



Linked learning theme: Cracking Coast

Autumn 1 Year 5

Science – Materials

Prior Knowledge

In Y4, children learnt about states of matter-solids, liquids and gases. They also learnt about the properties of each state. Changes were covered- condensation, evaporation, freezing, melting and the water cycle.

Core knowledge

- I can compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets.
- I can give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic.

Key skills

- plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary.
- take measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate.
- record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs.
- use test results to make predictions to set up further comparative and fair tests.
- report and present findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations
- identify scientific evidence that has been used to support or refute ideas or argument

Vocabulary

Hardness
solubility fair test
transparency
conductivity
magnetic
recycling
Solids liquids and
gases

Learning outcomes

- I can compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets.

- I know that some materials will dissolve in liquid to form a solution, and can describe how to recover a substance from a solution.
- I can use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating.
- I can give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic.
- I can demonstrate that dissolving, mixing and changes of state are reversible changes.
- I can explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda.