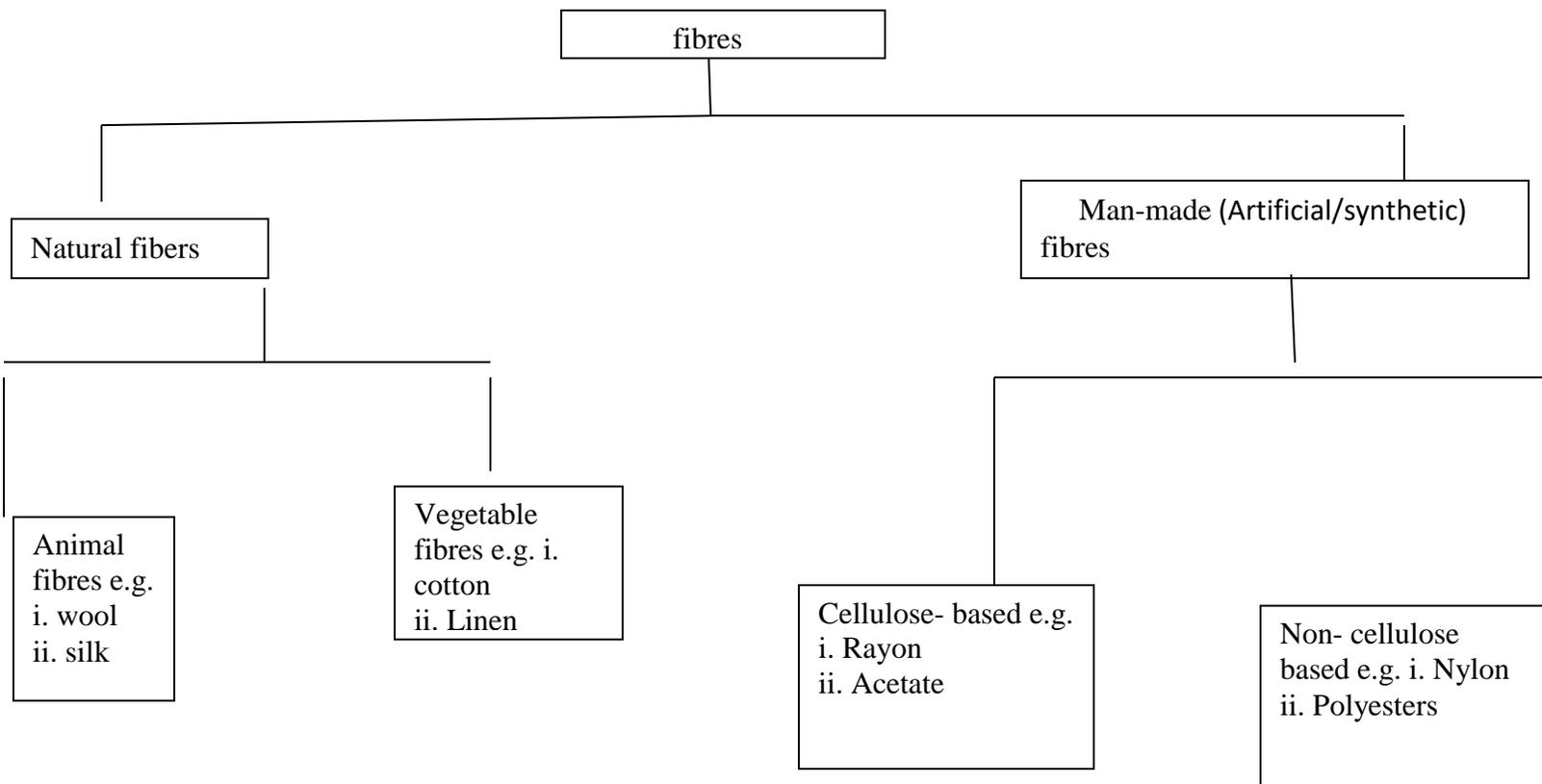
Oak silkworm cocoon



Silkworm larva and cocoon

Man-made (Artificial/synthetic) fibres: These are obtained through the chemical treatment of certain raw materials. They are of two kinds.

- (i) Fibers derived from a cellulose base e.g.
 - (a) Viscose rayon
 - (b) Acetate
- (ii) Fibres derived from a non-cellulose base e.g.
 - (a) Nylon
 - (b) Polyester.



Date-

TOPIC: Textiles: Types, properties, production, uses, and care:

SUB-TOPIC 1: Properties of fibres.

Properties or characteristics of Natural fibres:

1. **Cotton:** cotton is a vegetable fibre. It is made from cotton balls(bolls) of the cotton plant. The cotton fibres surround the seeds of the cotton plant. Cotton plants grow in Northern parts of Nigeria and many other countries such as, Egypt, China, America, India, Asia, etc.
 - i. It absorbs moisture quickly. It is there suitable for the tropics e.g. Nigeria.
 - ii. It is reasonably strong and durable.
 - iii. It creases or wrinkles quickly, but irons very well.
 - iv. It washes easily i.e. it is washable.
 - v. It is cool and comfortable to wear.
 - vi. It is mothproof.
 - vii. It can be affected by mildew in damp conditions
 - viii. White cotton can be bleached.
 - ix. It can withstand friction or rubbing.
 - x. It can withstand hot water, so can be boiled.
2. **Linen:** linen is a vegetable fibre. It is gotten from the stem of flax plant. The flax plant grows in such countries as France, Belgium, Russia, Northern Ireland; etc. It is not produced in Nigeria.
 - i. It is stronger than cotton. It increases in strength when wet.
 - ii. It is absorbent and cool to wear.
 - iii. It dries slowly.
 - iv. It is a good conductor of heat. It therefore, carries heat away from the body.
 - v. It creates badly.
 - vi. It washes well.
 - vii. It frays badly and easily.
 - viii. It can stand high temperature.
 - ix. It has natural luster.
 - x. It is not fluffy. Linen is therefore suitable as dish-dish or glass-cloth, since it will leave no lint in glassware.
3. **Wool:** wool is an animal fibre. It is got from the hair or fleece of sheep. The hair of a camel, Angora rabbit or Angora goat can be used. Wool is commonly produced in temperate countries such as Britain, Australia, New Zealand, Argentina, etc.
 - i. A wool fibre has scaly appearance.
 - ii. Wool is elastic and sparingly to touch. It does not crease.
 - iii. It makes a very absorbent fabric.
 - iv. Wool fabric has large number of air spaces between the fibres. It is therefore very warm. It retains body heat.
 - v. It is stronger when dry than when wet.
 - vi. It can absorb moisture very well without appearing damp.
 - vii. It is readily affected by bleach.
 - viii. It is attacked by clothes moth and other insects.
 - ix. It gives the smell of burning feathers when burnt.
 - x. It felts or shrinks easily especially when treated with hot water. This means that it stops stretching and reduces in size.

4. **Silk:** silk is an animal fibre. It is produced by silk worm. Silk is produced chiefly in France, Italy, China and Japan.
- i. It is a very strong fibre.
 - ii. It is smooth and fine. Is beautiful and has natural luster.
 - iii. It is springy or elastic.
 - iv. It is crease-resistant, i.e. will with stand creasing.
 - v. It is warm to touch.
 - vi. It absorbs moisture easily.
 - vii. It is easily dyed.
 - viii. It is an expensive fibre.
 - ix. It is weak when wet.

Properties or characteristics of man-made or synthetic fibres:

Man-made fibres can be classified into two main headings:

- i. **The cellulose –based fibres:** Made from cellulose; which is obtained from cotton linters or wood pulp e.g. viscose rayon, acetate.
- ii. **Non- cellulose man-made or synthetic fibres:** made entirely from mineral substances such as coal and petroleum, e.g. nylon, polyester, acrylics, etc.

Viscose rayon:

Viscose rayon is made by treating wood pulp or cotton linters with certain chemicals. It is therefore called **regenerated cellulose fibre**. There are other types of rayon such as **cuprammonium rayon**.

- i. It is absorbent.
- ii. It is soft and drapes well.
- iii. It is not very strong especially when wet.
- iv. It creases badly.
- v. It has smooth surface.
- vi. It is cool wear.
- vii. It dyes well.
- viii. It is not easily attacked by mildew.\
- ix. It is mothproof.
- x. It resembles silk in appearance only.

Acetate: this also is a regenerated cellulose fibre. It is made from wood pulp or cotton linters treated with acetic acid and acetic anhydride.

- i. It has silk-like rich soft attractive appearance.
- ii. It is fairly cool to wear, but uncomfortable in hot weather.
- iii. It is soft and drapes well.
- iv. It loses strength when wet.
- v. It is moderately elastic.
- vi. It recovers well from creasing.
- vii. It is not very absorbent.
- viii. It dries quickly.
- ix. It does not soil easily because of its smooth surface.
- x. It can be dyed in rich colours.

Nylon: Nylon is the family name for all synthetic polyamides.

- i. It is very strong. Strength is not affected by wetting.
- ii. It resists abrasion well.
- iii. It is very elastic and does not crease easily.
- iv. It does not absorb much water.
- v. It has smooth surface. Therefore it is resistant to soiling.
- vi. It is easy to wash. It dries easily.
- vii. It is light in weight.
- viii. It requires no ironing.
- ix. It is durable.
- x. It is resistant to mildew and moth.

Polyester e.g. Terylene:

Polyesters are also products of complex series of chemical processes using petroleum products and other chemicals. Polyesters include Terylene, Dacron, Tergal, Deden, etc.

- i. They are very strong.
- ii. They are resistant to abrasion.
- iii. They do not stretch very much.
- iv. They do not absorb much water. They therefore dry up easily.
- v. They are easy to wash.
- vi. They are not harmed by heat.
- vii. They are crease resistant.
- viii. They can be permanently pleated.
- ix. They do not dye easily.
- x. They are generally warm to wear

Sub Topic 2: Care and uses of fibers.

care of fabrics

Dirt, dust and grease are some of the agents that make our clothes dirty. Therefore, our clothes need to be cared for by washing, dyeing and ironing them regularly for neater appearance, personal cleanliness and longer life span.

Reasons for the care of clothing

1. To make the cloth last long.
2. To kill any disease-carrying germs in the fabric.
3. To keep the clothes looking clean or better.
4. To save money since clean clothes last long.
5. To ensure that whatever clothes you have will be available for wearing anytime.

Uses of fabrics

Different fabrics are suitable for different purposes.

1. Cotton fabrics can be used for outer personal clothes, underwear, furnishings, bed sheets, pillow cases, tablecloth etc.
2. Linen can be used into different articles such as kitchen linen, like glass-cloth, tea-towels, table-covers, tray cover, serviette, suits, dresses, etc.
3. Wool can be used for under wears, sweaters, socks, suits, trousers, vests, baby wears, soft furniture, etc. they are particularly suitable for cold weathers and temperate countries.
4. Silk fabrics are used for making scarves, ties, dresses, shirts, etc.
5. Viscose rayon is used for bed-sheets, bed-covers, home furnishings, table-cover, under wears, dresses, etc.
6. Acetate fabrics can be used for dresses, evening wears, lingerie, shirts, ties, umbrellas, rain wears, batting suits, etc.
7. Nylon is used for different types of garments e.g. under wears, night-wears, stockings, curtains, carpets, upholstery, etc.
8. Polyesters are used for varieties of dresses, bed sheets, pillow cases, home furnishings, etc.

Weekend Activity:

1. Visit a tailor's workshop. Collect as many pieces of different kinds of fabrics as possible
2. Carry out the following tests, record your observations:
 - i. Appearance and Handling test
 - ii. Microscope test
 - iii. Strength test
 - iv. Burning test
3. Use the identified fabrics to make an album. Label specimens correctly.

WEEK 8

Date-

TOPIC: Textiles: Types, properties, production, uses, and care

SUB-TOPIC 1: Production of textiles

FABRIC CONSTRUCTION METHODS

Fabric construction is the process of twisting fibres into yarns into fabrics or textiles.

Fibres **→** **yarns** **→** **fabric**

Fabric construction methods include:

Weaving: This is the process of constructing fabrics by interlacing two sets of yarns (the warp and the weft yarns) at right angles to produce a woven fabric. Woven fabrics are strong. Weaving is done on looms. The two set of yarns that form the woven fabric are:

- a. Warp: the yarn or thread that runs length-wise in the woven fabric.
- b. Filling or weft: is the yarn or thread that runs cross-wise in a woven fabric. The fillings are carried over and under the warp threads



Loom

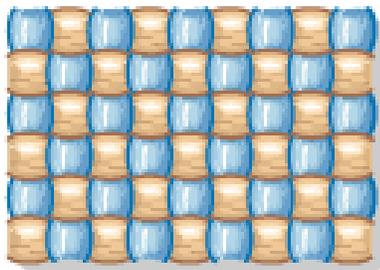
Basic Weaves

There are certain basic methods of weaving by which many variations can be obtained.

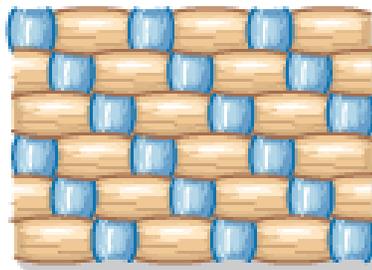
- a. Plain weaves: in plain weave, the weft and warp yarns pass over and under each other regularly and at right angles. Examples of fabrics woven with plain weave include linen, calico, nylon, shiffon, etc.
- b. Basket or Hopsack weave: this is a variation of the plain weave. Weft threads or yarns are made to pass over and under two warp yarns regularly for two rows and

then the arrangement is changed in the next rows. It gives a chequered effect and an interesting texture to the surface.

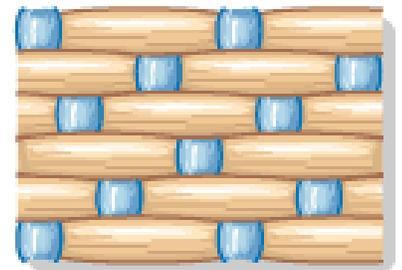
- c. Twill weave: for the twill weave, the weft thread passes over and under one, two or more warp yarns. Each row starts the series with one yarn along to the right or left so that a diagonal line appears on the surface.
- d. Satin weave: for satin weave, the weft or warp threads pass over more threads than are picked up. Long threads result on the surface and give a smooth effect, which gives luster to the fabric, e.g. cotton satin, rayon satin, etc.
- e. Pile weave: this has a plain weave as a background. An extra thread is woven into the warp and weft of the plain weave to make loops. The loops can be cut as in velvets and corduroys or left uncut as in towels or baby's napkins.



plain



twill



satin

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Knitting: The process of constructing fabrics by forming rows of loops with the yarn. The loops support each other like a chain.



Felt or felting: this is a non-woven fabric made by layering thin sheets of carded wool fibres and then applying heat, moisture and pressure to shrink and compress the fibres into a thick matted cloth that will not ravel or fray. Other methods are braiding, knotting, Bonding, etc.

Braiding: this is the process of constructing narrow fabrics by interlacing three or more yarns. Such fabrics are commonly used for trimming.



A woman braiding palm leaves into thatch

Crocheting: is a process of constructing fabric by making a chain of loops from a single yarn, using just one hook or needle.

Production of woven mat

Materials needed:

Cardboard sheets of two different colours, scissors, ruler, pencil and glue or sellotape.

Procedure:

- i. Measure out 1 inch along the length of the cardboard using ruler and pencil.
- ii. Cut 1-inch wide strips of varying lengths of about 9-12 inches strips.
- iii. Weave the short strips vertically through the longer horizontal strips.
- iv. Continue the interlacing with the contrasting colours to form the weave.
- v. Tuck the ends under and secure with glue as you weave the cardboard through or you can trim the edges when you complete the mat.

Sub Topic 2: Manufacture of fabrics

Manufacturing process of cotton fibres:

Cotton fabrics are processed from the bolls by the following step:

1. **Ginning:** This is the process of separating or removing cotton fibres from the seeds. The hairs left on the seeds after ginning are called **linters**.
2. **Baling:** The ginned cotton is pressed into bales. The bales are sent to factory or mill.
3. **Bale breaking:** the tightly pressed cotton fibres from the bales are loosened inside a machine for the impurities to fall out.
4. **Cleaning:** The impurities in the cotton are removed in the mill.
5. **Carding:** At this stage, many shorter fibres are removed. The longer ones are formed into thick ropes. The ropes are called **slivers**.
6. **Combing:** This is the process of removing more short fibres.
7. **Drawing:** This is the process of twisting the ropes and making them ready for spinning.
8. **Spinning:** This is the process of making the twisted into **yarn** or **thread**.
9. **Dyeing:** The yarn can be bleached or dyed into different colours and **woven** into **fabrics**.
10. **Weaving:** the yarns are used to produce fabrics.



Cotton plant with cotton boll

Manufacturing process of linen:

Linen is processed from the stem of flax plant by the following steps:

- i. **Retting:** This is the process of softening the flax stems by letting them rot in ponds or special retting tanks. This separates the fibres from the stem.

- ii. **Breaking and scotching:** These are mechanical treatments that break and remove the woody matter and impurities from the fibres.
- iii. **Combing:** This is the process of passing the fibres through special series of combs to separate long fibres from short ones.
- iv. **Spinning:** This is the process of drawing the fibres into slivers and twisting them for strength. Yarns are produced. The yarns are then woven into fabric.
- v. The yarns can be dyed before weaving.



Flax plant

Manufacturing process for wool:

Wool fibres are processed into two forms:

1. Worsted yarn: This is made from long fibres.
2. Woolen yarn: This is made from short fibres.

The major steps for the manufacturing of both forms are:

- i. **Clipping:** the fibres (fleece) from the sheep. This is cutting the hair. The fleece is then packed in bales and transported to the factories.
- ii. **Sorting:** The process of grading and separating fibres according to length.

- iii. **Scouring:** The process of washing the fibres in soapy alkaline water to remove dirt and grease.
- iv. **Carbonizing:** The process of removing all vegetable matter from the fibres by treatment with acid heat and pressure.
- v. **Carding:** This process separates the matted fibres.
- vi. **Spinning:** This is the process of twisting the fibres into worsted or woolen yarns.
- vii. **Weaving:** The process of making the wool fabrics from the yarn.

Manufacturing process for silk:

A silk worm spins filaments (the fibres) for its cocoon. It then turns into pupa. The fibres are then held together by silk gum. Before the pupa changes into a moth, the cocoon is put into boiling water. This softens the gum. The silk fibre is then drawn from the cocoon. The raw silk is reeled up into skeins and packed into small bundles called books. Silk fibre is very fine or tiny to handle. Therefore, silk is processed by the following steps:

Reeling: this is the process of winding the silk filament from the cocoon. The cocoons are boiled in water to soften the gum so as to unwind the filaments.

Throwing: this is the process of twisting silk fibres to form a strong yarn.

De-gumming: this is the process of removing the silk-gum from the yarn by boiling in soapy water.

Weaving: this is the process of constructing the yarn into silk fabric. Metallic salts in a process known as weighing. This makes the fabric heavier.

Weighing: this is the process of treating the silk fabric with certain metallic salts to give luster and physical weight to the product.

Sub Topic 1: Manufacturing process of Rayon:

Viscose rayon is obtained from the cellulose of wood pulp or cotton linter. The steps involved are as follows:

1. **Purification:** The cellulose (wood pulp or cotton linters) is first purified.
2. **Acid treatment:** The cellulose is then treated with the right chemicals. E.g. caustic soda and carbon-disulphide to form a thick thread-like liquid.

3. **Spinning:** The liquid is then forced through a nozzle containing many fine holes called a **spinneret**. The rayon filament or fibres are produced.
4. **Delustering:** This is the process of adding a white pigment powder into the spinning solution so that the filament will not have metallic luster.
5. **Dyeing:** this may be carried out after the yarn is spun or the dye can be added to the spinning solution.
6. **Weaving:** the spun yarn is woven into a fabric in the process called weaving.

Manufacturing procedure of acetate:

1. The cellulose is purified.
2. It is treated with acetic acid and acetic anhydride, then with water. Cellulose acetate is formed.
3. Cellulose acetate is dissolved in acetone to form a thick liquid.
4. The liquid is spun into filaments or fibres.

Manufacturing of nylon:

Nylon is made by linear polymerization process of the two chemicals, hexamethylenediamine and adipic acid. The steps involved are as follows:

- i. After polymerization, the polymer is extruded in a ribbon form and chipped into small flakes or pellets.
- ii. The polymer is melted and extruded through spinnerets into cool air.
- iii. The nylon filaments that are formed are then stretched to give strength and fineness.
- iv. The nylon filaments can then be woven into fabric.

SUB-TOPIC 2: Laundering of fabrics

Laundry processes are the steps to be followed when laundering personal or family clothes.

They include the following:

1. **Sorting:** this is grouping the materials according to
 - a. Colour
 - b. Types e.g. cotton, wool, polyester etc.

- c. Degree of dirt, and highly soiled fabrics.
 - d. Colour-fast and non-colour fasts.
- 2. **Mending:** this is sewing or stitching split seams or tears and fastening loose buttons and hooks before washing.
- 3. **Stain removal:** removal all stains accordingly before washing.
- 4. **Soak or steeping:** this is leaving the materials in water for some time to loosen surface dirt.
- 5. **Washing:** washing is removing dirt from clothes with the aid of water and soap using any of the following methods:
 - a. Washing by rubbing
 - b. Washing by kneading and squeezing
 - c. Washing by squeezing alone
 - d. Using a washing machine if available.
- 6. **Boiling:** is used when necessary. It helps to whiten and disinfect clothes. Cotton and linen materials could be boiled e.g. babies' napkins, handkerchiefs, white bed sheets, etc.
- 7. **Rinsing:** rinsing is the process by which dirty lather is washed off the clothes.
- 8. **Blueing and stiffening:** blue or stiffening agent could be added to the rinsed clothes if desired.
- 9. **Drying:** drying is the complete removal of water from rinsed clothes. It could be by:
 - i. Exposure to sunshine
 - ii. Exposure under a shady but breezy place.
 - iii. Using an electric dryer.
- 10. **Ironing:** ironing is pressing dried clothes with a hot iron in order to regain their original appearance. For best results, clothes should be ironed while slightly damp or if they are very dry.
- 11. **Airing:** airing is hanging out ironed clothes in the open for a short time before storage. it helps to dry out the steam left in between the threads of the clothes after ironing.
- 12. **Folding and storage:** aired clothes could be:

- a. Folded and stored in a box or drawers
- b. By hanging in a wardrobe.

LAUNDRY AGENTS AND EQUIPMENT

Laundry agents are substances with cleansing properties for washing clothes.

1. **Water:** this is a very important cleaning agent in laundry

Uses:

- i. Water is used for soaking clothes and household articles before washing.
 - ii. It cleanses articles with non-greasy dirt to a certain extent. For instance, sugar dissolves in water.
 - iii. Hot water will melt and soften grease.
 - iv. It is used for rinsing washed articles.
 - v. It is used to dampen articles before ironing.
2. **Detergents:** a detergent is any substance that cleanses or aids the removal of dirt. soaps and synthetic/soapless detergents are all detergents. soap is made by the reaction between fats/oil of animal/vegetable origin, and alkalis. Synthetic detergents are made from mineral oil or petroleum products.

Uses:

- i. Detergents are used to lower the surface tension of water.
- ii. Enable the water to wet the dirty articles/fabrics.
- iii. Break up grease-held dirt in the fabric into tiny particles.
- iv. Remove dirt from the fabric.

3. **Bleaches:**

Uses:

- i. Make white cotton and linen fabrics whiter.
 - ii. Remove certain stains.
 - iii. Kill disease carrying germs in fabrics.
4. **Stiffening agents:** these include different types of laundry starch, as, hot water starch, cool water starch, spray or aerosol starches, gum Arabic, glue.

Uses:

- i. To stiffen cotton and linen fabrics.
- ii. To give the fabrics a smooth surface.
- iii. To give the fabrics a fresh look.
- iv. To make fabrics keep clean for longer period.

Note: A starch article keeps clean longer than unstarched articles. This is because dirt cannot adhere easily to the smooth surface.

5. **Stain removers:** a stain is a spot or a mark made on a fabric which gives a colour that is different from the rest of the surface of the fabric. There are different types of stains e.g. vegetable, animal and grease stains. Each type of stain requires a specific remover, as follows:

Stains removers

stains

- | | |
|------------------------|------------------------|
| i. Methylated spirit | greasy stains lipstick |
| ii. Lemon juice | iron mould (rust), ink |
| iii. Bleach | mildew |
| iv. Kerosene | palm oil, tar |
| v. Turpentine | shoe polsh |
| vi. Ammonia | perspiration |
| vii. Celycerine | chocolate, coffee, tea |
| viii. Enzyme detergent | blood |

6. **Laundry blue:** this is used during the last rinse to improve the appearance of faded white material or materials with a blue background.

Laundry Equipment:

Laundry equipment is classified into groups:

1. **Equipment for washing:** these include:
 - i. Galvanized or plastic buckets and basins.
 - ii. Laundry sinks or tubes.
 - iii. Washing machines.
 - iv. Laundry brushes
2. **Equipment for boiling:**

- i. Stainless steel pots.
- ii. Tongs for turning clothes while boiling.

3. Equipment for drying:

- i. Wooden or plastic pegs.
- ii. Clothes lines.
- iii. Hangers both for indoors and outdoors.

4. Equipment for finishing:

- i. Pressing irons e.g. box and flat, electric and steam irons.
- ii. Ironing boards.
- iii. Ironing pads.