

Monday 6th – Friday 10th July 2020

Science

Solids, liquids and gases are called **the three states of matter**.

Solids

- Stay in one place and can be held.
- Keep their shape – they do not flow like liquids.
- Always take up the same amount of space – they do not spread out like gases.
- Can be cut or shaped.
- Even though they can be poured, sugar, salt and flour are all solids. Each grain of salt, for example, keeps the same shape and volume.
- Examples: ice, wood and sand.

Liquids

- Can flow or be poured easily. They are not easy to hold.
- 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.
- Examples: water, honey and milk.

Gases

- Often invisible.
- Do not have a fixed shape. They spread out and change their shape and volume to fill up whatever container they are in.
- Can be squashed.

1. Can you sort the materials below into solids, liquids or gases?

Solid	Liquid	Gas



2. What adjectives can you think of to describe each state of matter? Use the examples above or find some examples in your home. Record your adjectives in the table below.




Solid	Liquid	Gas

You could check your adjectives against the words in the song Matter Chatter
<https://www.youtube.com/watch?v=C33WdI64FiY>

3. Think about the three states of matter and try to answer the questions below.

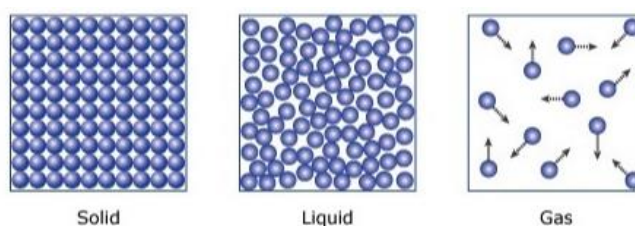
- What can a liquid do that a solid or a gas cannot?
- Describe one difference between a solid and a gas.
- Describe one difference between a liquid and a gas.

4. Match each descriptive sentence to the state of matter (circle the correct answer).

		
Solid	Liquid	Gas

- They keep their shape unless a force is applied to them. solid / liquid / gas
- They take the shape of the container they are in. solid / liquid / gas
- They can be cut, squashed or twisted. They will not change shape on their own.
solid / liquid / gas
- They do not spread out or flow. solid / liquid / gas
- They can be squashed. solid / liquid / gas
- They can spread out to completely fill the container or room they are in. solid / liquid / gas
- They do not have to be hard. They can be squashy or soft. solid / liquid / gas
- They are pulled down to the bottom of a container by gravity. solid / liquid / gas
- They can flow or be poured. solid / liquid / gas
- They do not keep their shape. solid / liquid / gas

We can explain the differences between solids, liquids and gases by knowing what they are made of. Scientists have found out that all materials are made of very tiny **particles**. These particles are so small that we cannot see them with our eyes, or even with a microscope! The position and behaviour of the particles is different in solids, liquids and gases.



- If you can, watch this clip for a fun explanation of how the particles are different in each state of matter <https://www.bbc.co.uk/bitesize/clips/zpbvr82>
- Then, watch this clip – see which materials you can spot and which states of matter they are <https://www.bbc.co.uk/bitesize/clips/zrdkjxs>

Think about what you know and have learned about the three states: **solids, liquid and gas**. Give yourself a thumbs up if you are confident and a thumbs down if you need to check and read through the information again.

