

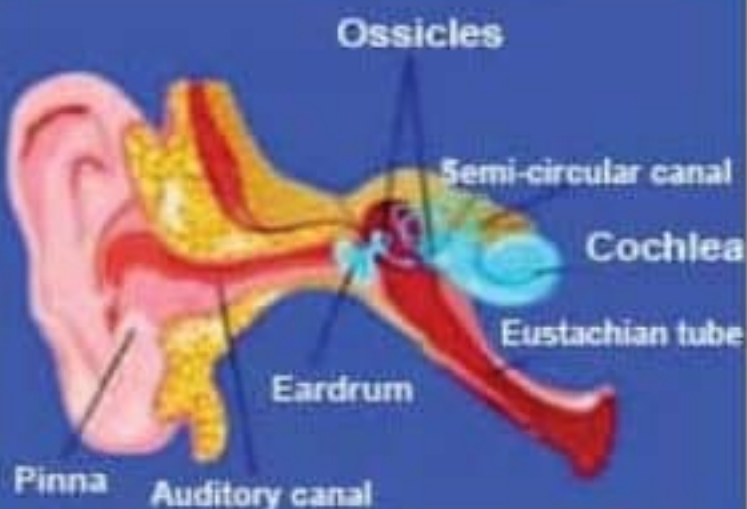
THE SUREKEY

INTEGRATED SCIENCE

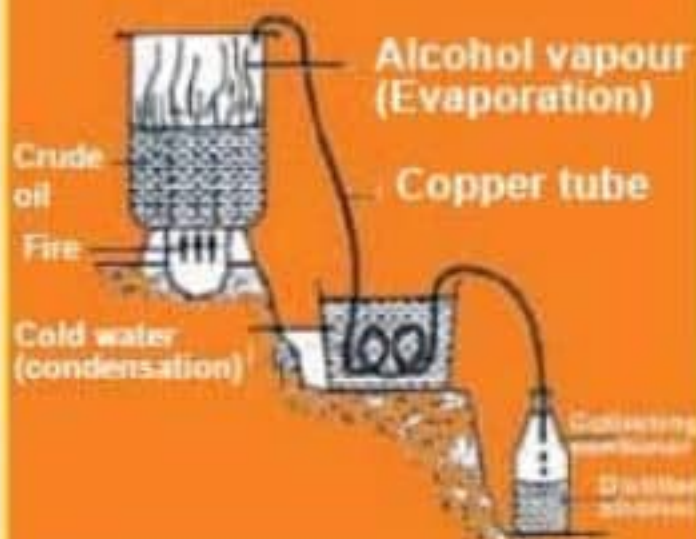
Pupil's BOOK

6

THE HUMAN EAR



DISTILLATION METHOD



VEGETATIVE PROPAGATION

Planting the sucker



SIMPLE WATER PURIFICATION

Filtration



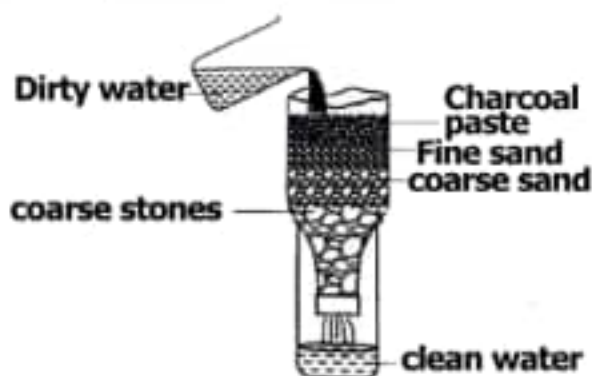
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Based on the Current Standard Curriculum

Filtration

Filtration is a method of separating liquid from solid particles.

Filtration can be used to remove solid impurities from water.



Explanation:

- The solid particles that remain on the filter paper are called **residues** while the clear water that passes through the filter paper is called **filtrate**.
- The filter paper/cloth traps residues.
- The solid particles that remain behind when pouring water are called **sediments/precipitate**.
- The water filtered is not necessarily safe for drinking.

Reason. Filtered water still contains germs.

- Filtered water should be boiled before drinking to kill germs.

Local materials used for filtering water are; coarse sand, gravel, cotton wool, Charcoal paste, sisal fibre, banana fibre, pebble, grass and clean cloth.

Charcoal removes toxins and smell from water.

Fine sand, coarse sand and coarse stones trap impurities in water.

Other ways in which filtration is useful to people.

- It helps in preparing local salt from plant ash.
- It helps in separating fruit juice from seeds.
- It helps in separating tea leaves from tea.

Preparing local salt from plant ash using filtration.

Materials needed: water, sieve, banana leaf, dry bean plant leaves, 2 containers, flat metal sheet

Procedure:

- Burn the dry bean plant leaves to get plant ash.
- Gently place the banana leaf on the sieve.
- Take the sieve with a banana leaf and place on the cup.
- Transfer the plant ash onto the sieve and add water to make a solution.
- Leave the solution to collect in the cup for some time. The solution tastes salty.

Set up:



Note: the solution can also be heated/boiled to evaporation to dryness to obtain solid salt. Local salt is rich in sodium chloride. It tastes sour due to high concentration of sodium chloride.

Simple summary of steps followed when preparing local salt

- Get banana peelings and bean leaves and dry them.
- Burn dry banana peelings and bean leaves to ash.
- Pour water into the ash to make a solution and filter to get a filtrate.
- Heat the filtrate to dryness.

II) Pull the casualty from water in case you are able.

III) Apply mouth to mouth breathing.

This opens up airways to restore breathing/Induces breathing

How to apply mouth to mouth breathing.

- (i) Lie the person on his/her back and open his/her mouth.
- (ii) Press the nostrils with your fingers to close them.
- (iii) Bring your mouth to that of the victim's mouth.
- (iv) Blow air strongly into his/her mouth and then pause to let the air come out. Blow in again. Repeat this several times.



IV) Press the belly of a casualty to push water of the lungs.

Prevention of near drowning.

- Covering water tanks and deep pits.
- Fencing swimming pools.
- Wearing life jackets when sailing on water.
- Acquiring swimming skills.
- Fencing water sources.
- Remove the baby from water after bathing.
- Avoid playing near water bodies.
- Relocating to other areas in case of flood outbreak.



Fainting

Fainting is the sudden loss of consciousness for a short time.

The major cause of fainting is reduced supply of oxygen to the brain.

Signs of fainting are; loss of body balance, body weakness, loss of sense.

Conditions that can lead to fainting are;

prolonged hunger, vigorous exercise, shocking news, severe pain, anxiety and excitement, excessive bleeding, fear, being frightened, standing in sunshine for long, alcoholism, dehydration and heart problems like irregular heartbeat.

The above conditions lead to reduced supply of oxygen to the brain.

First Aid for fainting

- ❖ Lay the casualty on his/her back and raise the legs higher than the head.

Reason. To allow the supply of oxygen to the brain.

- ❖ Loosen the tight clothes.

Reasons. To ensure adequate supply of fresh air//To allow free blood circulation.

- ❖ Fan the casualty in order for him/her get fresh air.

- ❖ Put the casualty in a cool and open place to enable him/her get fresh air.



to prevent clothes from fading or bleaching in sunshine.



Ironing

This is the last step in cleaning clothes.

Importance of ironing clothes

- It helps to kill some parasites like lice.
- It helps to kill germs in clothes.



The sun, water and wind help in cleaning clothes

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Evaluation activity 9.2

1. Mention **one** way in which you can prevent some clothes from staining others during washing.
2. Give any **two** examples of water impurities.
3. State the importance of the following steps in cleaning clothes at home.
 - (i) Sorting
 - (ii) Soaking
4. Mention any **one** factor considered when sorting clothes for washing.
5. State any **one** danger of hanging clothes under direct sunshine for a long time to dry.
6. Name any **one** natural resource that can be important when washing clothes.
7. State any **two** ways in which washing clothes is important to human health.
8. Name the step used in cleaning clothes that;
 - (a) Removes excess water from the clothes
 - (b) Removes soapy
- 9.(a) What is meant by the term silting?
 (b) State the major cause of silting in water bodies.
 (c) Apart from killing fish, give any **two** other ways in which silting affects fish.
10. State the reason why woollen clothes should be dried without wringing.
11. In which way is the sun useful in the cleaning of clothes at home?
12. State any **one** way in which the ironing of clothes is useful when cleaning clothes.
13. In the table below, part **A** shows steps used in cleaning clothes and part **B** has the meanings of the terms.

Part A: Steps	Part B: Meanings
Sorting	Putting dirty clothes in soapy water.
Wringing	Putting clothes in water to remove soapy water.
Rinsing	Grouping clothes before washing or soaking.
Soaking	Squeezing clothes to remove excess water.

Use the meanings in part B of the table to match the terms below.

- (a) Sorting
- (b) Wringing
- (c) Rinsing
- (d) Soaking

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The Surekey Integrated Science Pupil's Book 6 By Jamie Humphrey

Theme:

HUMAN HEALTH

Topic

10: ACCIDENTS AND FIRST AID



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Functions of each part of the flush toilet

Toilet seat. It is where the user sits when defecating or urinating. A lid is attached to the seat for covering/closing the bowl.

Toilet bowl. For depositing faeces and urine. Some water remains in the bowl after flushing. This water is called toilet bowl trap seal.

Uses of some water that remains in the bowl after flushing.

- It prevents smelly air from coming out of the septic tank.
- It keeps the toilet bowl hygienically clean.
- It prevents houseflies from reaching faeces.
- It prevents the backflow of sewage in the toilet room.

Cistern tank. It holds water for flushing the toilet after use. It is usually raised above the bowl to increase the pressure of water flow when flushed.

Handle. It is pulled or pushed when flushing the toilet.

Water pipe. It brings water to the toilet bowl for flushing faeces and urine.

Septic pipe. It takes faeces and urine to the septic tank.

Septic tank. It stores faeces and urine.

There are bacteria that decompose faeces .

It is not advisable to pour chemicals like acids in the septic tank.

Reason. They kill bacteria that help to decompose faeces.

Proper maintenance of the water closet toilet.

- ✓ Flush the toilet with water after use.
- ✓ Scrubbing the floor with a toilet brush.
- ✓ Use a toilet paper to clean yourself after defecating.
Using hard materials like papers may block sewage pipes.
- ✓ Do not squat or stand on the bowl. This may make the bowl dirty.
It may cause the bowl to break
- ✓ Disinfect the toilet regularly to kill germs.



Things needed to clean
toilets and latrine



Cleaning a western
toilet



Cleaning Asian or Oriental
toilet



Signs of pregnancy

- Menstruation period stops.
- Breasts grow bigger and become tender.
- The belly expands due to increasing size of the foetus.
- Frequent urination.



Care and requirements of a pregnant woman

Requirement	Importance/uses
Balanced diet	<ul style="list-style-type: none"> ❖ It enables the pregnant mother to remain healthy. ❖ Carbohydrates provide energy to the pregnant woman. ❖ Proteins repair worn out body tissues. ❖ Proteins promote proper growth of the foetus in the womb. ❖ Proteins replace the worn-out body cells. ❖ Proteins make antibodies to boost immunity of the mother and unborn child. ❖ Vitamins and mineral salts boost the immunity of the mother.
Enough rest and sleep	- It helps to refresh the brain and relieve stress.

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Requirement	Importance/uses
Physical exercises	<ul style="list-style-type: none"> • They make the muscles of the womb flexible. • They enable the baby to move and turn easily in the womb. • They prevent complications during birth. • They improve blood circulation. • They reduce overweight of the body.
Proper hygiene	<ul style="list-style-type: none"> ☞ It helps to prevent skin diseases. ☞ It helps to prevent bad odour from the body.
Appropriate dressing	<ul style="list-style-type: none"> 🍏 It helps to support the body's changes. 🍏 It boosts self-esteem during pregnancy. 🍏 It ensures comfort to the pregnant woman.
Ante-natal care	<ul style="list-style-type: none"> ⚡ It helps to promote the health of the mother and foetus. ⚡ It helps to prepare the mother for safe childbirth. ⚡ It helps to prevent complications during childbirth. ⚡ It helps to detect and treat conditions arising during pregnancy. ⚡ It enables HIV positive pregnant women to protect their unborn baby from contracting HIV during childbirth.

Ante-natal care

Ante-natal care is the care given to the pregnant women before birth.