



Previous Learning

Year 2 Uses of everyday materials

Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses

Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.

Year 4—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 this happens in degrees Celsius (°C)

identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature

Properties and Changes of Materials

Year 5 Science Autumn 2

Learning objectives

To compare and group together everyday materials on the basis of their properties, including their hardness, transparency and response to magnets by sorting and classifying materials according to their properties.

To give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic by investigating thermal conductors and insulators.

To compare and group together everyday materials on the basis of their thermal conductivity by investigating thermal conductors and insulators.

To use different processes to separate mixtures of material.

Working Scientifically

Learning Objectives

To **investigate** materials which will dissolve.

To **identify** and **explain** irreversible chemical changes.

To **report** and **present** findings in oral and written forms such as displays and other presentations.

To use relevant **scientific language and illustrations** to communicate ideas .



Possible experiments and investigations

Finding the best thermal insulator for a new lunch box

Investigating which material will dissolve

An investigation to separate mixtures

Vocabulary and definitions

Material—the matter from which a thing is or can be made

Conductor— an object or type of material that allows the flow of charge (electrical current) in one or more directions

Insulator—a material that does not conduct electrical current

Dissolve—become or cause to become incorporated into a liquid so as to form a solution

Separate—cause to move or be apart

Reversible—capable of being reversed so that the previous state or situation is restored

Irreversible—not able to be undone or altered