

# Lent Term 2 - Year 5 - Science

## Reversible Changes



In a reversible change a material turns into something that looks and feels different. But then it can be changed back to its original form.

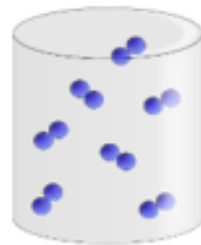
## Reversible and Irreversible Changes

### Three states of matter

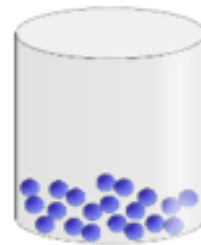
**GAS:** particles far apart and randomly arranged / move around

**LIQUID:** particles close but randomly arranged / move around

**SOLID:** particles very close together / vibrate around a fixed position



Gas



Liquid



Solid

#### Examples

Steam (water vapour)  
Hydrogen  
Carbon Dioxide  
Oxygen

#### Examples

Water  
Milk  
Washing up liquid  
Juice

#### Examples

Ice  
Wood  
Glass  
Diamond

## Irreversible

✗ Burning



✗ Rusted metals



✗ Heating food



✗ Mixed ingredients



<p><b>Sieving</b></p> <p>Smaller <b>materials</b> are able to fall through the holes in the sieve, separating them from larger particles.</p>	<p><b>Filtering</b></p> <p>The <b>solid</b> particles will get caught in the filter paper but the <b>liquid</b> will be able to get through.</p>	<p><b>Evaporating</b></p> <p>The <b>liquid</b> changes into a <b>gas</b>, leaving the <b>solid</b> particles behind.</p>
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Reversible changes, such as mixing and dissolving solids and liquids together, can be reversed by: sieving, filtering and evaporating.

### Key Words

**Reversible Change** – when a material changes form but can easily be changed back to its original state. For example: ice can change to water and then it can be changed back to ice.

**Irreversible Change** – is when a material is changed permanently and a new material is made. For example: Burning wood creates ash and smoke. Ash and smoke can not be changed back into wood.

**Dissolving** – when a solid breaks down into tiny, invisible pieces and spreads out in a liquid.

**Solutions** – the clear liquids you get after dissolving.

**Filtering** – a method of separating an insoluble solid from a liquid.

**Evaporating** – when a liquid turns into a gas or vapour. It can then return to its original liquid state.