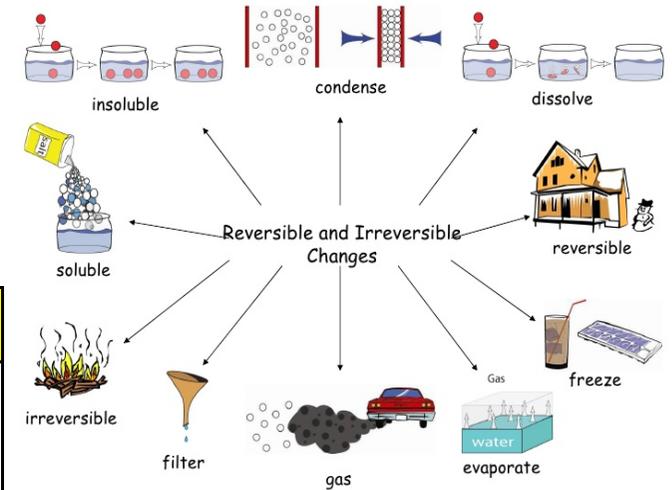


# Properties and changes of materials



solid	liquid	gas
● rigid	● not rigid	● not rigid
● fixed shape	● no fixed shape	● no fixed shape
● fixed volume	● fixed volume	● no fixed volume
cannot be squashed	cannot be squashed	can be squashed

Why are different materials chosen to make certain objects?



## KEY FACTS

- A **mixture** is formed when two or more materials have been mixed and are physically not chemically combined. They can be separated by physical means (sieving, filtering, evaporation, etc).
- A **chemical change** is a change during which new materials are formed. Many of these chemical changes are not reversible.
- When materials **dissolve** they form a solution. The solid material is called the solute and the liquid is called the solvent.

## KEY VOCABULARY

- Matter**- Any solid, liquid or gas that exists in the universe
- Substance**- Any solid, liquid, powder or gas is a substance
- Evaporation**- The process of a liquid becoming a gas.
- Condensation**- The process when water vapour in the air changes from a gas back into a liquid.
- Precipitation**- Any rain, snow, sleet or hail that falls to earth
- Particle**- A very small piece of matter
- Celsius** -A scale for measuring temperature, in which water freezes at 0 degrees.
- Boiling point** -The temperature when water begins to boil (on Earth this is 100o C)
- Thermometer**- A scientific instrument for measuring temperature.
- Dissolve** - to become incorporated into a liquid, forming a solution.

## Further Reading

- National Geographic Kids - <https://www.natgeokids.com/uk/>
- BBC Bitesize - <https://www.bbc.co.uk/bitesize/topics/zcvv4wx>
- The Firework Maker's Daughter - Philip Pullman
- [www.brainpop.com](http://www.brainpop.com)

## You might like to...

- Look outside at the weather, when it freezes, melts, and at the condensation outside?
- Look at materials and try to work out how they are made, investigate their inventors i.e. Bluetac
- Cook with an adult, what processes have you used, Are they reversible, irreversible?
- Watch experiments online and with an adult you could investigate some simple experiments to do at home.

Character	Critical Thinking	Creativity	Communication	Citizenship	Collaboration
Which parts of this do I need to try harder to understand?	Why do I need to know about this?	What am I curious about?	How could I present what I understand?	How could this information help people?	What can I learn from others about this?

## QUESTIONS TO DEEPEN YOUR LEARNING

<b>Character</b>	<b>Critical Thinking</b>	<b>Creativity</b>	<b>Communication</b>	<b>Citizenship</b>	<b>Collaboration</b>
Which parts of this do I need to try harder to understand?	Why do I need to know about this?	What am I curious about?	How could I present what I understand?	How could this information help people?	What can I learn from others about this?