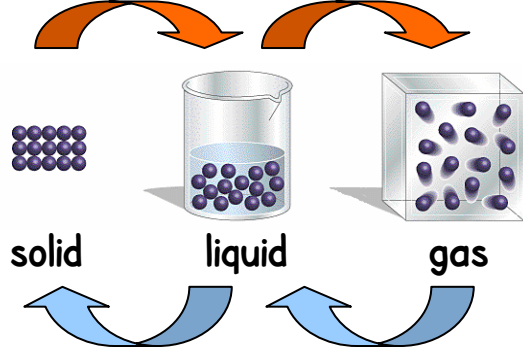


# Reversible and Irreversible Changes Fact Sheet

## PHYSICAL CHANGES



Changing state from solid to liquid to gas and back again is a reversible change.

Heating is the process of increasing the temperature.

Cooling is the opposite process where temperature is decreased. We use a thermometer to measure temperature.



A wind turbine helps to generate electricity from renewable sources.



When chocolate is melted it can solidify again. The change is reversible.

Cooking eggs, by frying, boiling, scrambling, poaching etc., is always an irreversible change.



When oil, vinegar and egg yolks are mixed together, they make a precipitate called mayonnaise. This change is irreversible.

Dissolving sugar in water is a reversible change. When the water is evaporated it leaves the sugar behind.



When vitamin tablets effervesce (fizz) a gas is produced. This is an irreversible change.

Any reaction, such as burning, that causes new substances to be formed is called a CHEMICAL CHANGE. These changes are irreversible.



fuel



oxygen



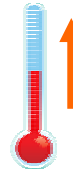
flame



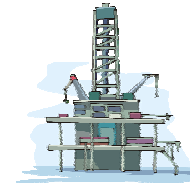
ash



smoke



heat



Coal, gas and oil are all fossil fuels. They non-renewable energy sources.

# Reversible and Irreversible Changes Glossary

<b>ash</b> - a new substance formed when materials burn	<b>heating</b> - the process of increasing the temperature
<b>burning</b> - a chemical change that is irreversible. Burning involves fuel, oxygen and a flame - heat, smoke and ash are produced when things burn	<b>irreversible change</b> - a change that cannot easily be reversed e.g. burning
<b>change of state</b> - the process of change from one state of matter to another - this is a reversible change	<b>physical changes</b> - are reversible changes - no new substances are produced following the change
<b>chemical changes</b> - are irreversible changes - new chemicals are produced following the change	<b>precipitate</b> - the name of a solid produced in some chemical reactions
<b>dissolving</b> - the process of a substance becoming part of a liquid - this is a reversible change	<b>reaction</b> - To <b>react</b> - verb
<b>effervesce</b> - to fizz - giving off a gas e.g. soluble antacid tablets - this is an irreversible change	<b>renewable energy</b> - a source of energy that does not involve the burning of fossil fuels e.g. wind power
<b>fossil fuel</b> - fuel that comes from the remains of dead animals and plants e.g. coal, oil, gas	<b>reversible change</b> - a change that can be easily reversed e.g. freezing water to make ice
<b>hazard</b> - a danger to health and / or life	<b>substance</b> - a material



**Hazard symbols** are placed on the containers of dangerous **substances** to alert us to the dangers!