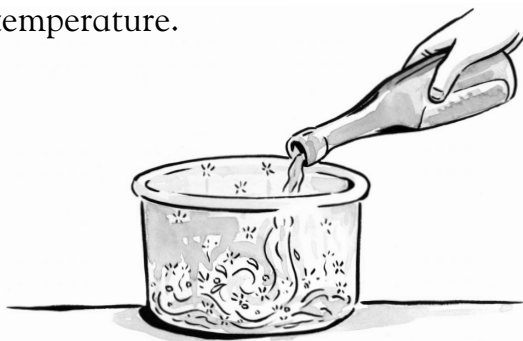


Changing matter



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 fizz 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 fizz, 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 bluish-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

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 fizz 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 fizz, color change, or a change in temperature.



Science activity

Are the following mixing processes reversible or irreversible?

1. Dissolving sugar in water *Reversible*.....
2. Shaking together vinegar and oil *Reversible*.....
3. Mixing sand and sugar *Reversible*.....
4. Adding lemon juice to red cabbage juice (the color changes from bluish-purple to red) *Irreversible (a color change often signifies a permanent change)*.....

Science investigation

Borax mixed with Elmer's glue makes an irreversible change. An irreversible change is always a chemical change since the matter takes on new properties. A reversible change is a physical change, since the individual properties of the matter are still present.