

# 6D REVERSIBLE AND IRREVERSIBLE CHANGES

## Glossary

**ash** – a new substance formed when materials burn

**burning** – a chemical change that is irreversible. Burning involves fuel, oxygen and a flame – heat, smoke and ash are produced when things burn

**change of state** – the process of change from one state of matter to another – this is a reversible change

**chemical changes** – are irreversible changes - new chemicals are produced following the change

**dissolving** – the process of a substance becoming part of a liquid – this is a reversible change

**effervesce** – to fizz – giving off a gas e.g. soluble antacid tablets – this is an irreversible change

**fossil fuel** – fuel that comes from the remains of dead animals and plants e.g. coal, oil, gas

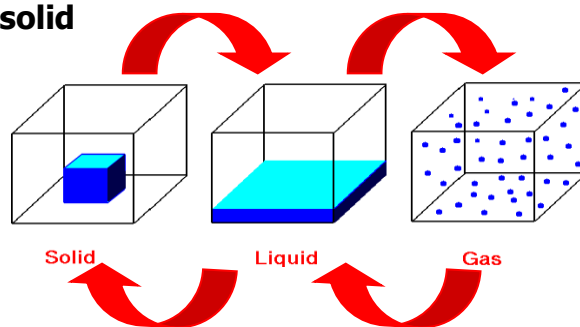
**hazard** – a danger to health and / or life

Here are some **hazard** symbols – do you know what they mean?



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

### PHYSICAL CHANGE



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.

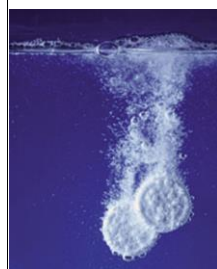
**Dissolving** sugar in water is a reversible change.



When the water is **evaporated** it leaves the sugar behind.



When oil, vinegar and egg yolks are mixed the resulting **precipitate** is mayonnaise. This change is **irreversible**.

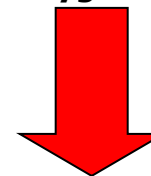


When vitamin tablets **effervesce** (fizz) a gas is produced. This is an **irreversible** change.

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



**Fuel + Oxygen + Flame**

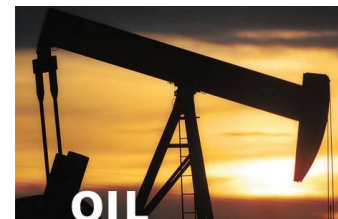


**Ash + Smoke + Heat**



**Coal, gas and oil**

are all **fossil fuels**. They are also examples of **non-renewable** energy sources.



**heating** – the process of increasing the temperature

**irreversible change** – a change that cannot easily be reversed e.g. burning

**physical changes** - are reversible changes – no new substances are produced following the change

**precipitate** – the name of a solid produced in some chemical reactions

**reaction** –  
To **react** - verb

**renewable energy** – a source of energy that does not involve the burning of fossil fuels e.g. wind power

**reversible change** – a change that can be easily reversed e.g. freezing water to make ice

**substance** – a material

This **wind turbine** is part of a **wind farm** helping to generate electricity from **renewable** sources.



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