



NATIONAL CURRICULUM

Science - Key Knowledge

Science: States of matter

- 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 materials change state (in Degrees Celsius)
- Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature

Three States of Matter



Science: Working scientifically

- Ask relevant questions and use different types of scientific enquiries to answer them
- Set up simple practical enquiries, comparative and fair tests
- Know which are control, dependent and independent variables in a fair test
- Identify one or more control variables from those provided when conducting a fair test

- Make observations and take increasingly accurate measurements using standard units (e.g., to a decimal point)
- Use a range of equipment, including thermometers and data loggers
- Gather, record, classify and present data in a variety of ways to help in answering questions
- Record findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables
- Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions
- Use results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions
- Identify differences, similarities or changes related to simple scientific ideas and processes
- Use straightforward scientific evidence to answer questions or to support their findings

SCHOOL KEY DRIVERS

Language

Science
States of matter
 solid, liquid, gas, state, degrees Celsius, evaporation, condensation, water vapour, water cycle, precipitation, dissolve, particle, temperature, bond, thermometer, sublimation, boiling point food chain, primary/secondary/ tertiary consumer

Scientists

George de Mestral (Velcro)
 George de Mestral was a Swiss electrical engineer who invented the hook and loop fastener which he named Velcro.



Opportunities

Scientist
 Naturalist

Links to prior learning and next steps:
 Y3: Rocks and soils
 Y5: Changing materials
 Y6: Reversible and irreversible changes

Diversity

Compare physical geography and climate differences
 Links to other subjects:
 Maths: statistics - bar charts
 Geography: water cycle

