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P.3 LITERACY 1A SELF-STUDY LESSONS SET 1

25.5.2020

Use your Literacy 1A class work books to write these notes and do all the given activities.

Use the reference books below for further study :

Kobta literacy Bk 3

MK Integrated Science Bk 3.

LESSON ONE:

THEME: OUR ENVIRONMENT

SUB THEME: AIR,WATER AND WIND:

CONTENT: Rain

Dear learners today we are going to study about rain.

By the end of the lesson you should be to:

i. **Explain what rain is**
ii. **Tell the processes through which rain is formed.**
iii. **Describe and draw the water cycle.**

RAIN

These are droplets of water that fall from the clouds.

Types of rainfall

There are three different types of rainfall and these are**:**

- Relief rainfall I: this is rainfall received in mountainous areas.

- Convectional rainfall : this is rainfall received along water bodies
- Cyclonic rainfall: this is rainfall received in plains and plateaus / flat lands.

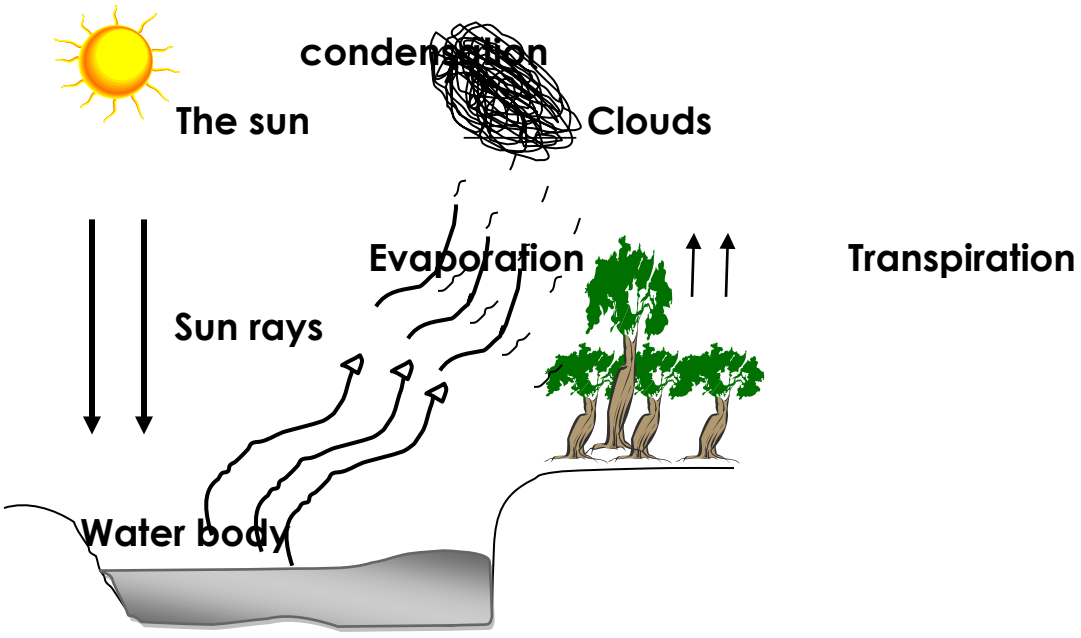
Processes that lead to rain formation

These are processes through which rain is formed:

- Evaporation
- Condensation
- Transpiration

The water cycle is a cycle that water goes through on earth. It supports the continuous presence of water on earth. It shows the movement of water on, above and below the earth's surface. It describes how water evaporates from the surface of the earth, rises into the atmosphere, cools and condenses into rain and falls back again on the surface of the earth.

Study the diagram showing the water cycle below properly.



Note:

i) The sun provides heat for evaporation and transpiration to take place here water is taken up to form water vapor into the atmosphere.

ii) Evaporation takes place when the water bodies are heated up by the sun's rays, the water turns into water vapour which rises up and condenses to form the rain.

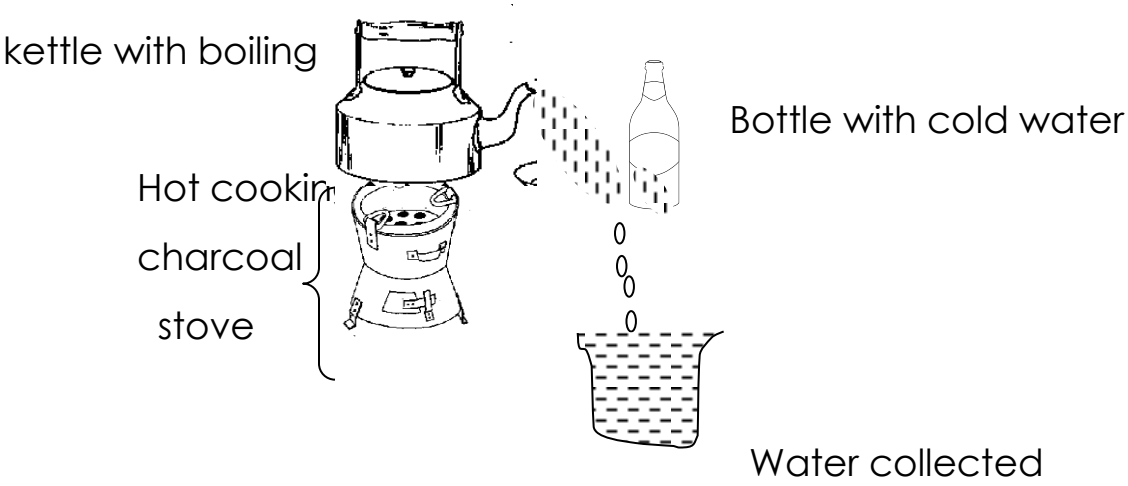
iii) The plants also help in the formation of water vapour through the process transpiration making them condense to form clouds.

iv) Condensation is the process by which the vapour in the air cools down and turns back into liquid form which falls back to the ground again as rain.

iv) Transpiration is the process by which plants release water back to the atmosphere.

Experiment to demonstrate the water cycle.

This experiment when carried out will show you how the water cycle occurs (Please do this with the help of your parent or your elder sibling)



Note:

1. The kettle with boiling water represents the water body

2. The bottle with cold water represents the clouds
3. The charcoal stove represents the sun which is the source of heat.
4. The water droplets represent the rain as a result of condensation.
5. The steam that goes onto the bottle from the kettle represents water vapour.

Uses of rain

Rain is the major source of water as shown in the water cycle.

These are some of the uses of rain:

- Rain provides water for plants to grow.
- Rain provides water for drinking
- Rain water makes the soil soft for easy digging.
- Rain cools our environment.

Exercise.

1. Which process in plants is involved in rain formation?.
2. How does the sun support in the process of rain formation?
3. Which type of rainfall occurs in mountainous places?
4. In the experiment you carried out on the rain cycle, what do the following represent:
   a) Steam
   b) The bottle
   c) The hot charcoal stove.

5. What is the major source of water?

6. Apart from watering plants for growth, how else is rain important to man?

LESSON 2.

THEME: OUR ENVIRONMENT

SUB THEME: AIR,WATER AND WIND:

CONTENT: Dangers of too much rain

By the end of the lesson, you should be able to:

i. **Give the uses of rain**
ii. **State the dangers of too much rain**
iii. **Explain how rain is measured**

Rain is very useful to man as noted earlier but it can be very dangerous when it comes in larger amounts.

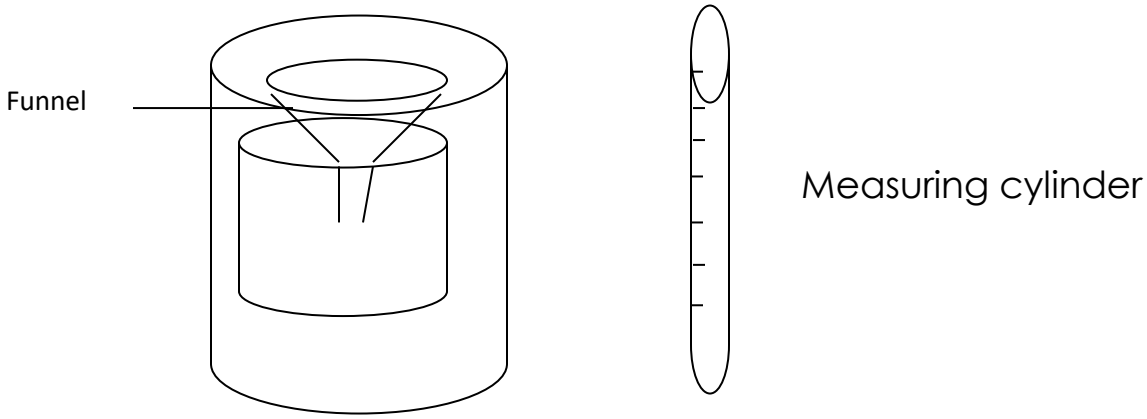
Heavy and too much rain can cause the following problems:

- Too much rain leads to floods.
- Too much rain damages roads and bridges.
- Rain water carries a way the top soil.
- Too much rain damages crops.

Measurement of rainfall

- We use rain gauge to measure the amount of rain fall received in an area. It is measured in units called millimeters(mm)

Structure of a rain gauge



Note:

1. A rain gauge is one of the weather instruments found at the weather station.
2. A weather station is a place where weather forecasting takes place .

Exercise

1. Mention two processes involved in rain formation.
2. State one process that leads to soil formation
3. How important is the sun in the rain cycle?
4. State two ways how too much rainfall is dangerous to man.
5. How does bush burning lead to soil erosion?
6. Mention one natural cause of change that you know
7. Why is a rain gauge placed in an open place?
8. In which unit is rainfall measured

LESSON 3
THEME: OUR ENVIRONMENT

SUB THEME: AIR,WATER AND WIND

CONTENT: Weather instruments

By the end of the lesson you should be able to:

i. **Tell what weather instruments are**
ii. **Give examples of weather instruments and their functions**
iii. **Draw the weather instruments.**

Weather instruments are instruments used to record different weather elements.

These elements of weather include:

i. Wind
ii. Rainfall
iii. sunshine

These weather instruments are usually found at a weather station. The main weather station in Uganda is found at Entebbe. It's called **Entebbe Meteorological Center**.

Study the examples of weather instruments with their functions in the table below.

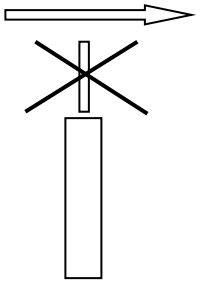
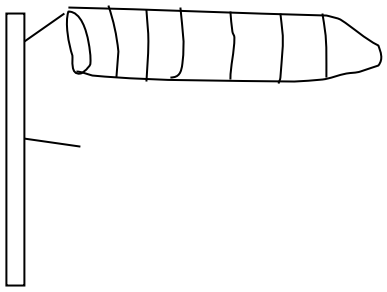
Instrument	**Function**
Wind vane	Shows direction of wind
Wind sock	Shows strength of wind
Anemometer	measures speed of wind
Rain gauge	Measures amount of rain received in an area
Barometer	It measures air pressure
Sunshine recorder	It measures sunshine intensity

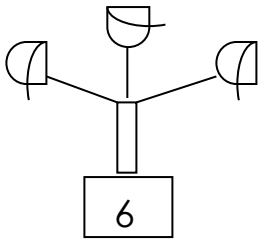
Thermometer	It measures temperature of the day
Hygrometer	It measures humidity

At the weather station we also find a **Stevenson screen .**

A **Stevenson screen** is a wooden box at a weather station used to keep delicate weather instruments .These delicate instruments include:

- A Thermometer
- A Barometer
- A Hygrometer
- The Stevenson screen has a painted white surface which reflects heat.
- It is well ventilated with louvers to allow proper air circulation.
- It is made of wood to protect the instruments from strong heat

Diagram	**Function**
 wind vane	To show the direction of wind
 Wind sock	To show the speed and direction of wind.

 Anemometer	For measuring the speed of wind To show the strength of wind

LESSON 4

THEME: OUR ENVIRONMENT

SUB THEME: AIR,WATER AND WIND

CONTENT: WIND

Dear learner today we are going to study about wind.

By the end of the lesson you should be able to:

i. **Tell what wind is**
ii. **State the advantages (uses) and disadvantages of wind(problems caused by wind)**

Wind is one of the major elements of weather that we need to study about

Wind is moving air.

OR

Wind is air in motion. The word motion here also means movement.

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Wind has many advantages/uses and these include:

- Wind is used for winnowing seeds.
- Wind is used for sailing boats.
- Wind helps to fly our kites.
- It helps to dry washed clothes.
- Wind helps to turn wind mills.
- Wind pollinates flowers.
- Wind is a source of power called wind power.

Disadvantages/problems caused by too much wind

- Strong wind blows off house roofs.
- Strong wind damages crops.

- Strong wind breaks trees and plants.
- Wind spreads diseases. e.g. Mumps, tuberculosis, measles, whooping cough, diphtheria etc

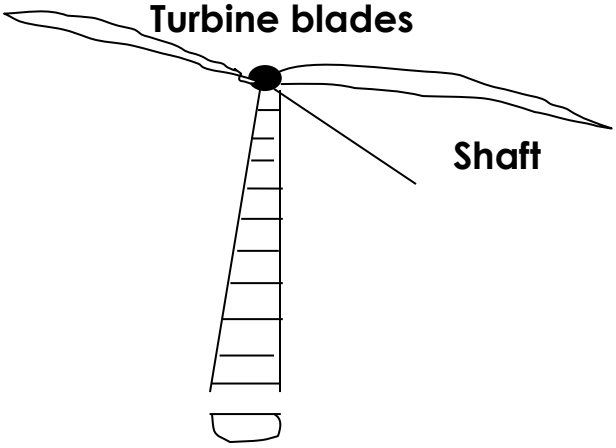
Wind as a source of power

A wind mill is used for producing wind power or wind energy which is a form of Electricity

-This electricity or power is released when the speed of wind turns the turbine blades. The turbines blades turn the shaft which enables it to produce electricity. The power produced is called wind power/wind energy.

Wind power is used to turn grinding mills.

A diagram of a wind mill



Activity

1. What is wind?
2. Mention any one importance of wind to farmers
3. Name any two instruments used to record wind
4. Why is strong wind dangerous in the environment?
5. What is soil erosion?
6. In which way do people in hilly areas control soil erosion?
7. State the importance of trees in the environment

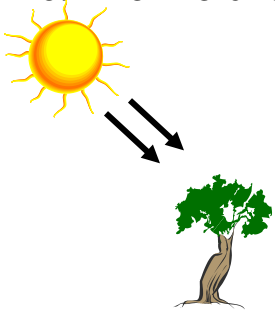
Lesson 5

Dear Learner ,having completed studying the theme on environment , you are now going to write a topical test on the learnt theme.

1. *What is weather?*
2. *Identify the element of weather suitable for winnowing.*
3. *Draw the following conditions of weather*

rainy	*sunny*

4. *Where does the sun rise from?*
5. *What is formed when light is blocked by an opaque object?*
6. *Draw a shadow for the following object*

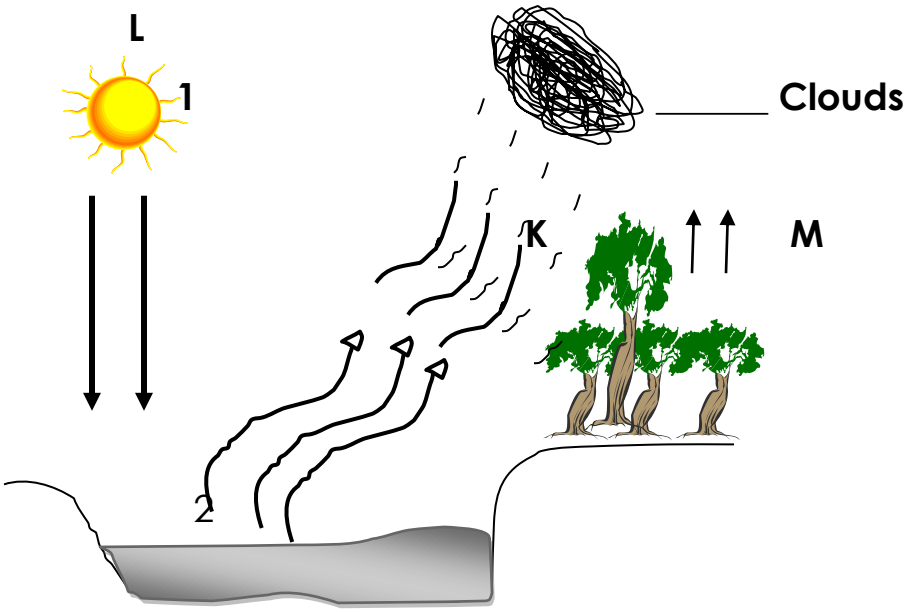


7. *State one way the sun helps in the control of some diseases in the environment.*
8. *Why would you advise a crop farmer to harvest their cereals in the dry season?*

9. *State one effect of drought to the people*

10. *Which type of clouds encourages crop farmers to plant their crops?*

11. *Use the water cycle below to answer the given questions*



12. *Name the process marked M, K, L*

13. *How useful is the sun in the above process*

14. *Give two uses of rain in our environment*

15. *Rain is very important to the growth of crops. Suggest one way it can be very dangerous to crops.*

16. *How can one determine the amount of rainfall received in Kitete village after it has rained?*