Year 6 Science Flashcards: Mixtures and Separation

Learning objective: To understand the properties of mixtures and identify methods for separating materials based on their physical properties.

Use these flashcards to test your knowledge of how mixtures are formed and how we can separate them. Ask a partner to read the front, or test yourself by covering the answer side.

What is a mixture?

A mixture is a substance made by combining two or more different materials where the individual parts keep their own properties and are not chemically joined.

What is a solution?

A solution is a special type of mixture where a solid has dissolved completely into a liquid.

What does the word 'soluble' mean?

A substance is soluble if it is able to dissolve in a liquid (like sugar in water).

What does the word 'insoluble' mean?

A substance is insoluble if it does not dissolve in a liquid (like sand in water).

Which method would you use to separate an insoluble solid from a liquid?

Filtration, using a filter paper or funnel.

How can you recover a dissolved solid from a solution?

Evaporation, where the liquid is heated until it turns into gas, leaving the solid crystals behind.

If you have a mixture of sand and salt, what is the first step to separate them?

Add water to dissolve the salt, then use filtration to remove the insoluble sand.

Why is a sieve useful when separating mixtures?

A sieve is used to separate solid mixtures based on the size of the particles.

True or False: A mixture can be separated back into its original parts.

True. Because the parts are not chemically bonded, they can be separated using physical methods.

Nova the owl wants to separate iron filings from sand. What should she use?

A magnet, because iron is magnetic and sand is not.