

**FORM 2**  
**HOMESCIENCE**  
**DECEMBER HOLIDAY ASSIGNMENT**  
**2024**  
**WEEK 1**

**Cosmetics**

Are substances used to enhance a persons appearance especially face, hands and feet. E.g nailpolish, lipstick, eye shadow, eyeliner,

Choice and use of cosmetics

Factors to consider when using and choosing;

- one should consider her skin type and complexion when buying,
- should be used sparingly to improve ones beauty,
- should be used skillfully not exaggerating,
- they should bring out ones beauty,

NB:- too much clogs skin pore hence preventing skin from breathing.

- should be washed off before sleeping to allow skin breath,
- should not be harsh ones with chemicals that bleach the skin,

NB:- those with hydroquines and mercury are bad, they get into body and affect the kidney.

Misuse of cosmetics

Ways of misusing:

- (i) borrowing from friends and siblings. They have a bad effect on skin,
- (ii) applying on a dirty face/old make,
- (iii) applying too much, it gives an artificial look,
- (iv) bleaching the skin with make ups.

### **ADOLESCENCE**

It is a period between childhood and adulthood. At this stage certain physical, emotional and social changes take place in the bodies of teens.

It is a stage of maturing into an adult (puberty/adolescence).

Changes in adolescence

Physical changes in boys

- (i) hair on face, armpits, chest and groin (beard and pubic grow)
- (ii) growing rapidly,
- (iii) voice breaking,
- (iv) develop acne (blackheads and pimples develop on face and neck),

Physical changes in girls

- (i) develop breasts
- (ii) hair on armpits (groin),
- (iii) enlarged hips,
- (iv) menstruation periods starts,
- (v) may develop acne,

At puberty adolescents are active, if possible, they should use deodorants for the face to be washed regularly and dried.

- avoid pricking pimples and black heads to avoid further infection.

NB:- Adolescents should observe personal hygiene in order to remain healthy for ones comfort and those around them. A good diet helps teenager cope with the changes.

They should shave/trim armpits and pubic areas because hair in these areas holds a lot of sweat and dirt.

They should take bath daily attention being given to areas that are hairy.

Girls should be extra clean during menstruation i.e the monthly shedding of temporary inner lining of uterus. Happens when reproductive organs of a girl begin maturing. Begins at 13 – 14 years. It occurs when there is no fertilization of egg in ovary. Inner lining of uterus is shed off with extra blood. It lasts 3-7 days.

NB:- sanitary towels should be used. Home made pads can be used e.g wrapping cotton wool in gauze or cotton materials or from pieces of sterile clean absorbent cotton cloth.

Used pads should be disposed off properly e.g wrapping in plastic paper or putting in disposal bags then throwing in dustbin/pit latrine. Can also be burtn.

- one should change towels regularly because bad smell develop if kept on for long,
- one should bath more than once,
- one should also seek doctors advice if she has severe abdominal cramps.

NB:- while bathing, girls should pay attention to the hairy parts of the their bodies and beneath breasts.

### **Emotional and social changes during adolescence**

- because of hormonal changes, they experience mood swings that make them irritable or cheerful,
- they become argumentative and hostile to parents and any authority,
- may enjoy reckless activities,
- may lead to neglect of the body and personal items that can lead to poor health,
- may become social misfits and unacceptable to the society,
- some become shy and self conscious,
- boys may tend to talk less to hide broken voice while a girl may overdress to hide her growing breasts,
- may assume stooping posture to appear shorter if they are taller than age mates. So distort their posture,
- easily influenced by peer groups in terms of behaviour life goals and mode of dressing.

## **CHAPTER TWO (ACTIVITY 2)**

### **PERSONAL HYGIENE**

1. Mention three dangers that may arise due to misuse of cosmetics.(3mks)
2. Give two measures which may prevent the occurrence of athlete's foot. (2 mks)
3. Give two points to consider when buying a pair of shoes. (2 mks)

4. List four points to consider when selecting clothes for a short pump figure. (8 mks)
5. Explain four points that lead to proper maintenance of clothes. (6mks)
6. Mention two dangers that may result from using antiperspirants. (2 mks)
7. State three ways of caring for the skin (3 mks)
8. State two functions of sebaceous gland in the skin. (2 mks)
9. State three functions of teeth to an individual. (3 mks)
10. Why is it wrong to share toothbrushes? Give two points (2 mks)
11. State five ways of caring for the teeth (5 mks)
12. Describe the procedure of cleaning white canvas shoes. (7 mks)
13. State two factors to consider when choosing clothes (2 mks)
14. Give three physical changes that take place in adolescent girls only (3 mks)
15. Identify three of misusing cosmetics (3 mks)
16. State three ways of maintaining clothes. (3 marks)

### **CHAPTER 3**

#### **SAFETY IN THE HOME AND FIRST AID**

Causes, prevention and management of common accidents in the home

##### **Burns**

Causes

Dry heat e.g hot charcoal, hot metal/flames and fire outbreaks, kerosene lamps, candles, cigarettes, matches, open fires, leaking gas cylinders and faulty electrical wiring can cause fire outbreaks, petrol stored in the house, home dry cleaning agents, coils close to beddings and mosquito nets can also cause severe burns and damage of property.

##### **Prevention**

- not leaving children locked alone in the house,
- keeping hot stoves out of children away,
- not smocking in bed,
- using candles while on stand/holder and not leaving them burning unattended,
- storing matches out of children reach,
- not leaving buffes to burn unattended can spread to other houses,

- not burning rubbish unattended to fire may spread to the house

### Scalds

Are caused by hot liquids:

#### Prevention

- hot liquids not to be kept in the pathway/where children can reach,
- not allowing children near boiling pots/hot water,
- keeping boiling pots stable and their handles turned away from human traffic,
- Directing steam away from handlers when opening lids during cooking.

#### **Management of burns and scalds**

- dip injured part in cold water or place under tap of running cold water to relieve pain and to reduce damage of skin,
- Avoid breaking blisters; (i) they protect injured part  
(ii) It is painful breaking them
- avoid removing the adherent clothing,
- if persons clothing is on fire, wrap patient in blanket put out flames,
- avoid using artificial fabric e.g nylon,
- apply petroleum jelly if small burns,
- don't expose to air, it causes more pain,
- bandage loosely,
- severe burns to be attended by doctor.

### **Cuts**

Causes:

Sharp objects cause cuts, scrapes, grazes and abrasion e.g knives, broken glass, sharp edges. Cuts causes bleeding and amount of bleeding depends on wounds depth. Deep cuts can damage nervous system.

#### **Prevention**

- (i) knives should be stored safely out of children reach,
- (ii) should be washed separately not putting together with other utensils,
- (iii) use chopping board when cutting meat and vegetables,

- (iv) dispose empty tins, broken bottles and pots, bury/throw into a pit latrine,
- (v) Keep compound clear of bones, sharp sticks, thorns and splinters.

#### **Management of cuts**

- clean around with clean water/weak antiseptic solutions,
- cover with a gauze/pad of clean cotton wool and bandage,
- Cover minor cuts with a plaster.

If deep and bleeding is severe;

- Press onto wound with clean hands or pad of cotton wool and bandage. Clean out all dirt, gloves should be clean to avoid infecting wounds,
  - wounded part to be raised if limb,
  - tie injured part/limb if bleeding continues with folded cloth/wide belt just above wound, avoid using a string/rope,
- loosen after a few minutes to avoid cutting off blood supply to injured part,
- take patient to doctor quickly to be given an anti-tetanus injection.

#### **Bruises**

Are swellings caused by bleeding inside skin/muscle,

Causes

- one being hit by a blunt object e.g hitting your head against wall,
- open doors, lockers, cabinets and drawers,

#### **Prevention**

- (i) ensuring all doors and drawers are well closed,
- (ii) placing a wedge to prevent doors from banging/slamming,

#### **Management of bruises**

- cooling bruised part with cold water on dumping it with a cloth soaked in cold water,
- keeping injured part slightly raised to cut down amount of blood flowing into to reduce swelling,
- alternate hot and cold water massage after 24 hours,
- use hot water on it for 3 minutes then very cold for ½ a minute, repeat 4 times to speed up healing.

## **Fractures**

### **Causes**

Refers to broken bones.

Caused by a fall, a road accident or heavy blow.

- Can be caused by slippery floors, potholes and cracks on old floor, spilt water/oil on the floor, peelings of vegetables and fruits and badly placed equipment that may make one stumble and fall.

- Loose tiles, littered clothes/books, torn edges of carpets, chipped edges on stairs can also cause falls,

- A house not well lit can also cause falls,

### **Kinds of fractures**

(i) Simple fractures

(ii) Compound fractures

In simple one is broken and cracks can be seen on X-ray. Has pain and swelling.

In compound bone is broken into many pieces (splintered and pieces of bone may pierce through skin. Are very painful and may lead to deformation of limb.

### **Prevention**

- Floors being well maintained,

- Ensuring tidiness in the room,

- Repairing floor coverings immediately,

- Wiping spills immediately,

- Ensuring house is well lit .

### **Management of fractures**

- never push back a broken bone,

- don't massage broken limb,

- avoid moving injured person,

- put splint on broken part using straight stick tie fractured part, securely to immobilize limb.

- use stretcher to move patient,

- seek medical attention.

## **Sprains**

It is a tearing/stretching of ligaments in joint especially wrist of ankle.

Cause

Happens when joint is twisted accidentally e.g stepping on uneven ground.

Symptoms

- painful joint,
- hotness,
- swelling

Prevention

- walking carefully if floor is uneven,
- wearing shoes of comfortable height

### **Management of sprains**

- dipping part in very cold water immediately. It reduces pain and swelling or crushing ice cubes in a plastic bag, wrapping it in a towel and dabbing the injury, should continue for first 12 hours,
  - keep limb raised for next 24 hours to slow down blood flow into joint to reduce bleeding into it,
  - curving some pain reliever,
  - dip the part in hot water severally after 24 hours,
  - avoid massaging the part,
  - serious sprains to be attended to by a qualified doctor,
  - give joint some light exercise if area is free from pain,
- sprain treatment is called RICE

R - Rest

I - Ice

C - Compress

E - Elevate

- It means there should be no movement,
- Ice should be used to compress and injured part to be elevated,
- to know whether it is sprain/fracture an X-ray should be taken.



## **Suffocation**

One will suffocate when fresh air supply is limited,

### **Causes**

- (i) breathing in poisonous gas e.g CO<sub>2</sub> from a charcoal stove in a poorly ventilated room,
- (ii) leaking gas and petrol fumes in a poorly ventilated room,
- (iii) objects e.g polythene bags put over head cuts off fresh air supply.

### **Prevention**

- turn of gas tap after use,
- check tubes, pipes and burners for leaders,
- exercise caution when lighting burners for gas not to flow before lighting,
- dispose plastic bags appropriately to avoid accidents,
- use a charcoal stove in a well ventilated room,
- put off fumes if not in use

Caution (when using gas)

Incase of leakage:

- (i) check source fix it,
- (ii) put off open fires,
- (iii) disconnect and take cylinder out if leakage continues,
- (iv) seek advice,
- (v) ventilate room for few minutes before lighting a fire to income any gas leaked escapes,

### **Management of suffocation**

- (i) take person to an airy places if due to lack of air,
- (ii) if due to polythene paper remove it,
- (iii) seek medical attention if person in unconscious,
- (iv) if due to leakage switch off gas cylinder if from charcoal fumes, ventilate room, keep one window open,

## **Choking**

Causes

Objects e.g food getting stuck in throat/air passage making breathing difficult,

Beads, seeds, small toys, coins, marbles can also cause this if swallowed by children.

### **Prevention**

Teaching children not to swallow foreign objects.

### **Management**

- stand behind patient if an adult hold patient by waist fist against abdomen just above navel below ribs,

- press belly with several strong jerks to compress lungs and force air up throat, to force the stuck object pop out,

NB:- person can also be hit by palm of hand between shoulder blades till objects pops out.

Foreign body in eye

### **Causes**

- eyelash/piece of grit,

- chemical

NB:-

- these irritate eye,

- may cause swelling up,

- may cause burning sensation and itching,

### **Management of foreign body in eye**

- avoid rubbing affected eye,

- lift upper/lower eyelid to expose eyeball,

- ask person to move eyeball to left, right, up and down and look for object,

- try to remove if it is seen by;

(i) flooding eye with clean water,

(ii) allow person blink eye while under water,

(iii) press eyelid with matchstick to expose object,

- remove object with moistened piece of gauze/corner of clean handkerchief,

- cover affected eye seek medical assistance,

- never remove it if its firmly stuck on pupils/iris,

- seek medical advice,

**Management of chemicals in the eye**

- it chemical flood eye with clean water to neutralize if possible force eye open to facilitate entry of water,
- flush it for approximately 10 minutes, dry face lightly, cover eye,
- seek medical assistance,

Foreign body in ear

**Cause**

Child may push a small object into ear/insect may crawl into ear,

NB:

- may cause temporary deafness,
- crawling/brizzing insect may sound frighteningly loud,
- if pushed far may perforate ear drum causing pain and discharge,
- may result to deafness.

**Prevention**

- teaching children not to push foreign objects in ear,
- storing seeds and grains out of reach of children,

**Management of foreign body in ear**

- never use a finger to removed object it may move further inside,
- hold head in a way that the ear is bend towards ground if it is an insect for it to crawl out,
- flush gently with warm water/vegetable oil,
- seek medical assistance if it doesn't come out,

**Foreign body in nose**

Cause

Children pushing foreign objects e.g seeds and beads into nose,

NB:- this can cause discomfort,

pain,

nose-bleeding,

then discharge

**Prevention**

- children being taught not to put foreign objects in the nose,
- storing small objects appropriately,
- keeping seeds and grains out of children reach,

**Management of foreign body in the nose**

- press unaffected nostril with finger and blow nose to remove,

NB:- never attempt to remove it, seek medical assistance, assist children to blow the nose,

- seek medical assistance immediately for small children.

**Shock**

It is a condition of weak rapid pulse, quick shallow irregular breaths, cold, heavy sweating, confusion or loss of consciousness.

**Symptoms**

- air becomes dull, clammy and cold,
- person feels giddy and faint,

**Causes****(i) Electricity**

It causes severe burns, shock and electrocution.

**(ii) Receiving unexpected bad/good news**

Severe pains, loss of blood, severe diarrhoea,

Vomiting

Allergy

**Prevention**

- Electric wires to be well insulated,
- replacing damaged wires,
- teaching children not to push objects into sockets,
- not touching switches with wet hands,
- turning off switches when not in use of power,
- replacing/repairing defective appliances.

## **Management**

- making person comfortable,
- treating cause of shock,
- reassuring person,
- giving hot drink if conscious,
- seeking medical assistance,

## **Fainting**

Occurs because of temporary inadequate supply of blood to brain,  
Persons feels dizzy and loses consciousness,

Causes:

- loss of blood,
- illness e.g anaemia,
- fear,
- receiving bad news,
- seeing injured person/blood,
- being physically weak/having stood on sun for long,

Management

- loosen tight clothing while reassuring victim,
- place him/her in a cool airy place e.g under shade/well ventilated room,
- lay him with head lower than rest of body,
- avoid overcrowding around casualty,
- seek medical attention,

Nose bleeding

Causes

- blowing nose too hard,
- sneezing,
- injuring it with a fingernail while pricking it,
- air pressure changes,
- high blood pressure,

- fractured skull,

### **Management of nose bleeding**

- person should sit with head slightly raised to prevent blood flowing down throat,
- pinch/plug nose for 15 minutes make person breath through mouth,
- cool face with wet cold towel,
- repeat for 15 minutes if bleeding doesn't stop,
- let person spit out any blood flowing into mouth,
- seek medical advice if it persists.

### **Drowning**

#### **Cause**

- water left in basins, karais, bathtubs, and buckets,
- swimming pools, dams and water pools,

A drowning person struggles to breath but water enters airways. One who is drowning will assume a vertical position, make erratic strokes and jerky movements that gradually decrease and stop if he/she fails to get help

#### **Prevention**

- children should not be left unattended,
- water stored in buckets and other container to be covered tightly,
- pools around house to be drained,
- taps to be turned off,
- bathtub should be unplugged,
- bathroom to stay locked,
- cautioning school going children against playing near dams, rivers, pools of water unattended,
- covering any manholes near house.

#### **Management**

- save the person/call for help,
- if victim is not breathing act immediately,
- give mouth to mouth resuscitation (breathing)
- wipe away foreign matter in mouth use fingers wrapped in a piece of cloth,

- there should be no foreign matter in mouth,
- NB:- if a young victim mouth-mouth should be done gently to avoid too much air in lungs.
- Victim should lie down with head lower than feet to get water out of chest,
- Belly to be pressed with strong jerks and mouth the mouth treatment continued,
- Back pressure – arm lift method on chest pressure – arm lift method or artificial respiration can be given to facilitate breathing as well as water ejection from stomach. Repeat whichever method 12 times per minute. Check stomach contents in mouth and keep wiping it.
- Keep victim warm
- Treat for shock, seek medical advice.

#### Bites and Stings

##### Causes

- can be by insects stings with their tails, others bite by mouth, e.g bees, wasps, hornets and scorpions stings,
- spiders, mosquitoes, lice, bedbugs and ticks bite

##### Prevention

- maintaining high standards of cleanliness to avoid infestation by insects and other pests,
- house to be well lit,
- changing beddings regularly and airing properly

##### Management of insect stings and bites

- insects inject poison in the body when they sting and the poison should be neutralized to stop from spreading to body organs,
  - bees live their sting in the body,
  - others sting (bite more than once because they never lose their stings)
- (i) remove sting using fingernails or pair of tweezers of bee stings,
  - (ii) cover part with a paste of baking powder mixed with cold cream or milk, or dab with a cloth that has been impregnated with alcohol/surgical spirit, place ice on sting  
very cold water can be used to clean injured part.
  - (iii) Seek doctors assistance immediately if its;

(a) scorpion/spider bite

(b) victim allergic to insect stings/bites

(c) victim who has been stung by many bees;

Apply paraffin if they are many bee stings to remove them but still consult doctor.

Snake bites

Not all snakes are poisonous but it is always important to handle all as poisonous. Poisonous snakes normally inject poison into the bitten part when giving first aid at stopping poison from spreading to whole body.

Management:

- study bite marks, a poisonous snake will leave two distinct marks made by fangs. sometimes other little marks made by teeth will be seen.

- non poisonous snakes don't leave any fang marks.

NB:- avoid moving part bitten to prevent rapid spread of poison if bitten on foot, victim shouldn't walk, instead should be carried on stretcher, to reduce spread of blood movement and slow down poison spreading,

- cloth should be tied around limb above bite but shouldn't be tight, loosen after every half an hour to allow blood circulation,

- bitten part should be wiped with a cloth to remove poison that may be on skin,

- cut injured part using a clean sharp razor blade/tip of a sharp knife four times working parallel to length of limb,

- gently but firmly press sides of injured wound to bleed so that poisoned blood can be removed,

- untie and retie area above injury at intervals of 15 minutes for oxygen to reach area beyond injury,

- treat for shock,

- seek doctors advice,

### **Poisoning**

Causes

- taking an overdose,

- swallowing/inhaling insecticides, pesticides, medicines, kerosene and household cleaning agent,



- using cosmetics, creams that have hydroquinone/mercury,
- eating/touching wild plants/fruits e.g datura stramonium
- storing grains in damp conditions have aflatoxin that can cause food poisoning,
- eating poisonous parts of some food e.g pith and skin of cassavas,

### **Prevention**

- labeling medicines, insecticides, pesticides and other poisonous substances and storing out of children reach,
- washing hands thoroughly with soapy warm water after handling pesticides and insecticides and not storing chemicals near foods,
- not storing paraffin and other clear liquid chemicals in soda juice or water bottles. Children mistake them for drinks/water.

### **Management**

(i) look for clues that may help identify the substance taken e.g container/label/stains on lips/colour of vomit,

NB:- take container to doctor for present/if no clue taken vomit to doctor for analysis.

(ii) Check if lips are dry; NB:- avoid inducing vomiting if victim complains of burning sensation in throat and pain in stomach because substance may be corrosive which when vomited can cause further damage to throat instead give plenty of water to dilute the poison and facilitate removal through kidneys.

(iii) If acidic poison taken neutralize it by giving victim an alkaline drink e.g milk of magnesia, 1 teaspoon for every cup of water or give milk, egg white or soap solution; NB:- avoid synthetic detergents.

(iv) For alkaline poisons give a fruit juice to neutralize and seek medical assistance quickly.

(v) If a clear substance is one taken and is not corrosive induce vomiting by pushing 2 fingers down the throat or by giving raw eggs.

NB:- patient should vomit while bending forward to ensure vomit doesn't get into lungs give plenty of milk/warm water having baking soda for every half a litre, this is to dilute poison in the stomach, inducing vomiting can be repeated

(vi) Take patient to doctor.

## **FIRST AID**

It is the immediate help given to a person who has had an accident/sudden illness before taking him/her to the doctor. Include attention given to small injuries for quick healing

### **FIRST AID KIT**

- it is essential in every school and home,
- it is a must in public vehicles e.g matatus and buses,

NB:-

- should be kept in a safe place
- easy to reach
- children should be taught how to use it.

### **Items of a First Aid kit**

- Bandage,
- Clinical thermometer,
- Cotton wool,
- Safety pins,
- A pair of tweezers,
- Pain relievers/painkillers,
- Clean drinking water,
- Small pair of scissors,
- Plasters,
- Triangular sling,
- Antiseptic,
- Petroleum jelly,
- Sterile gauze.

### **Medicines**

It is any substance taken to relieve pain/cure illness.

Basic instructions on using medicines

**Dosage:-** is the recommended amount of medicine to be taken at any time. It depends on age of patient.

**Frequency:-** is the intervals at which medicine is to be taken, i.e how often the medicine should be taken e.g once, twice/thrice a day. May or may not specify time in relation to meals.

**Duration:-** is how long medicine should be taken before being discontinued.

**Storage:-**

Gives instructions on how medicine is to be stored e.g keeping in a cool dry place in a fridge, away from children or direct sun.

**Instructions for use;**

e.g shaking well before use and keeping container tightly before storage.

**Caution**

Advising patient not to drive, drink alcohol or operate a machine after taking the medicine.

Difference between misuse and abuse of medicines

- **Misuse** – deviating from basic instructions regarding use of a type of medicine.

- Giving someone else medicine in belief that your illness are similar

- **Abuse;**

(i) taking someone else's medicine in belief that your illness are similar,

(ii) continuing to take a type of medicine which has been prescribed by doctor till you become addicted.

(iii) using the medicine for other reasons e.g to get intoxicated, procure an abortion, sleep, commit suicide (homicide etc),

**WEEK 2**

**CHAPTER 3 (ACTIVITY 3)**

**SAFETY IN THE HOME AND FIRST AID**

1. Suggest two measures to take immediately when nose bleeding occurs. (2mks)

2. Name four items in a first Aid kit that can be used to manage burns. (2mks)

3. Define first Aid. (2mks)

4. What causes fainting? (1mk)

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5. Define first aid. (2mks)

6. State three aims of first aid. (2mks)

7. Differentiate drug abuse from drug misuse. (2mks)

8. Give three points to consider when administering first aid to a victim of poisoning. (3mks)
9. State two precautions to take when handling choking in children. (2 mks)
10. Identify three major causes of suffocation. (3 mks)
11. What is RICE treatment in first Aid? (2 mks)
12. State three preventive measures to take to avoid cuts at home. (3 mks)
13. Write down the procedure to follow when handling someone who has been bitten by a venomous snake (8 mks)
14. Write down the procedure to follow when handling someone who has been bitten by a venomous snake. (8 mks)
15. State three precautions to take when handling a foreign body in the eye. (3 mks)

#### **CHAPTER 4**

##### **HOUSING THE FAMILY**

A house is a physical structure that provides shelter for family members and possessions. It protects family from unfavorable conditions, wild animals and enemies.

Types of houses

Houses differ in design, structure and materials used,

Resources available determine type of house to built.

Traditional houses/huts

- Are circular in most cases apart from maasai ones,
- Are built of wooden poles and sticks,
- Are thatched with grass, palms and reeds,
- Walls are smeared with mud and cow dung,
- Are divided into specific areas depending on family needs.

##### **Modern houses**

- Are an improvement of traditional houses,  
e.g roofs, improving from grass thatched to corrugated iron roofs/tiles, walls from mud smeared ones to cemented, mud walls and use of wood to bricks, stones and concrete, floors from earthen to cemented, wooden (parquet) terrazzo and tiled floors. Windows made of

metallic/wooden and glass panes same to doors.

### **Bungalows:**

Are houses with all rooms on one floor. Found in rural and urban areas.

#### **Advantages**

- Are convenient for families with young children, old and physically impaired since all rooms are on same floor,
- Are cheaper to build and easier to extend than maisonnette,
- More private than maisonnettes and flats.

#### **Disadvantages**

- Occupy a lot of space all rooms are on same floor,
- Don't offer adequate security.

### **Maisonnettes**

- Are houses with some rooms on ground floor and others on upper floor,
- They may be attached, semi-detached/detached,
- Semi-detached ones share one common wall detached don't share any wall,
- Attached share common walls.

#### **Advantages**

- Saves land space, some rooms are above others,
- Family safe from break and several units are together,
- Saves building materials because units share common walls,
- Semi detached are private.

#### **Disadvantages**

- Sometimes rooms are too close to provide enough privacy,
- Not easy to demolish/extend a house at ones will,
- Pests can crawl from one house to another,
- Fire can easily spread from one house to another.

### **Flats/Apartments**

- Are complete houses on several floors,
- Common in urban areas.

### Advantages

- Saves on land because several housing units can be on same plot,
- Saves building materials because they share walls.

### Disadvantages

- Noise can distract if walls are not sound proof,
- Climbing, staircase is tiring for those living upper floors especially elderly and physically disabled.
- Pests can crawl from one side to another,
- Children and elderly, physically, disabled can fall downstairs,
- Difficult to compound clean.

### **Essential areas and their placement in the house**

- The living room (sitting room/entertainment area),
- The kitchen/cooking area,
- The dining room/or eating area,
- The storeroom/or the storage area,
- The bedrooms or sleeping area,
- The toilet and bathroom/sanitation area.

NB:- when planning a house position of rooms in relation to each other and purpose to consider areas with related activities to be near each other, e.g eating area near cooking area; toilet should be near kitchen; sleeping area to be away from entertainment area to allow for relaxation and privacy.

#### The living room

- Should be accessible from main door and front,
- Adequate space should be provided.

#### The dining room

- Space should be enough,
- May be part of living room/ a separate room,
- Should be close to kitchen and living room.

### The bedroom

- Should provide space,
- Should provide maximum comfort,
- Should provide privacy and relaxation,
- Should be away from noisy areas, idle living room and kitchen.

### Sanitation area

Includes bathroom/bathshelter and toilet or latrine,

- Should be easily accessible from living and bedroom,
- Should be away from kitchen.

### The kitchen

- There should be direct access to the dining room and food store,
- It should be accessible from main door and bedrooms without passing through sitting room,
- Work centres should be arranged in a way that energy and time are saved,
- Kitchen window should be large enough to allow in plenty of air and light.

### **PLANNING AND EQUIPPING THE KITCHEN**

(a) The one wall plan kitchen type;

- work centres are arranged in a row

e.g cooker, sink, fridge and food store are all in one row,

NB:- there should be enough space between 2 opposite walls to allow doors and cabinets open freely.

(b) The L plan kitchen type

Work centres are on two adjoining walls.

(c) The U plan kitchen type

Equipment arranged along three walls forming a U shape,

Advantages: it produces enough floor space between 2 opposite walls to allow doors of equipment and cabinets open freely.

### **METHODS OF PROVIDING FAMILY SHELTER**

- (i) building a house,
- (ii) renting a house

(iii) buying an already built house

(i) Building a house

**Factors to consider when building a house;**

(a) Site

Should be close to social amenities e.g roads, water, electricity, sewerage system, a hospital, a shopping centre and schools.

(b) Type of soil

Should be one that is not difficult and costly to manage.

(c) Drainage

Soil should be well drained not to flood during wet season, to prevent damage to property and leads to dampness that is a health hazard and to support foundation of the house.

(d) Neighbourhood

The environment should be safe, it should not be near factories, airports and sewage plants for health reasons.

(e) Cost

Includes cost of land, architect fee, legal fees and cost of materials and labour used when building house. It should be affordable.

(f) Size of family

A family with many children of both sexes may require more rooms and family that entertains many visitors requires a larger sitting room.

**Types of materials**

**Geographical area**

Materials used should be ones that allow house to remain cool e.g makuti at the coast while in cold regions, materials used should allow house to remain warm.

**Availability**

Some materials are easily available in certain areas e.g brick are common in certain areas of eastern.

**Durability**

It determines how long the house will be used.



**Orientation**

Refers to positioning of house in relation to sun, direction of wind and nearness to main road.

**Size of land available**

It determines type of house to be built whether a bungalow, maisonette or flat.

Buying a house

**Factors to consider when buying a house;**

(i) Cost

Price and other charges by legal and valuation fees should be within financial means of buyer.

(ii) Value of house

Seek professional advice on value of house to determine whether it is worth price

(iii) Location of house

It should be in relation to distance from place of work, schools, means of transport and other social amenities.

(iv) Construction

Should be well built and should have surfaces and fixtures that are durable and attractive.

(v) Orientation

Should take best advantage of natural view.

(vi) Family requirements

Should have adequate space to meet needs of the family members.

(vii) The reliability of seller

All legal documents to be available and valid before final transaction.

Renting a house

(i) Income

Family should rent a house that they can easily afford without straining.

(ii) Life of family

A large family will require a big house

(iii) Composition of family

It determines size and type of a house. A family with both boys and girls need separate bedrooms for both sexes.

(iv) Place of work and schools

It should be near place of work and schools to avoid spending much on transport.

(v) Social amenities

Consider social environment i.e security and behaviour patterns of the community in area.

### **WEEK 3**

#### **CHAPTER FOUR (ACTIVITY 4)**

##### **HOUSING THE FAMILY**

1. Explain four factors to consider when choosing a plan for a family house. (4mks)
2. Mention the three centers of work that make up the work triangle in the kitchen. (3mks)
3. State two ideal positions for a pit latrine in a homestead (2mks)
4. State two disadvantages of maisonettes (2mks)
5. Define a house. (2mks)
6. State two disadvantages of bungalow housing design. (2mks)
7. State two factors to consider when buying a house. (2mks)
8. State two advantages of traditional houses. (2mks)
9. Give two reasons why U- plan kitchen type is said to be the most convenient. (2mks)
10. State three disadvantages of renting a house. (3mks)
11. Give two reasons why flat designs are not suitable for the young and the elderly (2mks)

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### **CHAPTER 5**

#### **CARE OF THE HOME**

- A house is a basic necessity for people so that always be kept in order.
- Living in dirty and unpleasant conditions is a health hazard,
- It should be cleaned for comfort, health and safety.

Classification of dirt/dust

(i) loose dirt

(ii) fixed dirt

(i) Loose dirt

It is composed of very small light organic or inorganic particles e.g soil, ash, soot, chalk, dry leaves, scraps, or hair and skin that can be carried from one place to another.

(ii) Fixed dirt

It is dirt which when it comes into contact with water or grease, it sticks onto surface of an article.

It can also be due to air and moisture forming tarnish in metallic materials e.g of fixed dirt.

(a) stains

(b) mud

(c) tarnish/rust

Basic cleaning equipment and materials

Cleaning equipment

e.g

(a) sweeping broom

(b) scrubbing brush

(c) cobwebs brush

(d) toilet brush

(e) dustpin and dustpan brush

(f) clothes brush

(g) bottle brush

(h) buckets

(i) basins and karais

(j) dusters

(k

) mop and mop bucket

(l) floor cloth

(m) scoring pad

Cleaning materials and agents

Examples of cleaning materials and agents:

(a) detergents

(b) grease solvent

(c) crease absorbents

(d) metal polishes

- (e) glass cleaners
- (f) abrasive powder
- (g) toilet cleaner
- (h) air fresheners

#### Broom and brushes

##### Materials for making brooms and brushes

- Handle made of wood, metal/plastic can be plain, painted/varnished
- Broom fibres on head may be made of animal hair, vegetable fibres, grass, straw synthetic filaments.

##### A. Animal hair

###### (1) Horse hair

Makes good quality sweeping brooms and brushes

Disadvantages: It is expensive

###### (2) Bristles

- it is from animal of the pig family,
- it is strong and resilient,
- it is thick at base and tapers towards end. Mass so ideal for sweeping and collect dust well,

###### (3) Goat hair

- it is very soft and made of goat's hair,
- used to sweep delicate surfaces,

##### B. Vegetable fibres

Produces stiff brooms and brushes

###### (1) Bass

- it is strong wood fibrous material, also called bast fibre
- it is from inner fibrous bark of plants e.g flax, hemp and jute,
- it is stiff and used for making yard brooms,

###### (2) Bassive

- from palm trees,
- if it finer than bass and often used as a substitute,

Coconut oil

Used for making stiff brooms, it is the midrib/leaflets of palm trees.

Sisal

It is for brooms and brushes, it is not very stiff and used for sweeping floors.

C. Grass/straw

For making brooms and brushes.

- it is cheap

- for sweeping earthen floor and cupboard.

D. Synthetic filaments

- for making brushes e.g nylon,

- it is strong and resilient,

Advantages: it doesn't absorb odours and moisture, it dries quickly.

Disadva. If of poor quality it crumples and tangles after use,

Choice of brooms and brushes

(i) buy them for right purpose,

(ii) bristles should be soft/hard and pliable depending on purpose intended for,

(iii) bristles to be closely and firmly fixed,

(iv) handle to be smooth and of comfortable length,

(v) broom to be light in weight,

(vi) handle to be firmly fixed into head, outer end should have a hole/depression for hanging in order for storage to be easier.

(vii) Head to be smooth and curved at edges to avoid damaging furniture,

(viii) Wooden part to be appropriately finished for easy cleaning,

(ix) Materials used should be durable for brush to last long.

Daily care of brooms and brushes

(i) remove fluffs threads and bits of hair,

(ii) shake off any dust after sweeping,

(iii) store by hanging/placing upright on handles to avoid damaging bristles,

Special cleaning of brooms and brushes

- (i) prepare warm soapy water, wash bristles by flicking them in water to remove dirt. Remove dirt if any bits of hair and dirt use a wire or smooth stick then wash,
- (ii) rinse in warm water then cold to refreshen bristles,
- (iii) clean handle and head carefully depending on material and finish,
- (iv) flick broom to remove excess water,
- (v) dry brooms and brushes outside by hanging/placing sideways to drip, if laid on back water soaks into wooden part making it rot,
- (vi) put toilet brushes in special containers head facing downwards,
- (vii) dry them completely,
- (viii) hang in a special cupboard/broom rack, bristles facing upwards to avoid flattening.

Points to note when cleaning brooms and brushes

- wash them outside the house,
- use plain water when washing coconut ones because soap softens them, add the ammonia washing soda,
- clean stiff brooms and brushes without using detergent to avoid becoming bristle,
- those for brushing need both soda and detergent to ensure removal of all polish,
- wash and rinse toilet brushes in disinfectant water,

Dustpans

Can be of plastic / metal, have a flat base.

Choice

- should be strong,
- edge should be open for dirt and dust to be swept into it,
- edges must be smooth to avoid accidents and damaging of furniture,

Care of dustpans

- don't bang,
- brush off after use and store appropriately,
- wash weekly in hot soapy water,
- rinse dry and store by hanging,

buckets, basins, and karais

Choice of basins and buckets.

NB: Disadv.

- Galvanized iron buckets are heavy and cumbersome, Adv.

Are strong and durable

NB-

- Enamel ones will cheap and rust easily,
- Plastics ones are light and easy to clean, they also don't chip.

Care of basins and buckets

- wash using warm soapy water

after use:

- rinse and dry well,
- store away from dust,
- avoid drying on the sun they may bulge and crack,
- avoid drying near fire they will warp,
- avoid dropping and knocking them over to prevent cracking,
- don't use harsh abrasives they will scratch it,
- don't store water in galvanized ones for long they will rust

### **FLOOR CLOTHES**

Choice

- should be made from thick and absorbent materials,

Care of floor clothes

- wash after use with soapy water,
- rinse dry, store appropriately,

Dusters

Are for removing dust and buffing polished and painted surfaces.

Choice

- should be of a fabric that can remove dust,
- should be able to hold dust,

**Care**

- wash thoroughly in warm soapy water,
- rinse in warm water finally in cold,
- dry in open air,
- store in a dry well ventilated place,

**Mops**

Floor dusting ones are for dusting floor surfaces after sweeping,  
Furniture dusting ones are for dusting furniture,  
Floor polishing mops are for polishing and buffing surfaces,  
Wet mops are for tiled floors.

**Choice**

- should be made of twisted cotton yarn,
- should have a removable handle for convenience when washing,

**Care of wet mops**

Wet mops are used together with a mop bucket to clean,

- should be washed and rinsed well,
- should be dried well after use,
- should be occasionally disinfected.

NB:- mops are for buffing polished floors.

- should be washed well after use,
- should be dried and stored properly (impregnated ones are used for shining floors).

**Sponges and cleaning clothes**

Are for various cleaning e.g kitchen clothes and floor clothes.

**Choice**

- should be highly absorbent,
- should be made of strong fibre,

Care of sponges and cleaning clothes

- wash with soapy after use,



- rinse thoroughly,
- squeeze out excess water dry well,
- store away from dust.

Chamois leather

Is soft leather made from skin of goats,

Used for polishing glass and smooth surfaces.

Care of chamois leather

- wash in warm soapy water,
- rinse and dry in a cool place,
- store when dry

### **IMRPOVISING CLEANING EQUIPMENT & MATERIALS**

Examples

Long grass, reeds/twigs used to make brooms.

a) Grass and reeds

- collect long green grass and reeds,
- take a reasonable amount, tie tightly using a string,
- fold top edges back tie again to make firm and to produce a neat edge,
- trim cover edges evenly.

b) Twigs

- Collect greed twigs,
- Trim well to a uniform length,
- Tie firmly at upper edge,

Improvising brushes

Cobweb brushes,

- use sisal/coconut fibres,
- tie well round a long smooth stick,
- trim

Bottle brushes

- use sisal/coconut fibres,

- tie well around a small smooth stick,
- trim

#### Dustpans

- use a flat piece of tin/debe, cardboard paper, an old jerrycan/large rectangular plastic bottle.

#### Cleaning clothes

- use old sheets, clothes
- should be washed and cut neatly into required sizes,
- hem edges,

#### Floor clothes

- use old bedcovers, blankets, towels and sheets,
- should be washed clean,
- should be cut neatly into required sizes and edges hemmed.

#### **IMPROVISED ABRASIVES**

- charcoal,  
crush charcoal into a powder  
store in a covered container
- sand sieved
- rough leaves  
shouldn't be from poisonous plants,  
should be fresh,  
clean before use,
- sisal
- crushed egg shells
- maize cobs

#### **Reasons for cleaning a home**

Cleaning is the removal of dirt and any other foreign matter from the surface of an article, a household furnishing or any other item;

Why clean;

(a) For preservation of appearance

Dirt is removed from surfaces so that the original appearance is retained.

(b) Prolong life of the article/surface

If dirt accumulates it destroys surface as harsh methods of removal will be applied and will erode surface.

(c) Ensures healthy environment

Dirty conditions encourage breeding of disease spreading insects e.g flies, mosquitoes and pests e.g rodents.

(d) Psychological satisfaction

A clean tidy home makes family feel comfortable and motivated to stay in the house.

(e) To cut down costs

Fixed dirt requires expensive cleaning agents and takes time and energy to remove.

## **METHODS OF REMOVING DIRT FROM SURFACES**

### **1) Sweeping**

- collect all necessary equipments,
- move movable furniture to one side, cover foodstuffs,
- close windows and doors to prevent dust from being blown by wind,
- sweep from farthest corner coming towards door,
- maintain good posture not to get fixed,
- sweep with a long low strokes to avoid rising dust too much,
- head of broom to be kept down to ensure all dust is trapped between bristles,
- stand behind broom not to get dirty,
- sweep all parts of room methodically,
- gather all dust together at a point, collect using a dustpan and brush,
- put collected dust in a sheet of newspaper with dirt picked from broom wrap burn/put in a dustbin,
- rearrange furniture, open windows and doors to air room,
- dust all surfaces methodically,
- clean used equipment, store appropriately,
- if earthen sprinkle a little water over whole surface to reduce amount of dust that is to be

raised.

## **2) Dusting**

- should be after sweeping a room

Procedure:

- Fold duster to form a pad because it removes dirt effectively,
- Work methodically from top downwards,
- Unfold and refold duster to expose clean surface, dust till thoroughly done,

## **3) Scrubbing**

A method used to remove fixed dirt from surfaces e.g surfaces made from stone, cement terrazzo and plain wood;

Procedure;

- use warm soapy water and hard scrubbing brush from farthest end to room,
- scrub a small area at a time using circular motions along grain,
- rinse scrubbed areas by wiping with clean cloth rinsed in warm water,
- overlap sections work towards door,
- dry surface

## **4) Suction**

A vacuum cleaner is used to remove dirt from surfaces.

Advantages:

Loose dirt is not blown about from surfaces instead it is sucked into a bag attached and can be disposed later.

Types of vacuum cleaner

- (a) upright suction cleaners,
- (b) cylindrical suction cleaners,
- (c) round suction cleaners.

Use and care of vacuum cleaners

- (a) follow manufacturers instructions to avoid damage to both machine and surface being cleared,
- (b) emptying dust bags regularly if too full they strain motor hence wear it or tear dirt bag,

- (c) storing in a cool dry place to avoid damaging it,
- (d) servicing a cemented dealer to avoid damage,

### **5) Wiping**

Used on floors that can be damaged by scrubbing and scouring;  
e.g PVC flooring, tiles & painted and varnished surfaces.

Procedure;

- (a) wipe floor with a mop, sponge/cleaning cloth from warm soapy water, if stubborn dirt rub using mops, sponge or cloth with a mild abrasive,
- (b) rinse with a cloth from warm water then cold to remove dirt and soap,
- (c) dry,
- (d) buff to shine

Removal of fixed dirt

Should be removed with help of a cleaning agent.

Type of agent to use depends on

- (i) nature of dirt,
- (ii) surface from which dirt is to be removed

Agents used

- water,
- soap and soapless detergents,
- abrasives e.g scouring powder and pads,
- grease solvents e.g kerosene, benzene and turpentine,
- absorbents e.g chalk, blotting papers

### **Cleaning different rooms in the house**

Daily cleaning

It is removal of loose dirt from rooms and surfaces on daily basis e.g sweeping, brushing, dusting and suction.

- It involves tidying up, that is putting household items back to their normal place.

Weekly cleaning

Involves removal of both loose and fixed dirt,

- It is thorough cleaning done once a week e.g sweeping, dusting, suction, scrubbing and wiping.

Special cleaning

It is thorough cleaning done occasionally once a month.

- Assign cleaning different surfaces; pg 88 – 105.

## **CHAPTER 5 (ACTIVITY 5)**

### **CARE OF THE HOME**

1. Suggest two ways in which old newspapers may be used when cleaning a house. (2 mks)
2. List three ways of improvising cleaning agents in the home. (3 mks)
3. Suggest two qualities of a good bathroom floor. (2 mks)
4. List three ways of caring for galvanized iron buckets in the home (3 mks)
5. Mention three desirable characteristics of a duster. (3 mks)
6. Give two reasons why buffing the floor after polishing is necessary (2 mks)
7. What safety measures should be considered when arranging furniture in the sitting room? (3 mks)
8. State six factors to consider when choosing long handled brooms and in each case explain why? (6 mks)
- 9 List two improvised abrasives in the house. (2 mks)
10. Identify three tasks that are carried out only during special cleaning of a bedroom.( 3 mks)
11. Give three reasons for removing dirt from surfaces (3 mks)
12. Identify two areas in a house where high polishing should not be done (2 mks)
13. Describe the procedure of thorough cleaning a wall with oil paint. (6 mks)
14. Describe the procedure of thorough cleaning a cemented floor. (7 mks)
15. List down 8 tasks carried out when caring for a home compound. (4 mks)
16. State the classification of dirt. (2 mks)
17. State two reasons for cleaning a house (2 mks)
18. What are grease solvents? (1 mk)
19. Differentiate fixed dirt from loose dirt (2 mks)
20. Give two points on daily care of brooms (2 mks)

21. Give two reasons why galvanized iron basins are unpopular today (2 mks)
22. What is a mackintosh? (1 mk)
23. Explain suction (3 mks)
24. Describe the procedure for cleaning a highly polished floor. (8 mks)
25. With reasons describe the procedure for weekly cleaning a pit latrine. (10 mks)

#### **WEEK 4**

#### **CHAPTER 6**

#### **KITCHEN EQUIPMENTS**

They include: Equipment used in preparing, cooking, serving and storing food.

Classes

(i) Large kitchen equipment

e.g cookers, refrigerators, dish-washers.

(ii) Small kitchen equipment

include kitchen tools, e.g knives, spatulas, can openers, potatoe peelers, egg whisks, baking tins and casserole or pyrex dishes.

(iii) Time and labour saving kitchen equipment

- Are manufactured to ease food preparation by making it faster, energy saving and convenient.

- Are time saving and labour saving though expensive.

- Useful in hotels, institutions of higher learning and hospitals e.g dishwashers, potato peelers, food mincers, food slicers, microwave ovens and small electrical appliances e.g kettles, coffee makers, toasters, food mixers and blenders.

Nb: used where largescale cookery is done.

General points to consider when buying kitchen equipment

(a) Requirements/needs of family

It should adequately serve the needs of family.

(b) Space available

There should be adequate space to store large kitchen equipment.

(c) Efficiency of equipment

Any bough should perform its specific function properly.

(d) Availability of service and spare parts.

Should be readily available for large and labour saving equipment.

To avoid them becoming useless

(e) Type of material

Material should be appropriate, durable and easy to clean.

(f) Cost/affordability of the equipment

Should be affordable to family.

(g) Size

Size should cater for diverse cooking needs of family.

(h) Type of fuel

Consider fuel availability when buying cookers, refrigerators and appliances.

(i) Ease of use

Should not be too complicated for user. A manual should be provided.

### **Large Kitchen Equipment**

Cookers:

Is used for surface cooking, baking, roasting and boiling foods.

- Operated by gas, electricity/combination of two.

- May not have an oven and grill.

Care of a cooker

- Switch off gas tap/main switch, if charcoal/firewood remove all charcoal and firewood.

- Switch on when cooking utensils are on the hot plate for economical use,

- Wipe spills immediately to prevent formation of permanent stains,

- Avoid storing utensils in the oven/top of cooking surface to avoid damaging the appliance,

- Avoid using non heat resistant materials for cooking,

Cleaning

- Turn off current from main switch,

- Wipe surface after use,

- Rinse and dry a mild abrasive can be used,

- Occasionally remove movable parts, clean appropriately, clean metal surface underneath.



- Light gas burners when it dries to ensure they are working.

### **Microwave oven**

- It cooks, defrosts and reheats foods in a fraction of time required for conventional ovens/cookers.

- Food is cooked by high frequency energy called microwaves.

- As food absorbs waves, the molecules within it vibrate against each other friction produced creates heat that cooks food.

Care of a microwave oven

- Use microwave glass and plastic for cooking because metal ones reflect waves,

- Shut microwave door firmly after food is put in switch on,

- Avoid tampering with safety switch in case of an electrical fault instead get a qualified technician or manufacturer,

- Avoid switching the appliance when oven is empty,

- Clean with a cloth wrng out of warm water,

- Avoid abrasives when cleaning.

Oil stoves

Use wicks/pressure

### **Care:**

Should be stored in a safe dry place to avoid rusting.

Cleaning an oil stove

- clean regularly,

- wipe any food spills with a cloth wrung out of hot soapy water,

- dismantle occasionally and clean thoroughly,

- wash wicks in hot soapy water to avoid smoking,

- rinse in warm water dry them thoroughly,

NB:- never allow water in the kerosene tank instead when cleaning rinse it with paraffin.

Charcoal stove

- it uses charcoal/coffee husks, saw dust, maize cobs and cow dung,

- the energy saving uses less fuel because of the ceramic lining on inner side that acts as an

insulator hence conserve heat.

Care:

- avoid spilling foods and liquids on the ceramic lining to prevent it from cracking,
- NB:- To conserve heat and energy, use a cooking utensil same size as cooking surface.

Refrigerator

Stores perishable foods e.g meat, fish, poultry eggs, vegetables and milk.

Types

Absorption refrigerators that use gas/paraffin.

Compression refrigerators : are electricity powered and action of internal motor causes some noise and vibration. Are cheaper to maintain as they freeze more rapidly.

Care of a refrigerator:

- All foods to be covered to prevent absorption of odours,
- Hot foods should never be stored in it they reduce efficiency leading to spoilage of foods,
- The door should not be left open,
- Avoid storing it under direct sunlight, near cooler/near water heating equipment.

Cleaning of the refrigerators

- wipe spills immediately,
- occasionally remove all contents defrost clean appropriately,
- use warm soapy water clean all parts rinse with cloth wrung from warm water and dry,
- wipe all container return to the fridge,
- defrost regularly to improve efficiency.

Small kitchen equipment

- (a) measuring and weighing equipments,
- (b) cutting tools,
- (c) shaping and mouldering tools,
- (d) separating tools,
- (e) shifting, mixing, turning and scooping tools,
- (f) oven/baking utensils,
- (g) pans and pots

## **Points to consider when buying small kitchen equipment**

### **(a) Type of equipment**

- should be one suitable for function
- easy to clean and durable,
- if oven pans and pots should be good conductor of heat,

### **(b) Size**

- choose a variety of sizes that will cater for different cooking requirements.

### **(c) Ease of use**

- all equipment should have firmly fixed parts that fit well into each other,
- for knives, spoons, pans and pots, handles should be comfortable and made of heat resistant materials,
- saucepans and saucepots should have a flat and even base to ensure they are well balanced and prevent them from tilting over,
- should have sides with a rounded bend at bottom to avoid dirt hiding in and to make cleaning easy.

### **(d) Purpose**

- ensure equipment is for the right purpose.

### **Measuring and weighing equipment**

- to get accurate results in cookery, one should use accurately weighed ingredients and should be in correct proportions, e.g measuring jugs, measuring cups, measuring spoons and weighing balances,
- measuring and weighing equipment may be made of plastic, metal/glass.

### **Care of measuring equipment**

- should be used correctly to get good results,
- should not be overloaded to avoid spoiling them.

### **Cleaning the measuring equipment**

Should be cleaned according to the materials rinsed dried and stored appropriately.

### **Cutting tools**

e.g knives, kitchen scissors, potato peelers, fish and egg slicers.

- Cuts, peels, chops, slices food during preparation and service.

### 1) Knives

Vary in type depending on functions e.g utility (kitchen) knife

paring (vegetable) knife

butchers knife

carving knife

palette (pastry) knife

knife and fruit knife

### 2) Graters

Are flat square/cylindrical with holes punched/drilled into it. Have metal, plastic/wooden handles and have fine medium and coarse cutting section.

### 3) Egg slice

Used to slice hard boiled eggs.

Care of cutting tools

(i) should only be used for foodstuffs for cutting edge not to become blunt or damaged.

To also ensure foreign flavours are not introduced into food.

(ii) use for right purpose to avoid making blunt,

(iii) avoid soaking wooden ones or those with wooden handles, it causes warping, discolours them and loosens joint.

(iv) blade of knife shouldn't be exposed to open flame it destroys the knives tang,

(v) the blade to be sharpened regularly using sharpening steel, oilstone/an electric sharpener to improve efficiency,

(vi) knives to be stored individually to prevent blades from coming into contact with each other.

Care of cutting tools

- clean according to materials,

- pay attention to joints and grooves to avoid accumulation of dirt.

### **Shaping and moulding tools**

e.g chopping and pastry boards

- rolling pins

- jelly moulds,
- meat tenderizers
- potato mashers
- chopping board is for cutting meat and vegetables.
- pastry boards are for chapattis and pastries – rolling pans are for rolling out,
- rolling pins pastry and chopping boards are made of wood, some chopping boards may be of plastic,
- a meat hammer (tenderizer is used for beating steak for frying and roasting) used together with chopping board,
- may be of wood/metal,
- a potato masher is for mashing foods e.g vegetables like potatoes and peas.

#### Use and care of shaping and moulding tools

- use separate chopping boards when cutting cooked meat, raw meat, vegetables and fruits to avoid contamination.
- when using a meat hammer, don't heat the board it will be damaged,

#### **Cleaning shaping and moulding tools.**

- avoid soaking because it spoils wood,
- shouldn't be used to hammer nails or objects,
- chopping boards, pastry boards and rolling pins to be washed immediately after use and stored when completely dry,
- meat hammer to be cleaned in warm soapy water paying attention to grooves to remove all bits of meat.

#### Separating tools

- used for draining, straining and sieving food stuffs e.g sieving flour, draining water from pasta and straining soups,
- e.g sieves, colanders, draining spoons.

#### Strainers

May be of stainless steel/plastic used to drain foods.

NB:-

- should be chosen to suit the purpose e.g fine mesh for tea strainers and flour, large mesh for vegetables, mushroom and similar foods.

Colanders

For draining foods

Made of stainless steel, aluminium or plastic, metal ones are the best they don't bend out of shape.

#### **Qualities**

- it should be one that is designed to drain all foods,  
- should have handle supports/base high enough for bottom not to rest directly on surface of sinks/any other utensil,

Care of separating tools

- use for correct purpose,  
- don't strain hot liquids e.g hot fuel or oil using a plastic strainer sieve/colander because it will damage it,  
- use a wooden spoon because it can cut the wire mesh,

Care of separating tools

- clean currently according to materials,  
- use a soft brush to unblock mesh,  
- dry and store correctly.

#### **Lifting, turning, scooping and mixing tools**

Used for mixing, stirring, turning and serving food stuffs during preparation, cooking and serving, e.g spoons, forks, fish slice, scoops, balloon whisks and rotary whisks.

- Made of wood, stainless steel or silver,  
- Some have wooden handles/plastics,  
- Spoons may have deep/shallow bowls,  
- Are for stirring and beating, spoons with shallow bowls are the best.

#### **Wooden spoons**

- may have deep/shallow bowls,

Advantages:

- they don't scratch pans/bowls,

- handle doesn't get hot when stirring food,

NB:-

- shouldn't be left to stay in foods they get stained and absorbs flavours,
- those with shallow bowls are the best because they are used for stirring.

### **Metal spoons**

Are for stirring, mixing and eating,

- are made of aluminium, stainless steel, iron or silver,

Disadvantages:

- are made of metal wires,
- are balloon shaped,
- are for beating eggs, cream or sauces.

Rotary whisks

- have two handles one to hold whisk and the other to form blade when whisking,
- have same function as balloon whisk.

### **Forks**

- may have 2/3/4 prongs/tines,
- may have long/short handles,
- they are used for holding food firmly when carving, to lift cooked meat, and turn chunks of roasted meat.

Care of lifting, turning, scooping and mixing tools

- care should be taken when using them not to scratch containers,
- metal spoon are good for making cake mixtures because they provide a cutting edge,
- avoid using forks, scoops and fish slices for lifting chunks of foodstuffs,
- avoid leaving plastic handles leaning against hot containers they melt.

Cleaning lifting, turning, scooping and mixing tools

- should be cleaned depending on material they are made of and stored correctly,
- pay attention to tines and spaces between them when cleaning forks,
- avoid soaking spoons and tools with wooden handles they get spoilt and discoloured,
- avoid standing them in food they get stained and absorb flavours,

- store appropriately when clean and dry

### **Oven utensils**

- are made of materials that withstand high temperature e.g heating resistant glass, porcelain, earthenware and iron,
- aluminium also used because it reflects radiant heat enabling food cook slowly and evenly,
- vary in size and shape e.g pie dishes, casseroles, baking tins and roasting trays and tins.

### **Care of oven utensils**

- clean after use according to material,
- store when dry to avoid rusting, not stick ones should not be cleaned with abrasives this removes the coating,
- casseroles shouldn't be exposed to extreme temperature and should be allowed to cool before soaking,
- avoid handling carelessly i.e banging or dropping to prevent breakage.

### **Pans and pots**

- e.g frying pans, sauté pans, saucepans, and saucepots,
- may be of aluminum, stainless steel, enamelware and cast iron,
- used for surface cooking e.g boiling, stewing, frying and steaming,
- saucepans have one handle and saucepots have two,
- sauté pans and earthenpots have extended handle rim for handling.

### **Care of pans and pots**

- to ensure durability shouldn't be placed in cold water before cooling to prevent warping,
- should be washed using a scouring pad/fine steelwool, don't use strong alkalis,
- rinse, dry, and store correctly,
- avoid dropping/banging it loosens handles and dents pans,
- keep all handles away from centre of stove to avoid burning.

### **Time and labour saving kitchen equipment:**

- they save on labour and time,  
e.g food mixers  
food mincers



potato peelers  
deep fat fryers  
dish washers  
liquidizers  
food slicers  
potato choppers  
food warmers  
sterilizing sinks

Care of time and labour saving equipment

- follow manufactures instructions to prevent damage,
- use for their specific functions,
- store correctly as in manual,
- in case of technical faults, consult a qualified electrician/manufacturers,

Care of kitchen equipment

- should be cared for depending of material e.g plastic, metal, wood, glass, earthenware and plant materials for calabashes and guards.

## **WEEKS**

### **Plastics**

Made from natural substances e.g casein, coal cotton and oil.

- used for making cups, spoons, plates and knobs for electrical appliances e.g cookers and refrigerators.

### **Are of two groups**

#### **(a) Thermoplastics**

Softens when heated to temperature used during its formation without undergoing a chemical change e.g acrylics, silicon and polyvinyl chloride (PVC).

#### **(b) Thermosetting plastics**

Heat is used to permanently let them into shape, they don't soften/melt after setting e.g melamine and phenolic.

Care of plastics

- avoid contact with sharp objects they cause scratches/cuts that harbour dirt,

- avoid open flame contact it causes warping/leaning them in the sun for long,
- avoid bending/hitting plastic items,
- don't use abrasives when cleaning they scratch them.

### **Cleaning plastics**

- wash in hot soapy water use a soft cloth/sponge
- occasionally use mild bleach or citric acid/soaks in hot lemon water overnight to remove stubborn stains,
- rinse in hot water,
- dry by rubbing/buffing with a soft cloth to shine,
- store correctly.

### **Metals**

(a) Functional (useful) or decorative metals e.g stainless steel

- decorative or ornamental are those used as ornaments, to decorate house e.g gold, brass and silver,
- some functional ones may also be for ornamental purposes.

(b) White/coloured metals

- are for functional purposes e.g aluminium, steel, tin and silver,
- are mainly used for decorative purposes e.g copper and brass,

(c) Soft and hard metals

- soft metals wear/get damaged easily; e.g silver tin and aluminium, they should be handled carefully
- hard metals are stronger and hard wearing, e.g steel, chromium and gold.

### **Examples;**

Stainless steel

It is resistance to staining,

- are not easily dented,
- used to make knives, spoons, forks, saucepans, cutlery blades, counter tops and liners in freezers.

Care of stainless-steel equipment

- after washing dry completely before storage to avoid spotting,
- avoid exposing to open flame/excessive heat it darkens steel,
- should be stored on highly polished surfaces.

#### Cleaning stainless steel equipment

- wash in hot soapy water,
- rinse in hot water,
- dry
- polish using a clean soft dry tea towel or a glass cloth,
- store correctly.

#### **Aluminium**

For making saucepans, frying pans, sufurias and measuring jugs.

Care;

- don't use baking soda the alkaline salts dissolve aluminium and form dark spots/tarnish,
- avoid exposure to extreme temperature,
- avoid soaking with hot equipment in cold water it causes buckling.

#### **Cleaning aluminium equipment**

- wash in hot soapy water,
- rub stains with a nylon scouring pad or steelwool,
- rinse in clean hot water to remove soap and dirt,
- dry,
- store correctly.

#### **Iron**

The items are normally protected with a coat of paint, enamel or zinc to prevent rusting,

- used for making heavy cooking pans, charcoal stoves, oil stoves, buckets and karais.

Care of iron equipment

- keep dry to prevent rusting that causes metal to tarnish,
- avoid harsh abrasives,
- oil using unsalted fat frequently to prevent rusting especially handle joints,
- avoid dropping/banging to prevent chipping.

### Cleaning iron equipment

- wash in warm soapy water,
- use a soft cloth and a mild abrasive,
- rinse thoroughly in warm water to remove soap and dirt,
- dry,
- store away from moisture

### Enamel

- It is a plastic resin sprayed onto a metal and baked to high temperature to give a hard glossy and durable finish.
- Porcelain enamel is used for making saucepans, casseroles dishes, pie dishes, bowls, mugs, coppers, teapots and plates,

### Care of enamel ware

- avoid scouring using abrasives to prevent scratching,
- avoid dropping and banging to avoid chipping,
- avoid sudden changes in temperature e.g putting ice water in hot porcelain enamel pot causes cracking,

### cleaning enamelware

- use a sponge to wash utensils in warm soapy water,
- rinse in warm water,
- dry
- store correctly.

### Wood

- used for making pastry boards, rolling pins, chopping boards, sugar dishes, handles for knives and saucepans and work surfaces,

### Types:

#### Hard and soft wood

Hard wood has close grains and soft wood has open.

Wood may be finished in different ways;

i) Plain wood

Is wood that has not been given any finishing and used for making kitchen table, chopping

boards, chairs/work surfaces,

ii) Polished wood

- is wood whose surface is protected by a thin coating/film of furniture polish,
- painted wood is one covered by a coat of paint that changes its appearance,
- used for making dining tables, chairs, side tables and cupboards.

iii) Varnished wood

- wood is coated with a special kind of liquid mixture,
- used to make dining tables and chairs, cupboards, side tables and handles for knives, saucepans, serving dishes and forks.

iv) Laminated wood

- it is wood with laminated plastics e.g formica,
- used on wall panels, counter tops, dining tables and work surfaces.

v) Stained wood

- Stains used are water /oil based. Oil stains are better than water stains they last longer.
- Used to make chairs, cupboards and tables.

**Care of wooden equipment**

**Plain wood**

- remove food stains immediately,
- avoid harsh abrasives roughen surface,
- avoid hot water it causes discolouration and warping of wood, wood also softens due to absorption of moisture by wood cells.
- avoid direct heat/sun it also causes wood to warp
- scrub along grain direction using a soft brush,

**Polished wood**

- protect surface from hot dishes using heatproof mats it prevents them from scorching
- wipe water spilt and any stains immediately,
- avoid abrasives they leave scratch marks on them.

**Painted wood**

- avoid exposing to heat it softens paints,

- avoid turpentine it discolours the paint,
- avoid wetting surface too much it softens paint and may blister,
- don't use sharp objects they scratch surface,
- dust regularly to prevent staining,
- apply new paint after old has scrapped off.

#### **Varnished wood**

- avoid hot water it softens the varnish,
- avoid strong alkalis e.g washing soda they spoil its appearance.

#### **Stained wood**

- avoid washing with water it removes the staining substance hence spoils appearance.

#### Cleaning wooden equipment

- dust with a cloth (dry),
- clean using warm soapy water and scrubbing brush,
- for large surfaces use soapy water and a cloth,
- scrub in direction of grain to prevent roughening of surface and to remove all dirt,
- rinse thoroughly with a cloth from warm water twice to remove soap and dirt,
- rinse finally with a cloth from cold water to freshen and preserve colour,
- clean a section at a time overlapping parts to ensure all parts are cleaned,
- for small items e.g rolling pins and chopping board;

(a) use warm soapy water and scouring pad to scrub surface,

(b) rinse thoroughly in warm water finally in cold,

(c) wipe to dry

(d) dry in warm airy place,

(e) store correctly.

#### Cleaning polished wood

- dust thoroughly,
- clean with a cloth wrung out of warm soapy water,
- wipe with a cloth wrung out of clean water,
- allow to dry

- apply polish using an old piece of cloth,
- rub in circular movements overlapping to ensure polish is evenly distributed and no polish is fed into open cracks,
- shake away and spray polish sparingly, hold it 6" and leave for approximately 10 minutes for polish to set for easy shining. For spray polish buff immediately,
- use a soft dry non fluffy cloth folded into a pad to buff surface, to ensure a proper finish and remove excess polish, rub hard using circular movements.

#### **Cleaning painted wood**

- dusting daily keeps painted wood clean and attractive,
- occasional cleaning:
  - (a) dust thoroughly,
  - (b) use warm soapy water and clean cloth to clean surfaces, start from bottom to avoid water marks/tear marks,
  - (c) remove stains with an appropriate stain remover,
  - (d) rinse immediately using clean warm water and clean cloth from top downwards,
  - (e) rinse in cold water,
  - (f) allow surface to dry,
  - (g) apply furniture cream using a soft dry cloth, rub well to get a shiny and glossy surface.

#### **Cleaning varnished wood**

- dust with a soft duster,
- use a soft clean cloth wrung out of warm soapy water/warm water having vinegar, 1 litre of water one tables spoons of vinegar,
- wipe with a clean cloth wrung out of warm clean water,
- dry using a soft cloth to rub surface,
- store small wooden items correctly when dry.

#### **Cleaning stained wood**

- dust thoroughly using a soft clean duster,
- remove stains using a cloth wrung from warm soapy water,
- wipe with one wring from warm water finally from cold water,

- dry completely,
- apply furniture polish in circular movements,
- allow it to settle,
- buff with a clean cloth to shine,
- rub with a soft dry cloth to remove excess polish and dirt.

### **Glass**

Used to make water tumblers, plates, bottles, casserole dishes, pie dishes, jugs, mixing bowls and pudding bowls.

### **Care of glass kitchen equipment**

- protect from sharp blows and knocks,
- avoid extreme changes in temperature when using heat resistant glass in oven place under low/moderate heat, increase gradually or warm dish in hot water and wipe dry before placing in oven,
- glass utensils from fridge to be placed in a bowl of hot water before putting in oven,
- avoid abrasives when cleaning,
- avoid placing glass tumblers inside each other they can break,
- store carefully to avoid breaking.

### **Cleaning glass equipment**

- rinse off any dirt in warm water,
- wash in warm soapy water use a soft cloth/sponge,
- rinse in warm water three times,
- drip dry on a rack,
- buff with a dry lintless cloth.

### **Earthenware**

- are known as china and are made of clay

Types:

(i) Glazed earthenware

Used for making cups, saucers, bowls and cooking and serving dishes.

(ii) Stoneware



It is hard, shiny, and transparent and vitreous in nature)  
Used for making cups, saucers, cooking and serving dishes,  
(iii) bone china

It is thin and very strong,

Used for cups, plates, saucers, side plates, dinner plates, teapots and saucer bowls.

### **Porcelain**

It is a hard, white, shiny material used for making cups, plates and ornaments.

Care of earthen ware

- avoid extreme temperature and sudden change in temperatures,
- avoid stacking carelessly when cleaning and piling plates too high may cause breaking,
- avoid harsh abrasives they scratch surface,
- gently wash in a plastic bowl or with a folded towel at bottom of sink to prevent breakage,
- shelves, racks/tables for storing utensils should be firm and strong to stand weight, should also be lined to prevent chipping.

### **Cleaning earthenware**

- use a soft cloth and hot water to wash,
- rinse in hot water to remove soap and dirt,
- dry completely on plate rack/use a dry tea towel,
- store correctly,

### **Calabashes:**

Care of guards and calabashes

- avoid banging/hitting they chip, crack/break,
- don't expose to a naked flame they burn,
- store in a cool dry place to avoid dampness that causes mouldering,

### **Cleaning**

- wash in warm soapy water using a mild abrasive,
- rinse thoroughly in warm water,
- finally in cold to refreshen,
- place upside down on a rack,

- store in a cool dry place

Safety precautions and rules when handling kitchen equipment

- 1) use equipment for right purpose and according to manufacturers instructions for safety and durability,
- 2) turn handles away from pathway to avoid accidents,
- 3) avoid reaching baked items with bare hands use oven clothes or gloves,
- 4) use potholes when handling hot pans don't use papers on damp clothes,
- 5) direct lid away when opening cooking pots to prevent scalding the skin,
- 6) avoid scarves, hanging ties on clothes and ribbons around necks, they catch fire easily,
- 7) avoid handling electrical appliances with wet hands,
- 8) keep doors and drawers of cabinets and cupboards closed to avoid knocking on them,
- 9) knives and forks should be stored with handles pointing towards you for easy reach and to avoid cuts,
- 10) clear spills and vegetable peelings on floor immediately to avoid accidents.

### **Improvising kitchen equipment**

1) A steamer improvised by using a saucepan/sufuria with tight fitting lid,

2) A charcoal cooler keeps cool by evaporation,

Looks like a kitchen cupboard with a double wall into which small pieces of charcoal are packed, on top of the cupboard there is a tray into which water is poured. A sack cloth is placed on top to ensure that water drips continuously onto charcoal, as water evaporates from charcoal it absorbs heat from the contents of cupboards keeping it cool.

NB:-

- should be constructed away from the sun,

- should be erected in a place that ensures proper drainage of water dripping from charcoal.

3) A meat safe stores meat,

Also looks like a kitchen cupboard lined with fine wire mesh for adequate circulation of air

It is lined with hooks from inside to suspend meat on.

4) A stand with various shelves constructed from wood used for draining washed utensils instead of tray,

5) Graters from clean perforated tins,

6) Dredgers from plastic containers with perforated lids,

7) An oven improvised by using a debe

After lighting a charcoal stove, place a debe 1/3 full of sand on it and cover it, Method is cumbersome as one has to keep on replacing burning charcoal.

## **CHAPTER SIX ( ACTIVITY 6)**

### **KITCHEN EQUIPMENT**

1. State two qualities to look for when buying kitchen knife. (2 mks)
2. Suggest three precautions to take when cleaning china tea cups. (3 mks)
3. Explain three precautions to take when using an oven to bake cakes. (6 mks)
4. Explain six factors to look for when selecting a frying pan (6mks)
5. State two advantages of using wooden spoon when cooking foods. (2 mks)
6. Outline six rules to observe when using a refrigerator (6 mks)
- 7 Outline the steps to follow when washing water glasses. (5 mks)
- 8 Describe the procedure of cleaning a neglected plastic dustbin (7 mks)
9. Identify two precautions to take when cleaning glass utensils. (2 mks)
10. Give two good characteristics of enamel utensils (2 mks)
11. Give a reason why it is not advisable to use steel wool when cleaning a calabash. (2 mks)
12. State two points on care of glass utensils. (2 mks)
13. State two points on care of glass utensils. (2 mks)
14. Give two reasons why most people do not use the labour saving equipment in the kitchen. (2 mks)
15. Why Aluminium is mostly used to make kettles and pans. Give three reasons. (3 mks)
16. State six rules to observe when using a refrigerator (6 mks)
17. Describe with reasons for the cleaning of gourds. (10 mks)
19. State and explain how you would improvise any three kitchen equipment.(6 mks)
20. State four precautions to observe when using electric appliances (4 mks)

## **CHAPTER SEVEN**

### **FOOD HYGIENE**

Means practices that safeguard against food contamination that may lead to food poisoning and spoilage. Proper personal and kitchen hygiene practices ensure food remains wholesome and

safe.

NB:- favourable conditions for growth of micro-organisms are warmth, moisture, darkness and dirt.

### **Kitchen hygiene**

- Kitchen hygiene is cleanliness of surfaces, equipment and proper disposal of refuse,
- Food storage, production, service handling and preparation should be carried out in a hygienic manner to prevent food contamination,
- hygiene practices include:
  - 1) keeping kitchen free from spilt food, crumbs and scraps, that attract flies, cockroaches and rats,
  - 2) cleaning cooking and serving utensils properly after use and drying before storage,
  - 3) kitchen clothes to be washed daily and boiled to kill germs and if white should be bleached once in a while to remove discolouration,
  - 4) work surfaces to be cleaned with warm water and detergent,
  - 5) lining kitchen refuse bin before use,
- food storage equipment to be clean at all times e.g refrigerator, kitchen stores, vegetable racks and meat safes.

Store to be checked often and any food/vegetable showing signs of spoilage to be removed and discarded,
- practicing principles of first in first out (fiffo) to be practiced when storing foods to prevent food spoilage,
- kitchen floor to be swept of any spilt food and vegetable peelings, wipe grease from floors they may cause falls, sprains and fractures,  
floors to be kept clean because they attract flies.
- providing adequate lighting
- food to be cooked and stored in clean and well ventilated cupboards or larders and free from pests e.g flies, rats, cockroaches/even pests,
- not handling cooked food with bare hands instead use properly cleaned kitchen tools,
- not storing cooked food for too long under warm conditions to avoid food poisoning,  
leftovers to be cooked and stored appropriately in small portions and shouldn't be reheated

more than once,

- clean water to be used for preparing food and all kitchen equipment to be cleaned before use,
- containers used to hold food to be free from cracks and chips,
- wasting foods to be eaten raw e.g fruits and vegetables to be washed thoroughly under clean water.

Persons handling food to observe the following

- wear protective clothing to prevent contaminants from outdoor clothing coming into contact with food,

surfaces and equipment:

NB: hair to be covered and kitchen shoes to be worn,

- hands to be washed with a soft scrubbing brush in warm soapy water and dried with a towel, should be washed thoroughly after visiting toilet, handling food refuse, handling money, touching parts of the..

avoid wearing jewellery, rings, watches and bracelets they trap grease, dirt and bacteria.

- avoid smoking, tasting food using fingers/other activities that are bad,
- persons suffering from infectious diseases e.g diarrhoea, typhoid, cholera, and dysentery and other diseases e.g sore throat, skin infections, worms, hepatitis should not handle food.

## **WEEK 6**

### **Food spoilage and poisoning**

#### **Food spoilage**

It is deterioration of food resulting in food becoming unfit for human consumption.

Causes of food spoilage

- (i) aerobic,
- (ii) anaerobic
- (i) Aerobic

Aerobic is caused by micro-organisms in presence of oxygen, e.g moulding of bread and rotting of meat.

Anaerobic occurs within the interior of food parts in sealed containers where oxygen is absent or present in limited quantities e.g in canned foods.

### **Causes of food spoilage**

- oxidation of chemicals present in fats or fatty foods,
- chemical present in pesticides and herbicides sprayed on fruits and vegetables,
- chemicals present in food containers, wrapping and packets,
- action of enzymes in fruits making them overripe,
- rancidity i.e decomposition of fats,

### **Food poisoning**

- some micro-organisms produce toxins which are harmful to human beings,
- contaminated food may lead to food poisoning, it is considered an illness due to consumption of food containing toxins, chemical poisons or harmful micro-organisms.

### **Causes**

- insecticides, pesticides, herbicides, kerosene, detergents and dry cleaning agents can contaminate food and cause food poisoning,
- bacterial contamination:  
caused by bacteria that get into the food and contaminate it. The bacteria enters the alimentary canal and produces toxins that cause abdominal pains and vomiting. foods like ice cream, nuts, meat pies and poorly stored cooked foods provide conditions for growth of bacteria.

### **- Natural poisoning**

occurs in badly stored grains, e.g stored in damp conditions and when not completely dry, they produce poisons called aflatoxins. Aflatoxins are poisonous substances that are produced by a mould fungus,

to prevent it plants should be stored only when completely dry;

NB: poisonous parts of certain plant food e.g cassavas can also cause food poisoning.

Signs and symptoms of food poisoning

- i) vomiting
- ii) severe stomachache/abdominal pains,
- iii) diarrhoea,
- iv) fever,

- v) general body weakness,
- vi) dizziness.

Prevention of food spoilage and poisoning

- avoid buying canned foods that have expired, check expiry dates always,
- buy fruits in seasons,
- buy from clean market and vendors,
- store under right conditions to avoid spoilage,
- storage facilities to provide adequate space with protection against dust, insects and rodents,
- avoid storing near foods to prevent chemical contamination, poisons and toxins,
- place refuse in correct and sealed containers away from food area,
- foods to be eaten e.g fruits and veges to be washed under clean running water,
- frozen foods to be thawed completely before cooking,

it ensures heat penetrates food adequately and kills harmful bacteria,

- leftovers to be cooled completely and be stored under low temperatures and be packed in small portions, avoid reheating more than once,

Storage of perishable and non-perishable (dry) foods

Perishable foods

Examples – meat, meat products, vegetables, milk, milk products and eggs.

- They deteriorate very first, they have to be stored at low temperature to maintain freshness,

Storage:

- Raw foods e.g meat and poultry not to be used immediately should be divided into portions, labelled and stored in the freezer,
- All stored foods to be covered,
- Meats, e.g beef, bacon, pork, poultry and fish to be used within 2 days, should be stored on first and second shelves, directly under freezer,
- Butter and cheese to be wrapped in greaseproof paper and to be stored on top shelf/on special compartments on door,
- Canned meat and other cooked foods to be stored in the middle shelf,
- Foods likely to deteriorate faster should be kept on shelf closest to freezer compartment.

- Vegetables, salad ingredients and nitrous fruits to be wrapped in perforated polythene bags and to be stored in the crisper,
- Bananas shouldn't be stored in a fridge they turn black,
- Eggs to be on egg racks on door, shouldn't be washed because it makes them porous shell susceptible to entry of bacteria,
- Milk to be in bottles in correct rack on the door

#### Storage of non-perishable (dry) foods

- Should be stored in a cupboard/food store or larder,
- Food to be stored in the larder are tea leaves, coffee, sugar salt, jam, and cooking fat,
- should be packed in dry covered containers (plastic) if not already in containers and clearly labelled.

#### Other methods of storing foodstuffs at home

- milk can be put in a clean bottle (jug) with a lid and stored in a container of cold water,
- a muslin cloth is then put over bottle with ends touching the water to keep the surrounding cool,
- water moves up cloth by capillary action and draws heat from milk,
- as it evaporates, heat is lost through cooling milk,
- it can keep fresh for 12 hours.

#### **Water treatment at home**

Water needs to be purified because of presence of micro-organism e.g bacteria cause water borne diseases e.g typhoid, dysentery and cholera.

#### Methods of purifying water

##### 1. Sedimentation

- water is collected in a container and left to stand for a while, solid particles e.g leaves and soil will settle at the bottom,
- to quicken the process salts of aluminium can be added especially to hard water, solids in the water will coagulate and sink to bottom,
- the water may still contain bacteria in so should be boiled before drinking.

##### 2. Filtration



After sedimentation the water may still be brown so it is passed through a series of filter beds having different grades of sand and gravel.

Diagram

- all minute impurities are removed and water starts to sparkle,

home made filters are useful in areas where water is fetched directly from rivers, dams or lakes,

- a low concentration of chlorine or ozone is added to kill micro-organisms.

3. Boiling

- it kills disease causing micro-organisms and other parasites,

- filter water using a clean cloth,

- put in a container heat and bring to boil approximately 10 minutes to ensure all microorganisms and parasites are killed,

- cool covered,

- store in some container,

- if it is transferred to another container the container should be rinsed in boiled water,

Storage;

- purified water should be stored in a sterile container to prevent contamination.

## **CHAPTER SEVEN (ACTIVITY 7)**

### **FOOD HYGIENE**

1. Apart from micro-organisms, suggest two ways in which food may be contaminated. (2mks)

2. Give a reason for boiling or chlorinating water after decantation or filtration. (1 mk)

3. State the difference between decanted water and filtered water. (1 mk)

4. State three causes of food spoilage (3 mks)

5. State three personal practices that safeguard food against contamination. (3 mks)

6. List four water borne diseases. (2 mks)

7 Explain four ways you will advise your mother to store harvested maize to last for a long time being safe for consumption (8 mks)

8. Explain where and how you would store the following food in the refrigerator: Milk, raw fish, cooked githeri, eggs and green peas. (5 mks)

9. Differentiate food poisoning from food spoilage (2 mks)

10. State two ways in which a neglected kitchen bin could lead to food contamination.  
(2 mks)

11. Describe how you store meat and milk in absence of refrigerator (4 mks)

## **CHAPTER EIGHT**

### **METHODS OF COOKING**

Reasons for cooking food

- to improve appearance of food, make food attractive,
- to improve flavour or taste of food,
- to make food tender and easy to chew,
- to kill germs and parasites,
- to keep food for long,

e.g

i. Boiling

ii. Stewing

iii. Roasting

iv. Baking

v. Frying

vi. Steaming

Factors that determine methods of cooking

i. Types of food,

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ii. The health condition of consumer of meal,

iii. The available time,

iv. The available fuel,

v. The available cooking equipment.

Categories of cooking methods

i. moist heat methods e.g boiling, steaming and stewing,

ii. dry methods e.g baking, roasting and frying

## i. Moist heat methods of cooking

### 1. Boiling

It is cooking food completely immersed in liquid bubbling at 100°C and keeping it at that temperature till ready.

Suitable foods;

- meat
- poultry
- root tubers e.g arrow roots, yams and sweet potatoes

Rules for boiling foods:

- boil in just enough water and nearer serving time to preserve nutrients,
- pan should be covered,
- green veges to be boiled in salted water to retain colour,
- root veges to be cut into even sized pieces and be put in water before boiling,
- meat to be cut into large pieces and put in boiling water to be to seal the inside for juices to be retained,
- once food boils to boiling point heat should be simmered,
- foods should not be overcooked, retain shape, nutrients, colour and flavour,
- liquid for boiling meat and veges to make stock/sauces,
- seasoning to be added to boiling water,

Advantages of boiling

- needs little attention,
- liquid for boiling can be used to prepare stock, sauces and gravies,
- convenient if modern type of cooking equipment are not available,

Disadvantages

- flavour and nutritive value damaged.

### 2. Stewing

- it is cooking food in a measured amount of liquid and then allowed to simmer,

Suitable for;

- beef,

- poultry,
- vegetables
- fruits

- aim is to give food enough time to soften and to retain nutrients and flavour.

#### Rules

- meat should be cut into neat and equal pieces to cook evenly,
- stewed beef and poultry to be browned well before adding liquid to seal juices,
- enough liquid, stock or water to be added to avoid having thin watery stew,
- pan/pot to be covered with a fitting lid,
- use gently heat during cooking to avoid hardening of proteins and damaging food texture and flavour,
- check on seasoning before serving,
- serve in liquid used for cooking,

#### Advantages

- an economical method of cooking cheap cuts of meat,
- needs little attention,
- can be on top of stove in oven,
- good for cooking tough cuts of meat,
- nutrients not lost.

#### Disadvantages

- slow method so needs adequate time,
- consumes a lot of fuel.

### 3. Steaming

It is cooking food using steam from boiling water,

Steam doesn't come into direct contact with food instead comes in contact with the container holding food:

Suitable for;

- fish fillet
- puddings

## Methods of steaming

- plate method,
- bowl steaming,
- using a steamer,
- using a colander
- Plate method:

Food in a covered plate is placed over boiling cooking pan.

NB:- root vegetables can be cooked at same time to save fuel.

- Bowl steaming

Food is placed in a covered bowl and placed in a pan of boiling water

- Using a colander

A colander covered is used to hold food.

It is placed on a saucepan of boiling water,

NB:- the colander should fit well on saucepan, and base shouldn't come into contact with boiling water.

- Using a food steamer

A steamer with several compartments for different foods is used.

Rules to follow;

- Follow instructions if using a steamer,
- Steam to be produced constantly so water bath should be allowed to evaporate, This will prevent pan containing water not to be damaged and food not to burn.
- Always add into the water bath some water to maintain,
- Cover food carefully to avoid direct contact with steam/water,
- Steamed/pan to have a tight fitting lid to avoid loss of steam,
- Direct steam away from you when opening lid to avoid scalds.

Advantages of steaming foods.

- Food is light and easy to digest so suitable for invalids and convalescents,
- Nutrients and flavour not lost,
- Different dishes can be cooked same time e.g food may be cooked on water being used for

boiling root vegetables.

Disadvantages of steaming foods

- Requires a lot of attention to ensure water bath does not boil, evaporate and get dry,
- Dangerous steamer may cause scalds,
- Not good for cooking tough foods.

Frying

It is cooking food in a lot of fat or oil in a pan.

Methods of frying

- shallow fat frying
- deep fat frying
- dry fat frying
- Shallow frying
- it is cooking food in hot fat half way the food,
- suitable for eggs, sausages, thin slices of meat, fish, poultry joints and pan cakes.
- Deep fat frying
- food is cooked in hot oil  $\frac{2}{3}$  of a pan that completely covers the food,
- a deep fat fryer, strong deep pan, a frying basket and draining spoon are required, suitable for potatoes chips, mandazi and samosas.
- Dry fat frying
- cooking food in its own fat in a shallow pan/cooking in a lightly greased pan,
- oil/fat used comes from the food being cooked, e.g bacon, and cuts of pork.

**General rules for frying foods**

- prepare food correctly e.g for fish and meat cuts shouldn't be more than 2.5cm thick to ensure thorough cooking,
- use good quality fat that has a high smoking point to prevent food from burning on heating,
- pan should be strong for fat not to overheat,
- for deep frying, should be  $\frac{2}{3}$  of a pan to avoid overflowing,
- heat fat to right temperature before putting food to prevent food from absorbing fat and becoming too greasy,

if fat is too hot it burns the outside of food and leaves it undercooked,

- foods to be coated unless starchy like potatoes and doughnuts,

use butter/beaten eggs and bread crumbs,

others should be dried before frying e.g potato chips,

- lower food gently into hot fat to avoid accidents e.g scalds,

- avoid overloading the fryer it lowers the temperature of oil,

- avoid having boiling water near fryer because the bubbling water may get onto the frying hot oil and cause accidents,

- drain any surplus fat/oil on absorbent paper before serving,

NB: should not be prepared for weight watchers.

ii. Dry heat methods of cooking

### **Baking**

- it is a dry method of cooking food using dry hot air in an oven. Suitable for foods that have enough moisture e.g potatoes and flour mixtures e.g cakes, scones and bread.

### **Rules for baking foods**

- oven should be pre-heated to correct temperature before putting food in oven,

- place food in the right shelf, top is hottest, middle and lower are moderately hot,

- always observe baking time (duration so as to reduce baking temperature for some foods) e.g for yeast mixtures temperature should be reduced once yeast is leveled and crust is formed for even cooking,

- avoid opening oven door before mixture settle because cool air can make them sink,

- test the food for readiness before removing from oven,

- turn the foods on a cooling tray or rack to cool unless they are to be served in the dishes in which they were baked,

### **Advantages**

- doesn't require a lot of attention if temperature is well set,

- light and easy to digest,

- saves fuel because several dishes can be cooked at same time,

Disadvantages:

- only suitable for certain dishes,

### **Roasting**

- as cooking food close to a source of heat; suitable foods;

- meat
- maize
- sweet potatoes
- yam
- arrow roots
- fish

food can also be roasted in an oven/while rotating on a spit, fat should be used to bake foods before roasting, good for cooking meat.

### **Rules for roasting foods**

- foods to be prepared correctly and seasoned before putting in roasting pan,
- joints to be raised from bottom of pan to avoid frying,
- oven should be pre-heated to the correct temperature before putting food,
- charcoal burners must be red hot before putting food to quickly brown the top and seal juices, it ensures food is free from smoke,
- frequently basting and turning of food should be done to keep food moist and ensure even cooking,
- use juices from pot roasted meat/chicken to make gravy,
- avoid pricking the surface of meat because this allows juices to run out and leave the roasted piece dry.

### **Advantages of roasting foods**

- it is quick method,
- roasted food is attractive and appetizing,
- it is easily digested,
- it is tasty especially meat.

### **Disadvantages**

- it is expensive meat to be roasted, should be of high quality,



- needs constant attention,
- food to be basted and turned frequently to prevent burning and drying.