Name:.....Class:.....

Weather Instruments



Until the 18th century, people used to depend on sensory observations for any weather information, they understood the wind direction through the movement of leaves or estimated the time of rain through the number of clouds in the sky. Now, the time has changed. Today, we have modern technology which includes different weather instruments that help us to accumulate real weather information.

Meteorology is the science of atmosphere that includes both the weather and the climate. This study includes some instruments that help to collect information of the atmosphere. Here, there are some of these weather instruments and their usage:

A **THERMOMETER** measures the air temperature. Most thermometers are closed glass tubes containing liquids such as alcohol or mercury. When air around the tube heats the liquid, the liquid expands and moves up the tube. We use degrees Celsius (°C) to measure it.

A **BAROMETER** measures air pressure. It tells you if the pressure is rising or falling. A rising barometer means sunny and dry conditions, while a falling barometer means stormy and wet conditions. An Italian scientist named Torricelli built the first barometer in 1643.

A **RAIN GAUGE** measures the amount of rain that has fallen over a specific time period. The unit we use is millimeters (mm).

A **WIND VANE** is an instrument that determines the direction from which the wind is blowing.

An **ANEMOMETER** measures wind speed. The cups catch the wind, turning a dial attached to the instrument. The dial shows the wind speed in kilometers per hour (km/h).

A **WIND SOCK** is a conical textile tube, which looks like a big sock, designed to indicate wind direction and relative wind speed.

A **HYGROMETER** measures the amount of water vapor in the air or the humidity. We use percentages (%) to measure it.

WEATHER SATELLITES are used to photograph and track large-scale air movements. Then meteorologists compile and analyze the information with the help of computers.



1. Read the text and mark if these sentences are True or False

1. Before the 18th century people used their senses to predict the weather. **True / False**
2. Meteorology studies only the weather. **True / False**
3. A thermometer measures the temperature of the soil. **True / False**
4. A rising barometer means sunny and dry weather. **True / False**
5. A rain gauge measures the wind speed. **True / False**
6. A wind vane measures how fast the wind is. **True / False**
7. The dial of an anemometer shows the wind speed. **True / False**
8. A wind sock is similar to a giant sock. **True / False**
9. A hygrometer measures the humidity. **True / False**
10. Weather satellites take pictures of the air movements. **True / False**

LIVEWORKSHEETS

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2. Choose the correct information for each box, follow the example.

EXAMPLE!

Atmospheric Presure

The weight of the air in the atmosphere

Unit: hectopascals (hPa)

Instrument: Barometer

Temperature

Unit:

Instrument:

Humidity

Unit:

Instrument:

Precipitation

Unit:

Instrument:

Wind

Unit:

Instrument:

3. Complete the sentences.

1. In an anemometer the _____ catch the wind, turning a _____ attached to the instrument.
2. In the past, people estimated the _____ of rain through the number of _____ in the sky.
3. Meteorologist use some _____ to collect information of the atmosphere.
4. A wind vane and a wind sock indicate the wind _____.
5. Meteorologists use a _____ to analyze the information of a weather satellite.
6. Thermometers are made of a _____ tube that contains liquids like alcohol or _____.

LIVEWORKSHEETS