Term 1

Lesson 1

Theme 3: OUR ENVIRONMENT IN OUR SUB-COUNTY

Sub-theme 1: SOIL

Read and spell

- soil
- growth
- earth
- layer

soil

- Soil is the top layer of the earth's surface

components of soil

water

- It dissolves nutrients in the soil
- Plants use the water to make their own food
- It helps in weathering of rocks
- It supports the living soil organisms

Air

- It helps living things in the soil to breathe
- Air in soil helps plant roots to grow
- Plants use soil air for respiration

Humus

- It makes soil fertile
- It holds more water in the soil
- It holds soil particles together
- Humus helps to warm up soil by absorbing heat from the sun
- It supports other soil organisms to live

Rock particles

- These are formed when rocks break up into small pieces
- They are a source of mineral salts in soil

Mineral salts

- They make soil fertile
- They help in healthy growth of plants

Living organisms

- They help to aerate the soil
- They help in soil formation

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Activity

- What is soil**?**

  _____

- Which component of soil makes it fertile**?**

  _____

- Mention the component of soil which helps living things to breathe.

  _____

- Why is water important in soil**?**

  _____

- Mention any two animals which live in soil.

  _____

Lesson 2

Read and spell

- tray - stove
- metallic - saucepan

Related experiments to soil

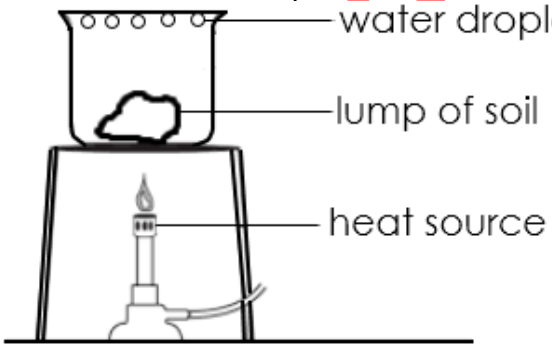
1. Experiment to prove that soil has water

Requirements

- Saucepan
- Dry lump of soil
- Stove

Procedure

- Put the dry lump of soil in the saucepan and cover it up
- Set the saucepan over the stove and heat it



Observation

- Droplets of water are formed on the saucepan cover

Conclusion

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- Heat caused the moisture in soil to evaporate and condense on the saucepan cover
- This proves that soil contains water

Activity

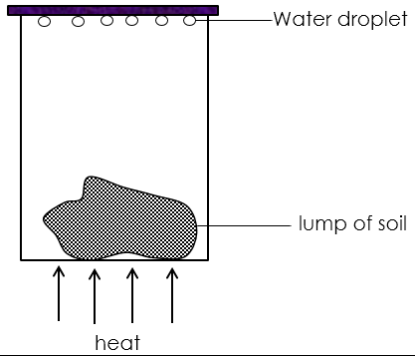
1. Why is water needed in soil**?**

   _____

2. Mention any two items required when experimenting the presence of water in soil.

   _____

3. Use the diagram below to answer the questions that follow.



a) What shows that soil contains water in the experiment shown aside**?**

   _____

b) How is heat important in the experiment shown aside**?**

   _____

Lesson 3

Read and spell

- bubbles - displaces
- experiment - rises

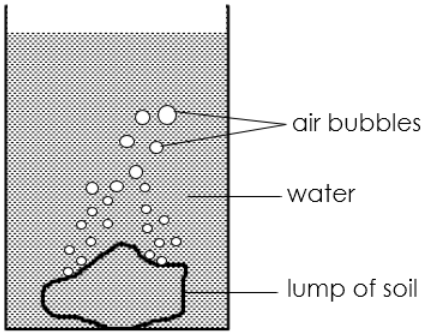
2. **Experiment to prove that soil contains air**

Requirements

- A lump of dry soil
- A bucket of water

Steps to follow

- Put the dry lump of soil in the bucket of water and observe carefully what happens as it sinks



Observation

- Bubbles of air are seen coming out

Conclusion

- As water enters into the soil, it displaces the air in it because air is less dense than water
- The air leaves the soil and rises up in form of bubbles

Activity

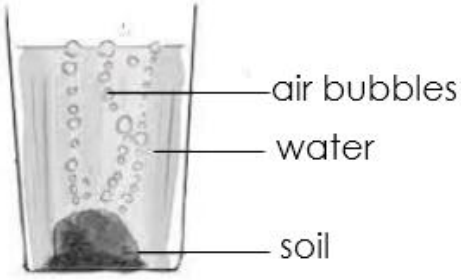
1. Which component of soil is investigated by putting a dry piece of soil in water**?**

   _____

2. Mention any one use of air in soil.

   _____

3. Use the diagram below to answer the questions that follow.



a) What is the experiment about**?**

_____

b) How is water useful in the above experiment**?**

_____

c) In the experiment above, what proves that the lump of soil used contained air**?**

_____

d) Why does the air rise up on water**?**

_____

Read and spell

Lesson 4

- humus
- rotten
- stick
- stir

3. **Experiment to show that soil contains humus**

Requirements

- Container of water
- Soil
- Stick

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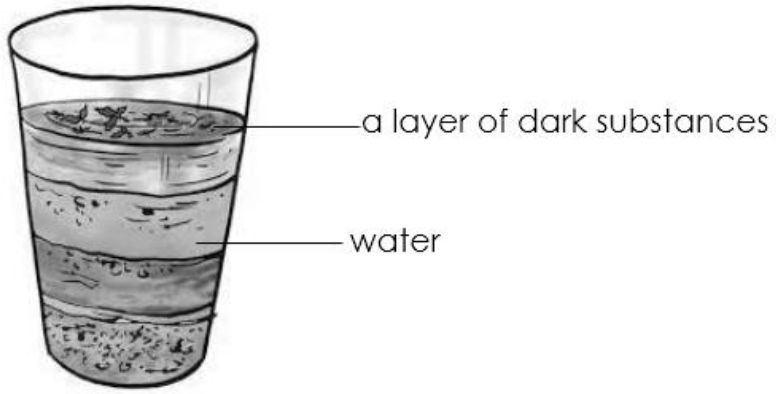
Procedure

- Put a dry piece of fertile soil in the container of soil
- Gently stir the soil in water for sometime
- Leave the set up for a minute or two



Observation

- Tiny dark particles form a layer on top of water

Conclusion

- The layer of dark particles is humus formed from rotten plant and animal matter

Activity

1. By what process is humus formed**?**

   _____

2. State **one** way humus is important to crop farmers**?**

   _____

3. Mention any one thing a P.3 child needs when testing for the presence of humus in soil.

   _____

Lesson 5

Read and spell

- texture - roughness
- smoothness - pottery

Soil texture

- Soil texture is the roughness or smoothness of soil

Types of soil

a) Loam soil

- It has a lot of humus
- It has moderately rough or smooth texture

b) Sand soil

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- It has a rough texture
- It has big soil particles

c) Clay soil

- It has smooth texture
- It has fine soil particles

Activity

1. What term describes the smoothness or roughness of soil**?**

   _____

2. Which type of soil is the best for pottery**?**

   _____

3. Give a reason why loam soil is the best for plant growth.

   _____

4. Why does clay soil have a smooth texture**?**

   _____

5. Which sense can help a P.3 child to know sand soil by merely touching it**?**

   _____

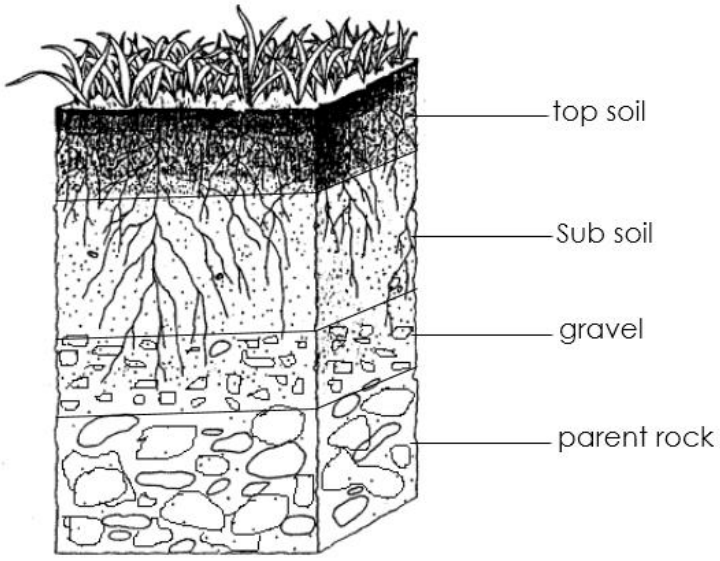
Read and spell

Lesson 6

- profile
- vertical
- arrangement
- layers

Soil profile

- Soil profile is the vertical arrangement of soil layers



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Top soil

- It is the top most layer of soil
- It contains humus

Sub soil

- It is a thicker brown layer of soil after the top soil
- It has low air content
- It contains roots of bigger plants

Gravels and parent rocks

- These layers contain rocks
- Gravels contains small rocks while parent rock is made up of very big rocks
- It supports the upper layers of soil
- It continuously weathers to form soil
- It is used by people to make stone aggregates used in constructions

Activity

1. What is soil profile**?**

   _____

2. Why is top soil said to be the best for plant growth**?**

   _____

3. How is the parent rock layer useful in soil**?**

   _____

4. Identify any one way builders make use of the parent rock layer of soil.

   _____

5. Mention any two places where soil profile can be observed.

   i)_____ ii)_____

Lesson 7

Read and spell

- habitat
- pottery
- modelling
- decoration

Uses of soil to people and other animals

- Soil is used for making bricks
- It is where people grow crops
- It is used for settlement
- It is a habitat of some animals
- It is used for modelling different art items

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Uses of soil to plants

- It provides plants with the nutrients it requires in order to grow
- It supports the plants to stand firmly

Activity

1. How is soil useful to rats**?**

   _____

2. Which type of soil is used for making glasses**?**

   _____

3. How is clay soil important in the local art industry**?**

   _____

4. State any one way in which soil is useful to plants.

   _____

Read and spell

Lesson 8

- natural
- environment
- drought
- occur

Sub-theme 2: NATURAL CAUSES OF CHANGES IN THE ENVIRONMENT

- Natural changes are changes in the environment which occur on their own

Examples of natural changes

- Floods
- Drought
- Earthquakes
- Hailstorms
- Landslides
- Volcanic eruption

Floods

- Floods is when much water covers the ground

Causes of floods

- Too much rain fall
- Settling in swampy areas
- Wetland drainage
- Poor drainage system in an area

Effects of floods

- It destroys people's properties

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- It leads to soil erosion
- It destroys crops

Ways of controlling floods

- Digging water ways
- Conserving wetlands
- Avoiding settlement in swampy land

Activity

1. What are natural changes**?**

   _____

2. Mention any one example of a natural change.

   _____

3. How are floods dangerous to people in an area**?**

   _____

4. Identify any one way of controlling floods in an area.

   _____

5. How does the practice shown below help to control floods**?**

_____

Read and spell

Lesson 9

- Period
- Sunshine
- Shortage
- Reserve

Causes of natural changes in the environment

Drought

- Drought is a long period of sunshine without rain

Causes of drought

- Deforestation
- Wet land drainage

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Effects of drought

- It leads to food shortage
- It destroys crops in the garden
- It dries pasture for animals
- It dries water from the water sources

Ways of controlling drought

- Practicing afforestation
- Conserving wetlands

Storms

- This is when there is a very heavy rain with strong wind

Causes of storms

- Strong winds during rain

Effects of storms

- It destroys crops
- It destroys buildings
- It kills animals

Activity

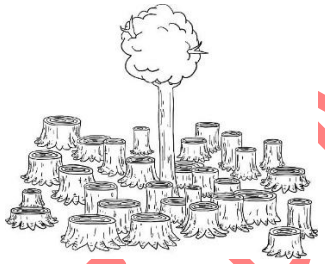
1. What is drought**?**

   _____

2. Identify any one cause of drought.

   _____

3. How does the activity shown in the diagram below cause drought**?**



   _____

4. Mention any one way of controlling drought.

   _____

5. In which way are storms dangerous to people**?**

   _____

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