

# Mix and match



## Background knowledge

Mixtures are two or more materials combined together. They can be separated in many different ways. To find out which is the best way to separate a mixture, you must first ask yourself some important questions. For example, are the materials in the mixture soluble? Are the materials attracted to a magnet? Do the materials change when they are heated? What size are the particles in the mixture?

## Science activity

On the left, you can see four mixtures. On the right are four different methods for separating mixtures. Draw a line between each mixture and the best separation method. On a separate piece of paper, explain your choice.



Steel nails and copper nails



Dissolve in water and then use a filter.



Use a colander.



Rice and many beans



Use a magnet.



Soil containing mud and sand



Shake in a bottle with some water and leave to settle.



Sand and salt

## Science investigation

Ⓜ Take extra care - ask an adult to supervise you.

Suppose somebody mixed together sand, paper clips, and sugar. Design and conduct an experiment that will separate the three materials from one another. How could you get the sugar back if you dissolved it in water?