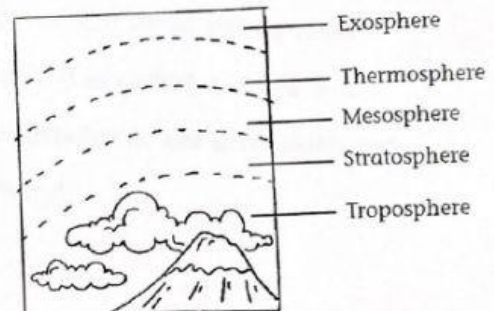


The Weather

Meteorology is the study of weather and the atmosphere. **Meteorologists** are scientists who study and measure weather conditions. Meteorologists have developed tools for measuring weather conditions such as air temperature and wind speed. They use the information from the weather instruments to predict the weather.

Earth's atmosphere

The atmosphere is the air that surrounds Earth. It is a very thin blanket surrounding the entire Earth and is a mixture of gases, solids, and liquids. The air we breathe is made up of 78% nitrogen, 21% oxygen, 0.4% carbon dioxide, up to 0.6% water vapour and traces of other gases including ozone, helium and hydrogen. The air in the atmosphere has certain properties. Air takes up space, has weight, and presses on things. The atmosphere has layers. Weather takes place in the lowest layer of the atmosphere.



Elements of Weather

Weather is what is happening in the atmosphere at a certain place. Temperature, wind and precipitation are all elements/parts of the weather. **Temperature** is a measure of how hot or cold something is. Wind is the movement of air.

Precipitation is any kind of water from the atmosphere that falls to the ground.

Climate is the average weather of a region over a long period.

Measure water at various temperatures

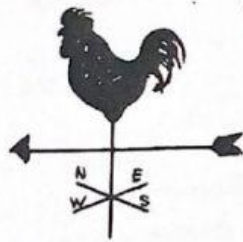
Temperature is measured with a **thermometer**. Most thermometers are made of a glass tube with coloured alcohol inside. When the air gets hotter, the level of the liquid in the tube rises. When the air cools, the liquid level falls. The thermometer has two scales for measuring temperature; **Fahrenheit** and **Celsius**.

Wind direction

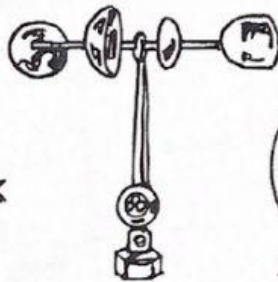
Wind vanes show the direction of the wind. The arrow of the wind vane points into the wind. When the wind is blowing from the south, it is called a south wind. When the arrow of the wind vane points between two directions, the directions are combined. E.g. north and west is called a north-west wind.



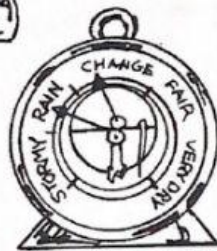
Thermometer



Wind Vane



Anemometer



Barometer



Rain Gauge

Date: _____

1. What is the scientific name for the study of weather and the atmosphere called?

[1] _____

2. What is the name given to the scientist who studies weather and the atmosphere?

[1] _____

3. Fill in the blank to complete the amount of air we breathe in. [4]

_____ % nitrogen _____ % oxygen
_____ % carbon _____ % water vapour

4. Write the words in the chart to match each definition.

Meanings	Words
a. what happens in the atmosphere at a certain place	
b. a measure of how hot or cold something is	
c. the movement of air.	
d. any kind of water from the atmosphere that falls to the ground	
e. the average weather of a region over a long period of time.	
f. An instrument that shows the direction of the wind	

5. Name the TWO scales on a thermometer. [2]
