

## P.4 SCIENCE LESSON NOTES

### WEATHER CHANGES

- Weather is the state of the atmosphere at a given place at a particular time.
- It is also the condition of the atmosphere at a given time.

#### 2. Elements/ factors of weather


- ✓ Sunshine
- ✓ Temperature
- ✓ Cloud cover
- ✓ Rainfall
- ✓ Wind movements
- ✓ Humidity

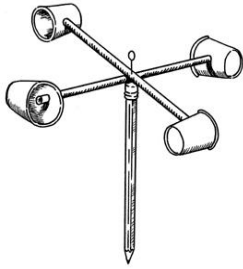

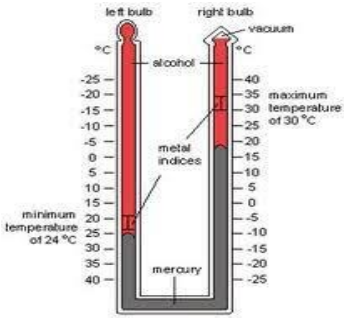



#### 3. Types of weather

- ✓ Cloudy weather
- ✓ Rainy weather
- ✓ Sunny weather
- ✓ Windy weather

#### 4. Weather instruments

These are instruments used to measure different elements of weather.

WEATHER INSTRUMENT	USE
Rain gauge 	Measures the amount of rainfall received in a given place.

 <p>Anemometer</p>	<p>Measures the speed of wind.</p>
 <p>Wind vane</p>	<p>Shows the direction of wind.</p>
 <p>Six's thermometer</p>	<p>Measures the maximum and minimum temperatures of the day.</p>
 <p>Wind sock</p>	<p>Shows the direction of wind.</p>
 <p>Barometer</p>	<p>Measures atmospheric air pressure.</p>
 <p>Hygrometer</p>	<p>Measures the humidity in the atmosphere</p>

**Sources of water**

### **a. Natural sources of water**

- ✓ Rivers
- ✓ Swamps
- ✓ Lakes
- ✓ Rainfall

### **b. Artificial sources of water**

- ✓ Bore holes
- ✓ Wells
- ✓ Valley dams
- ✓ Ponds

## **2. Properties of water**

- ✓ It has no colour
- ✓ It has no taste
- ✓ It has no smell
- ✓ It takes the shape of the container

### **uses of water to people and other animals.**

- Used for cooking
- For drinking
- For washing cloths
- For watering crops
- Water is a habitat for water animals.

### **Uses of water to plants.**

- It is used for germination
- For photosynthesis
- For transpiration
- It dissolves mineral salts.

## **3. Water in air**

This is called water vapour

### **Formation of water vapour**

- i. Through evaporation from water bodies
- ii. Through transpiration

### **Importance of water vapour**

- i. It changes into clouds on condensation which results in rain

## **4. Rain**

The drops that fall down from the clouds in the sky.

## **Rainfall**

The water collected on the ground from the rain drops

## **The water cycle**

This is the process by which rain is formed.

It involves

- i. Evaporation
- ii. Transpiration
- iii. Condensation

**Evaporation** is the change of water from liquid to gas.

**Transpiration** is the loss of water from a plant to the atmosphere through leaves as vapour.

**Condensation** is the change of state from gas to liquid.

### **During the water cycle;**

- i. The sun heats the water bodies and vegetation
- ii. Evaporation takes place from the water bodies and transpiration takes place in plants
- iii. The water vapour rises up into the sky and condenses to form clouds
- iv. The clouds become heavy and fall down as rain.



A—Heat from the sun

B—Evaporation from water bodies

C—Transpiration from vegetation

D—Condensation forming clouds

E—Rain

## **Clouds**

Clouds are formed when water vapour in the sky condenses.

## **Types of clouds**

- i. Cirrus—highest and lightest clouds
- ii. Stratus
- iii. Cumulus
- iv. Nimbus—heaviest clouds

## **Effects of clouds on the environment**

- ✓ Clouds block direct sunlight
- ✓ This reduces the brightness in our environment.
- ✓ Clouds lower the temperature in our environment by reducing heat from the sun.
- ✓ Clouds bring rain.

## **Effects of rain on the environment**

- i. Rain reduces temperature in the environment
- ii. Rain reduces dust
- iii. Rainfall softens soil.

## **Wind.**

Wind is moving air.

## **Effects of wind in the environment:**

- Strong wind is an agent of soil erosion.
- Strong wind breaks down crops and trees.
- Strong wind blows off roofs of houses.
- Wind is an agent of pollination.
- wind is an agent of seed dispersal.

## **Uses of wind to people and plants:**

- used for sailing engineless boats.
- For generating electricity.
- For flying kites'
- For winnowing.
- Plants use wind for pollination.
- For seed dispersal.

## **Uses of sunshine in the environment.**

- For drying harvests.
- For warmth'
- For solar electricity.

**Effects of sunshine in the environment:**

- Strong sunshine dries up water bodies.
- Strong sunshine dries up plants in the garden.
- Strong sunshine dries and hardens the soil.

**Temperature:**

- Temperature is the hotness or coldness of an object or place.
- The instruments used for measuring temperature are:
  - . six thermometer for measuring the highest and the lowest temperature of the day.
  - . clinical thermometer for measuring human body temperature.
- Temperature is measured in degrees.

**The weather chart**

1. It is a chart that shows the daily weather changes in our environment.
2. A weather chart is produced through observation and recording.

**The elements of weather in a weather chart include;**

1. How much rainfalls
2. How much cloud is in the sky
3. How strong the wind is
4. How hot is the sunshine
5. How warm or cool is the air in our surroundings.

**Examples of a weather chart**

<b>Element of weather</b>	<b>Temperature</b>	<b>Cloud cover</b>	<b>Rainfall</b>	<b>Cloud cover</b>	<b>Wind movement</b>	<b>Sunshine</b>
MON						
TUE						
WED						
THUR						
FRI						

**TOPICAL QUESTIONS**

1. Briefly explain the term weather.
2. Mention four elements of weather.
3. Identify four types of weather.
4. Match the items in A with those in B.

**A**

Thermometer  
temperature

Barometer

Six's thermometer

Rain gauge

Anemometer

**B**

Day's highest and lowest

Rainfall

Temperature

Air pressure

Speed of wind

5. How do people manage the following changes in their environment?
  - a) Strong wind
  - b) High temperatures
  - c) Very low temperatures
  - d) Flooding
6. Name two examples of each water source below;
  - a) Natural sources of water
  - b) Artificial sources of water
7. Mention two properties of water
8. Describe, in four sentences, how rain is formed.
9. How do the following affect temperature in the environment?
  - a) clouds
  - b) Rain

## **PERSONAL HYGIENE**

1. Personal hygiene is the way we keep our bodies clean.

It is the general cleanliness of the body.

2. **Importance of personal hygiene.**

- ✓ It controls the spread of germs.
- ✓ It prevents bad body smell.
- ✓ It prevents skin diseases
- ✓ It prevents teeth diseases

- ✓ It prevents lice, mites and ticks.

### 3. **Ways of keeping good personal hygiene.**

- ✓ Bathing every day
- ✓ Cutting finger and toe nails short
- ✓ Brushing teeth every day
- ✓ Washing hands after visiting the toilet or latrines.
- ✓ Washing hands after a physical task like digging, picking rubbish, etc.
- ✓ Washing hands before eating food.
- ✓ Washing clothes regularly
- ✓ Washing beddings regularly
- ✓ Combing hair daily.
- ✓ Ironing clothes and beddings.

### 4. **Items used to keep the body clean**

- ✓ Soap
- ✓ Clean water
- ✓ Sponge
- ✓ Tooth brush
- ✓ Comb
- ✓ Towel
- ✓ Razor blade
- ✓ Basin
- ✓ Sandals
- ✓ Tooth paste

### 5. **Dangers of poor personal hygiene.**

- ✓ The body smells bad.
- ✓ Jiggers, mites, ticks and lice can breed and affect the body.
- ✓ The teeth may develop tooth decay.
- ✓ Diarrhea diseases can spread easily.
- ✓ Accidental injuries from long finger nails to self or others.

### 6. Diseases brought by poor personal hygiene.

<b>DISEASES</b>	<b>CAUSE</b>
Tooth decay	Bacterial
Scabies	Itch mite



Dysentery	Bacteria Amoeba
Diarrhoea	Virus Bacteria
Ring worm	Fungus
Trachoma	Chlamydia

### **TOPICAL QUESTIONS**

1. Briefly explain personal hygiene.
2. Name four items used in keeping good personal hygiene.
3. Why is it important to keep good personal hygiene?
4. State four ways of keeping personal hygiene.
5. Name the diseases that affect the following parts of the body.  
a) eyes      b) skin      c) teeth
6. Suggest four ways of keeping good personal hygiene.
7. Why are the following habits important to the individual.  
a) Cutting finger nails  
b) Combing hair  
c) Washing hands before eating  
d) Washing hands after using a toilet or latrine