

# Changing matter



## Background knowledge

When you mix substances together, they may change to form a new substance. Sometimes the change is reversible, while at other times it is irreversible. For example, when vinegar is mixed with baking soda, the two fit and a new substance is formed. This change is irreversible. A change is more likely to be irreversible if there is a reaction such as a fit, color change, or a change in temperature.



## Science activity

Are the following mixing processes reversible or irreversible?

1. Dissolving sugar in water \_\_\_\_\_
2. Shaking together vinegar and oil \_\_\_\_\_
3. Mixing sand and sugar \_\_\_\_\_
4. Adding lemon juice to red cabbage juice (the color changes from black purple to red) \_\_\_\_\_

## Science investigation

Try mixing the following substances together, and decide whether the change is reversible or irreversible. Do any mixtures result in a temperature change? Explain.

1. Lemon juice added to baking powder
2. Vinegar added to chalk
3. Vinegar added to salt
4. Lemon juice added to sugar