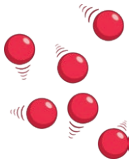
Year 4 States of Matter

Match the state of matter to the diagram that shows how their particles behave.

solid

liquid

gas



Next to each object, write whether it is a liquid, solid or gas.

plastic ruler_____

milk_____

air in a
hot air balloon_____

bubbles in
a fizzy drink_____

metal scissors_____

water_____

Write true or false next to each statement.

Some materials can change from one state to another and back again. _____

A solid takes the shape of the container it is in. _____

Solids are always hard. _____

Liquids can be poured. _____

Gases have a fixed shape. _____

Some materials can change state when heated or cooled. Draw a line from the change of state to either the word 'heat' or the word 'cooling'.

solid to liquid

liquid to gas

liquid to solid

heat

cooling

Fill in the missing words in the sentences:

When liquids reach a certain _____, they change state into a _____ or a _____. The temperatures that these changes happen at are called the boiling, _____ or freezing _____.

Fill in the missing words to complete the sentences.

The process of a liquid changing state into a gas is called _____.

The process of a gas changing state into a liquid is called _____.

The fall of liquid or solid particles as rain, sleet, hail or snow from a cloud is called _____.

Year 4 States of Matter

Fill in the missing letters to complete the words.

When water evaporates, it turns into a gas called w__t__r v__p__u__.

This process can happen quickly or slowly depending on the t__m__e__a__u__e.

Give an example of when you might see evaporation.

_____

_____

_____

_____

_____

_____

Write true or false next to these sentences:

The boiling point of water is 100°C.

_____

The freezing point of water is -5°C.

_____

The melting point of water is the same as its freezing point. _____

Give an example of a material that can change state and then change back to its original state.

_____

_____

_____

_____

_____

_____

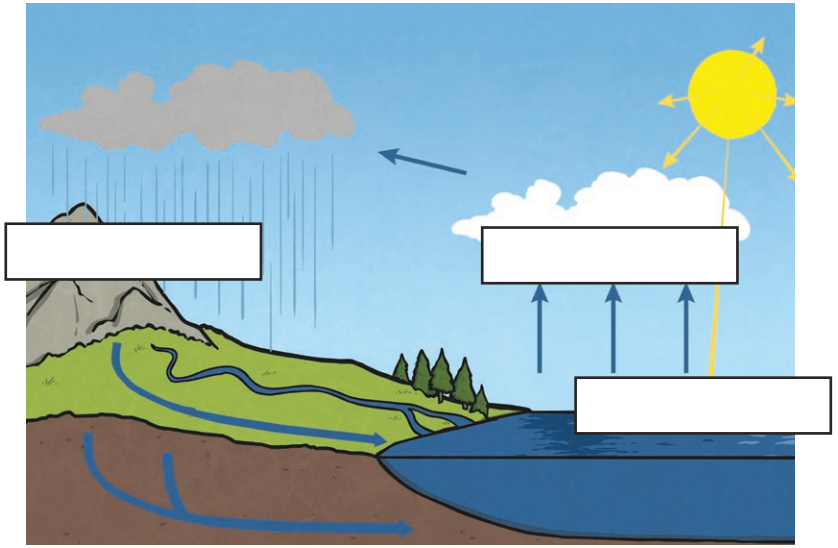
_____

Add the labels to this diagram of the water cycle:

precipitation

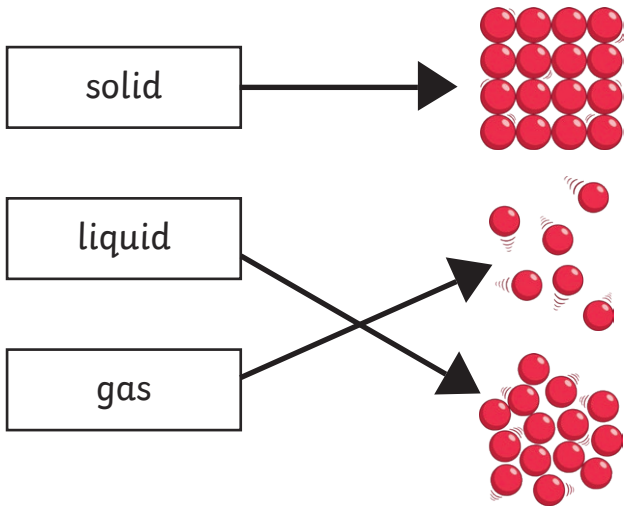
condensation

evaporation



Year 4 States of Matter - Answers

Match the state of matter to the diagram that shows how their particles behave.



Next to each object, write whether it is a liquid, solid or gas.


plastic ruler **solid**


milk **liquid**


air in a hot air balloon **gas**


bubbles in a fizzy drink **gas**


metal scissors **solid**


water **liquid**

Write true or false next to each statement.

Some materials can change from one state to another and back again. **true**

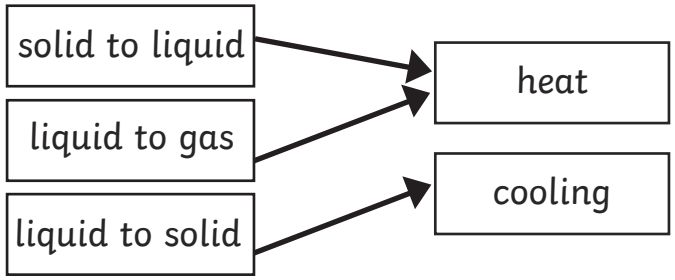
A solid takes the shape of the container it is in. **false**

Solids are always hard. **false**

Liquids can be poured. **true**

Gases have a fixed shape. **false**

Some materials can change state when heated or cooled. Draw a line from the change of state to either the word 'heat' or the word 'cooling'.



Fill in the missing words in the sentences:

When liquids reach a certain **temperature**, they change state into a **solid** or a **gas**. The temperatures that these changes happen at are called the boiling, **melting** or freezing **point**.

Fill in the missing words to complete the sentences.

The process of a liquid changing state into a gas is called **evaporation**.

The process of a gas changing state into a liquid is called **condensation**.

The fall of liquid or solid particles as rain, sleet, hail or snow from a cloud is called **precipitation**.

Year 4 States of Matter - Answers

Fill in the missing letters to complete the words.

When water evaporates, it turns into a gas called w**at**er v**a**p**ou**r.

This process can happen quickly or slowly depending on the t**e**m**pe**r**a**t**u**re.

Give an example of when you might see evaporation.

Example answers could include:

- **steam coming off clothes;**
- **steam coming from a kettle;**
- **puddles drying.**

Write true or false next to these sentences:

The boiling point of water is 100°C. **true**

The freezing point of water is -5°C. **false**

The melting point of water is the same as its freezing point. **true**

Give an example of a material that can change state and then change back to its original state.

Example answers could include:

- **water turning to ice and then back again;**
- **chocolate melting and then solidifying again;**
- **water vapour condensing and turning back into water.**

Add the labels to this diagram of the water cycle:

precipitation

condensation

evaporation