



States of Matter

Objectives

- 1) Compare and group materials together, according to whether they are solids, liquids or gases.
- 2) Observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius ($^{\circ}\text{C}$) (double lesson)
- 3) Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.

Questions

- 1) Describe the properties of these states of matter: a solid, a liquid and a gas.
- 2) How would I change a solid to a liquid?
- 3) How would I change a liquid to a gas?
- 4) What is the freezing point of water?
- 5) What is the boiling point of water?
- 6) Define evaporation.
- 7) Define condensation.
- 8) Name three types of precipitation
- 9) Is sand a solid, liquid or a gas?
- 10) Name three examples of a solid, a liquid and a gas.
- 11) All liquids can be poured: True or false?
- 12) States of matter change when their particles either gain or lose energy; this can be due to a change in _____.

Scientist: Bernard Palissy (1510-1590)

Bernard Palissy is often credited with discovering the modern theory of the water cycle.

Evaporation: Palissy described how the sun evaporates water from oceans to form clouds.



Condensation: Palissy explained how water vapor in the atmosphere condenses to form precipitation, such as rain, snow, sleet, and dew.

Scientific Terminology

condensation – when water vapour (gas) is cooled down, it changes into water (liquid).

evaporation - the process where a liquid changes into a gas, like when water turns into water vapor (gaseous state of water).

precipitation - when water falls from the clouds in the sky, including rain, snow, hail and sleet.

property - a characteristic

solid - a state of matter that is firm and stable. It holds its shape because it is made up of particles that are packed closely together in a fixed structure.

temperature - how hot or cold something is

The Water Cycle

