

Key knowledge

The most common reversible changes.

Water to ice—freezing
Ice to water—melting
Water to steam—evaporating
Steam to water—condensing

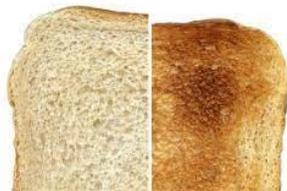
A change that can be undone or reversed back to get back the original materials.



The most common irreversible changes.

Cooking eggs by boiling, frying etc.
Burning wood.
Baking a cake.
Heating bread to make toast.

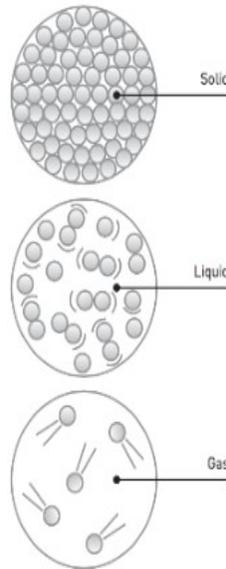
A change that cannot be undone or reversed.



Insulators are materials which keep things hot or cold.



Diagrams and Symbols



Materials generally exist in three states—**solids, liquid and gas.**

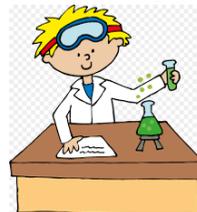
Solid—a material that has a fixed shape and volume e.g. if you put a solid into a container it will not change shape.

Liquid— a material that has a fixed volume but can change shape e.g. if you pour liquid into a container it will take the shape of the container.

Gas— a material that can change shape and volume e.g. if you put gas into a container it will take the shape and fill it.

What is a fair test?

When scientists want to find something out they conduct tests. For their findings to be accurate the test has to be fair. When conducting a fair test everything needs to be the same except for the one thing you are testing.



What? (Key Vocabulary)

	Definition/Sentence
Freezing point	Water freezes at 0 degrees Celsius.
Gas	A material that flows to fill a space.
Boiling point	Water boils at 100 degrees Celsius.
Condensing	When a gas changes into a liquid.
Dissolving	When a substance breaks up into tiny pieces in a liquid.
Evaporating	When a liquid changes into a gas.
Freezing	When a liquid is cooled and changes into a solid.
Liquid	A material that flows and takes the shape of the Container.
Melting	When a solid is heated and changes into a liquid.

People of the world that live in cold climates.

Inuit People live in the Arctic.



The Nomads Live in central Asia.



Scientists live in the Antarctic



Famous Explorers

Roald Amundsen was the first to reach the south pole in 1911. Robert Peary was the first to reach the North Pole in 1909. However Frederick Cook said he had done so a year earlier in 1908.



A climate is the average weather condition of a place over a long period of time. The climate of a place is often linked to its location in the world. Places near the equator will have a hotter climate than places near the north and south poles which will have a colder climate. Alaska, Canada, Denmark, Norway, Finland, Sweden, Iceland and Russia are near the earth's north polar regions.

Why is salt put onto icy roads?

Salt lowers the freezing point of water. This causes the ice to melt which does not re-freeze. This makes winter roads safer for drivers.



Agreed Outcome

Exit Point—To explain how molecules in solids, liquids and gases behave differently and why. Serve scientifically prepared food—ice lollies. Describe science investigations. Display designs for cooler boxes.