Year 6 Science Flashcards: Properties of Materials

Learning objective: To identify and describe the properties of materials and understand how these properties determine their suitability for specific purposes.

Use these flashcards to test your knowledge of material science. You can work with a partner to quiz each other or use them for independent revision.

What is a thermal insulator?

A material that does not allow heat to pass through it easily, such as wood or plastic.

Define electrical conductivity.

The ability of a material to allow electricity to flow through it, like metals.

What is the difference between a reversible and an irreversible change?

A reversible change can be undone (e.g., melting ice), while an irreversible change creates a new substance and cannot be undone (e.g., burning wood).

Nova the owl asks: Why is copper used for electrical wiring?

Because copper is an excellent electrical conductor.

Explain the term 'solubility'.

The ability of a substance (the solute) to dissolve in a liquid (the solvent) to form a solution.

Bea the honeybee asks: Which property makes a material 'transparent'?

A material is transparent if it allows light to pass through it so that objects behind it can be clearly seen.

How can you separate a mixture of sand and iron filings?

Using a magnet to attract the magnetic iron filings away from the non-magnetic sand.

Why are plastic handles often attached to metal frying pans?

Plastic is a thermal insulator, preventing the heat from the metal pan from burning the person holding it.

Is dissolving salt in water a reversible or irreversible change?

It is a reversible change because the water can be evaporated to leave the salt crystals behind.

Max the monkey asks: If a material is 'opaque', what does that mean?

Opaque materials do not let any light pass through them.