

Year 4 Science

States of Matter

LO - I can identify solids, liquids and gases

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Grammarsaurus

Thinking Time...

What do the words 'solid, liquid and gas' mean?

Write what you think on your pre-assessment task.



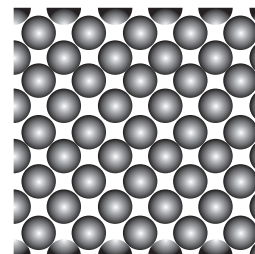
Solids

Characteristics

- Solids stay in one place and you can hold them in your hand.
- Solids keep their shape. They do not flow like liquids.
- Solids always take up the same amount of space. They do not spread out like gases.
- Solids can be cut or shaped.

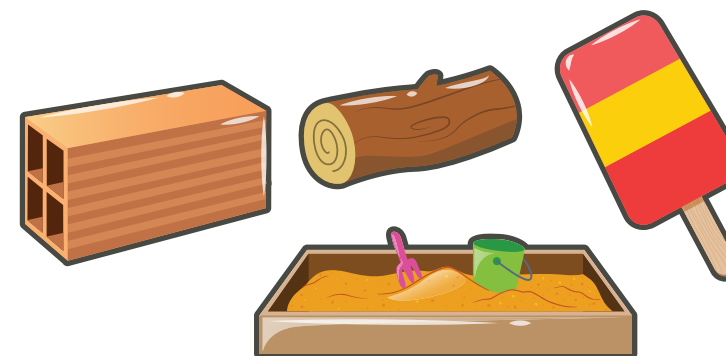
Did you know?

Heating some solids can turn them into liquids. Can you think of an example?



In a **solid**, the particles are closely packed together.

Examples of a solid;



Even though they can be poured, sugar, salt and flour are all solids. Each **particle** of salt for example, keeps the same shape and volume.

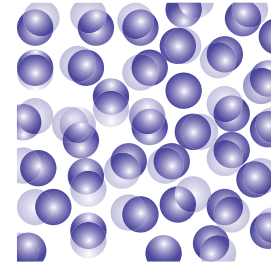
Liquids

Characteristics

- Liquids can **flow** or be **poured** easily. They are not easy to hold.
- Liquids change their shape depending on the container they are in.
- Even when liquids change their shape, they always take up the same amount of space. Their **volume** stays the same.

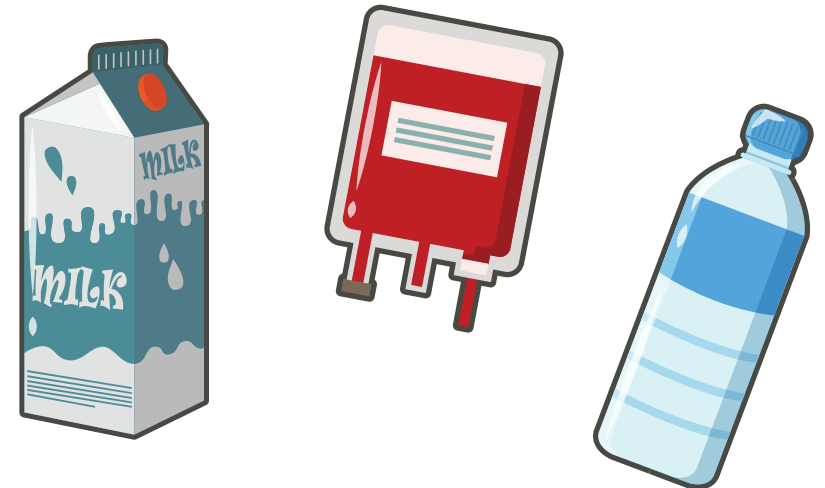
Did you know?

Heating a liquid can turn it into a gas. Can you think of an example?



In a **liquid**, the particles are close together but free to move around.

Examples of a liquid;



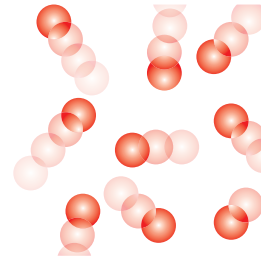
Gases

Characteristics

- Gases are often invisible.
- Gases do not keep their shape or always take up the same amount of space. They spread out and change their shape and volume to fill up whatever container they are in.
- Gases can be squashed.

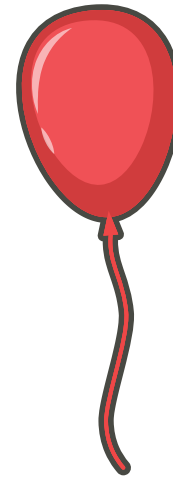
Did you know?

Cooling a gas can turn it into a liquid. Can you think of an example?



In a **gas**, the particles are widely separated and can move freely.

Examples of a gas;



helium in balloons



fumes from volcanoes

Partner Activity

Sort the **solids**, **liquids** and **gases** into the correct categories with your partner.

Solid	Liquid	Gas

Partner Activity Answers

Solid	Liquid	Gas
<p>Ice cubes</p> <p>Gold</p> <p>Brick</p> <p>Apple</p> <p>Sand</p> <p>Butter</p> <p>Wood</p>	<p>Water</p> <p>Blood</p> <p>Pepsi</p> <p>Milk</p> <p>Honey</p> <p>Petrol</p> <p>Soup</p>	<p>Oxygen</p> <p>Carbon dioxide</p> <p>Steam</p> <p>Wind</p>

Independent Activity

On your worksheet, you are now going to describe the three states of matter and name some examples of each.



What did we find out?



Think about one thing you have learnt in this lesson that you didn't know before.



Talk about it with your partner before discussing it with the class.

