



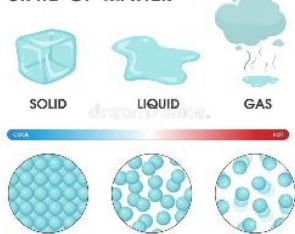
States of Matter

Science
Year 4
Autumn Term

Overview

During this topic, we will be exploring the different states of matter and how each state changes. We will be conducting a range of experiments to test what happens when materials change state.

STATE OF MATTER



Topic Vocabulary

condensation – the change of state from a gas to a liquid

degrees Celsius – a unit of measure for temperature

evaporation – the change of state from a liquid to a gas

freezing – the change of state from a liquid to a solid

gas – has no fixed shape or volume and they completely fill any container they are put into

liquid – has no fixed shape but a volume and takes on the shape of its container

melting – the change of state from a solid to a liquid

solid – has a definite shape that remains the same unless a force is acting upon it.

solidifying – the change of state from a liquid to a solid

Knowledge & Understanding

In this unit, the pupils will:

- compare and group materials together, according to whether they are solids, liquids or gases
- 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
- identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.

Enquiry Skills & Concepts

In this unit, the pupils will be:

- asking relevant questions and using different types of scientific enquiries to answer them
- setting up simple practical enquiries, comparative and fair tests
- making observations and taking accurate measurements
- gathering, recording, classifying and presenting data in a variety of ways to help in answering questions
- recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables
- using results to draw simple conclusions, suggest improvements and raise further questions
- identifying differences, similarities or changes related to simple scientific ideas
- using straightforward scientific evidence to answer questions or to support their findings.

Working Scientifically

classification – to sort things into different groups by their characteristics or features.

conclusion – an opinion reached after careful thinking and observation

data – facts or figures that can be used to give information about a subject.

evidence – findings and results that answer a question

fair test – testing without showing favour or allowing an advantage

observation – to look closely and make detailed thoughts / opinions about something

prediction – to use prior knowledge to state the outcome

variable – something that can change or has no fixed value.

Home – School link project

During this topic pupils can choose to:

- Make a model of the water cycle including evaporation and condensation.
- Make a model to show a solid, liquid and gas.