

y5

Properties and Changes of Materials

I can identify solids, liquids and gases

Science



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Thinking Time...

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

Talk with your partner before we discuss as a class.



Solids

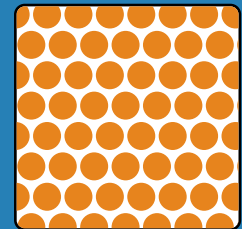
Describe a solid

- 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**.



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

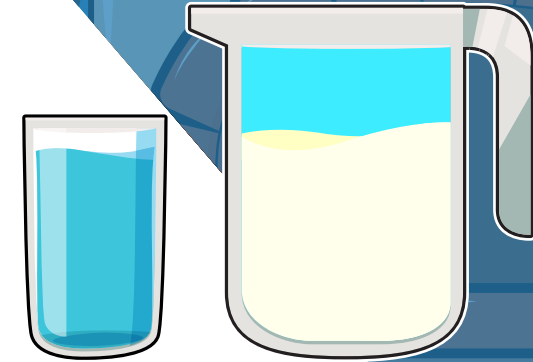
In a solid, the particles are closely packed together.



Liquids

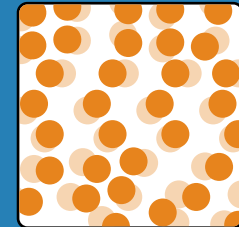
Describe a liquid

- 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**.



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 about.



Gases

Describe a gas

- 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**.



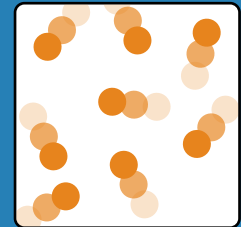
Helium in balloons



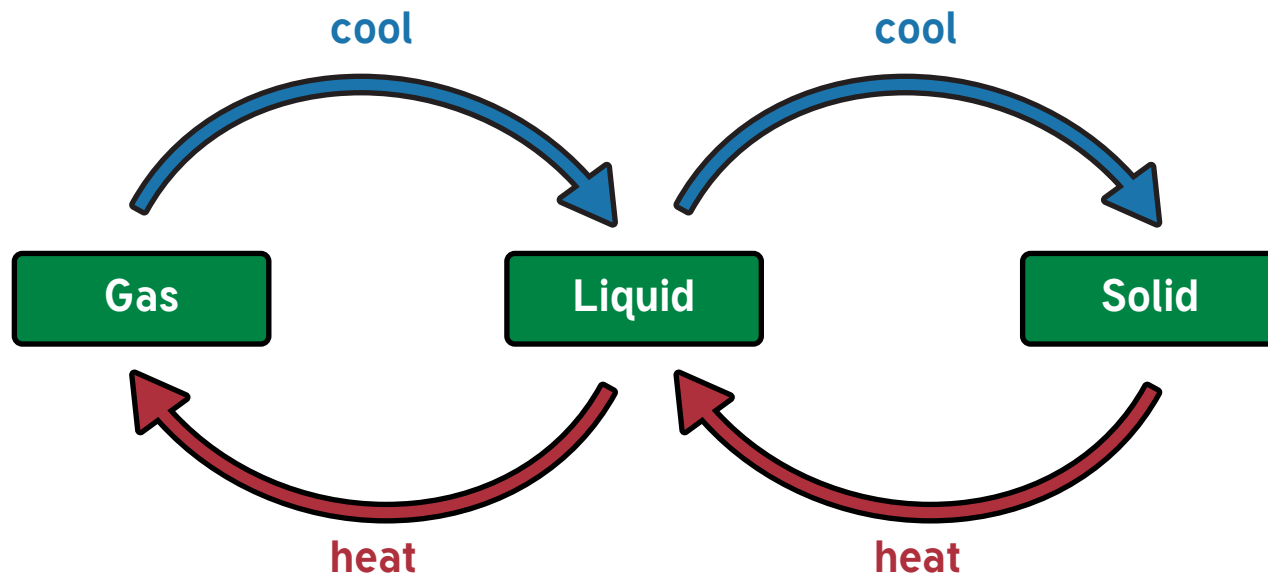
Fumes from volcanoes

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.



As we have already discussed, we can change states of matter.

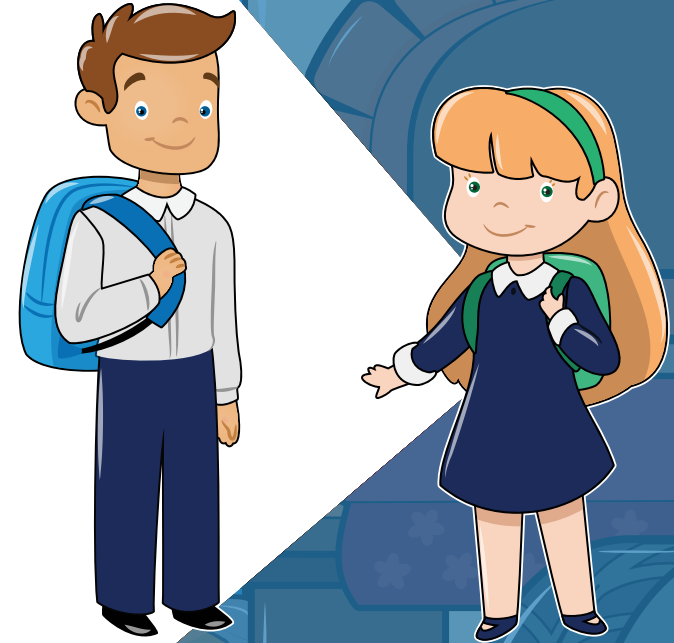


Discussion Time

Can you think of any examples when states of matter change?

Partner Activity

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



Partner Activity Answers

Solids	Liquids	Gases
Ice cubes	Water	Oxygen
Gold	Blood	Carbon dioxide
Brick	Pepsi	Steam
Apple	Milk	Wind
Sand	Honey	
Butter	Petrol	
Wood	Soup	

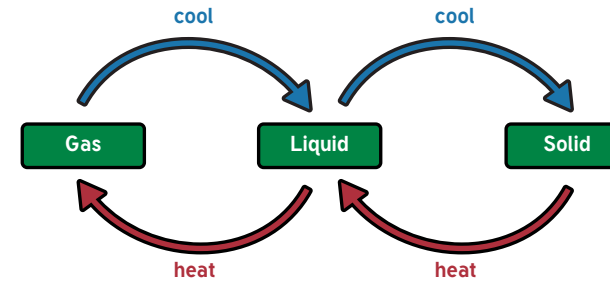


Independent Activity

On your worksheet, you are now going to describe the three states of matter.



Activity

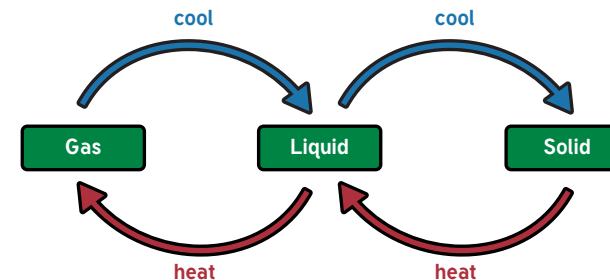


Explain what this diagram is showing.

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Activity



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.

