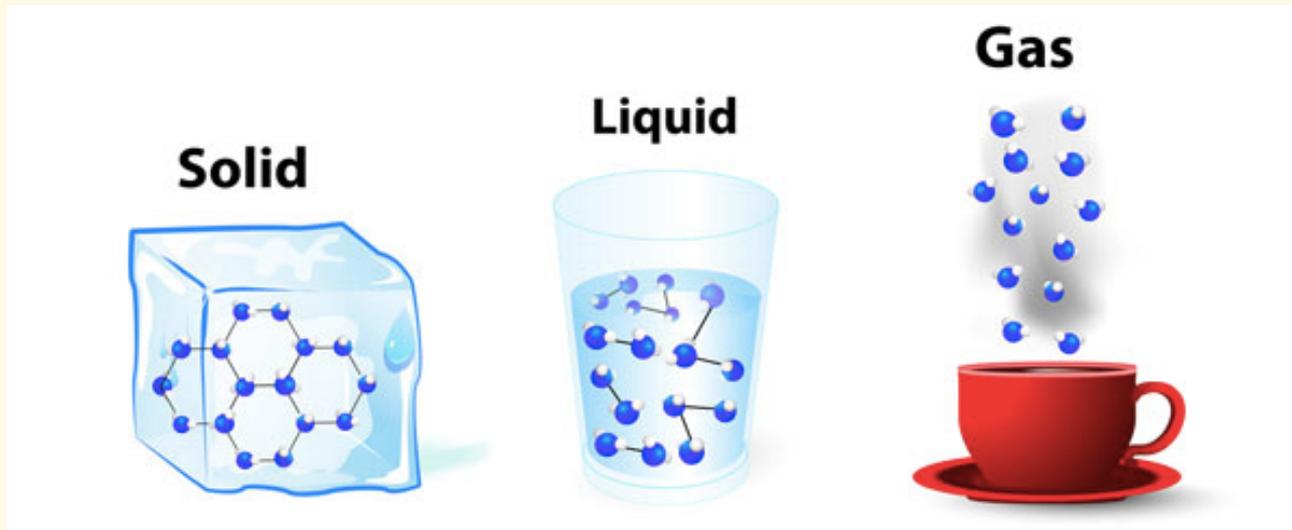


## 25.2.21

T: Can I describe the properties of solids, liquids and gases?



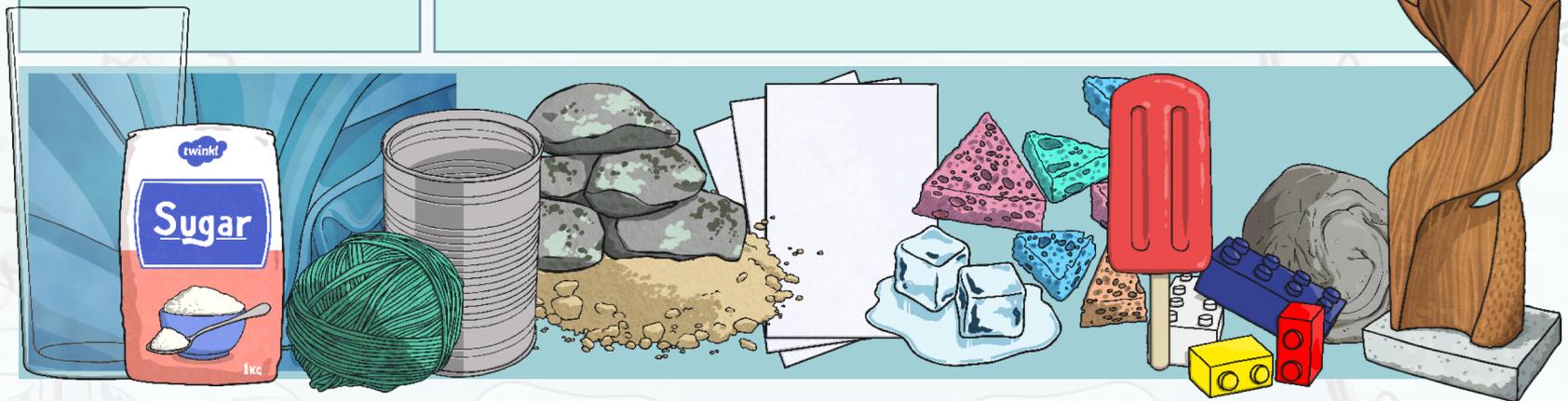
# Properties of Materials: Solids

These items are all solids!  
What do they have in common?

Materials in a solid state keep their shape unless a force is applied to them.

Solids can be cut, squashed or twisted. They will not change shape on their own.

Solid materials always take up the same amount of space. They do not spread out or flow. Solids do not have to be hard. They can be squashy or soft.



# Properties of Materials: Liquids

These items  
are all liquids!

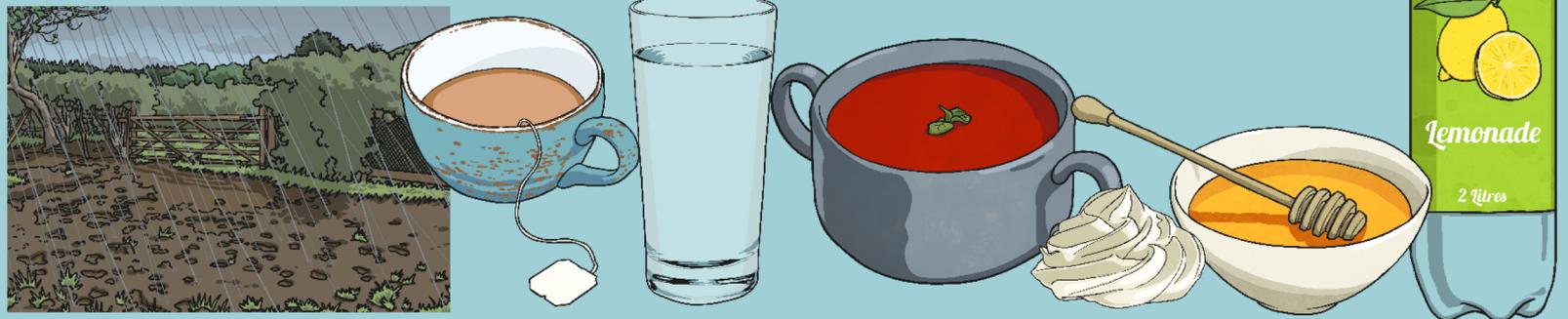
What do they  
have in  
common?

Materials in a liquid state take the shape of the container they are in.

Although liquids can change shape, they do not change their volume. This means they still take up the same amount of space.

Liquids are pulled down to the bottom of a container by gravity.

Liquids can flow or be poured.



# Properties of Materials: Gases

These items  
are all gases!

What do they  
have in  
common?

Materials in a gaseous state can spread out to completely fill the container or room they are in.

Gases have weight.

Gases can be squashed.

Gases do not keep their shape.



# What are particles

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!

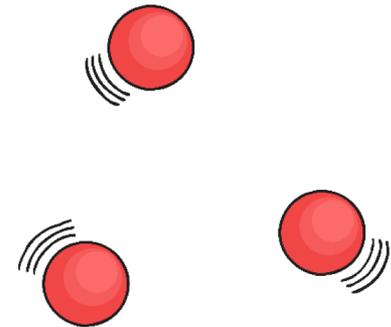
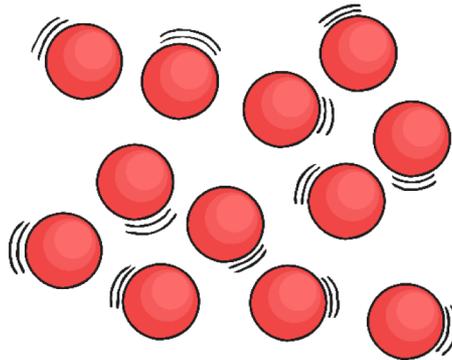
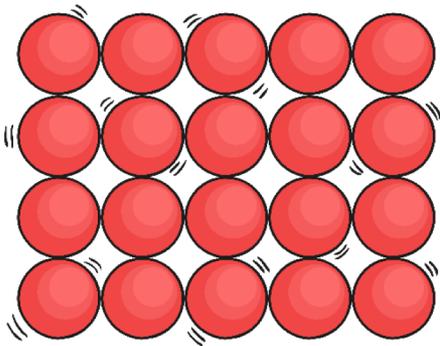
The position and behaviour of the particles is different in solids, liquids and gases.



# Particles and Properties

Click on the link below to watch the video about particles:

<https://www.youtube.com/watch?v=JQ4WduVp9k4>



# Today's Task

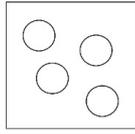
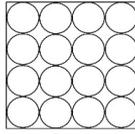
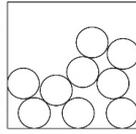
**For today's task, you will need glue and a pair of scissors (If you do not have these at home, you can draw your answers on a piece of paper).**

Your task today is to match the state of matter to the correct property and picture of the particles. There are three worksheets for you to choose from: one star, two stars and three stars. The more stars you choose, the more challenging your task will be.

**Particle Properties**

Cut out the cards and stick them on your 'Solid, Liquid or Gas?' activity sheet to complete the table.

State	Partic

solid	liquid	gas
Particles are close together but random. They can move over each other.	Particles are spread out and can move about quickly in all directions.	Particles are closely packed in a regular pattern. They vibrate on the spot.
		

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Science Year 4: States of Matter: Solid, Liquid or Gas? Lesson 3

# Aim



- I can sort and describe materials.

# Success Criteria

- I can sort materials into solids, liquids or gases.
- I can describe the properties of solids, liquids and gases.
- I can show the difference between the particles in solids, liquids and gases.

