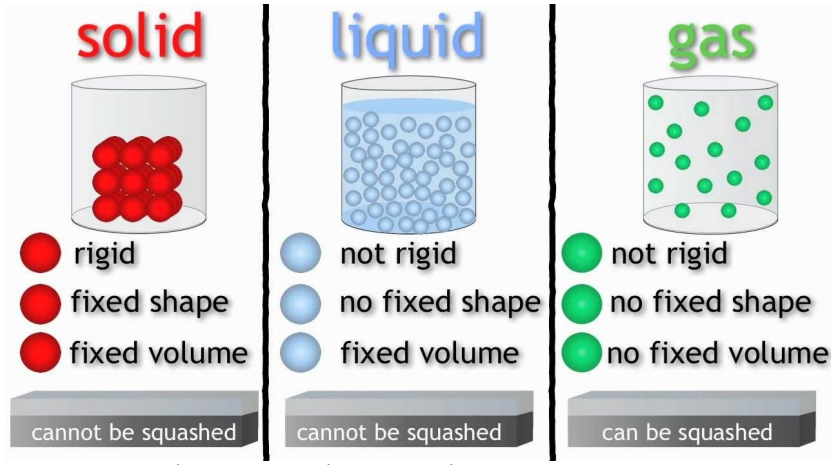
Knowledge Organiser

Science—States of Matter

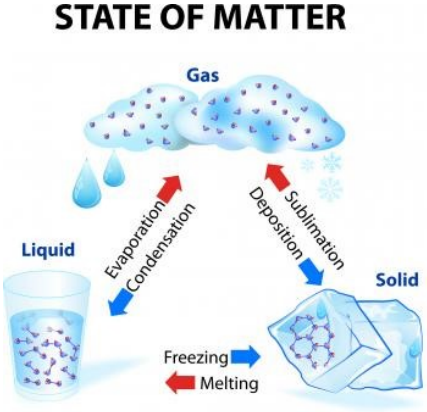
Year 4

States of Matter



- Everything around us is either a **solid, liquid or a gas**. These are called the three **states of matter**.
- Some materials can change from one state to another and back again by heating them up or cooling them down.
- Everything is made of tiny bits, called **particles**.
- In a solid, the particles are stuck closely together, which is why solids tend to be hard or more rigid.
- In a liquid, the particles are close together, but can move around easily which is why liquids tend to be runny.
- In a gas, the particles are really spread out and can

Changing State



If things are heated up or cooled down by the right amount, they will change state.

For example, water will boil and turn to a gas at 100°c, its boiling point. Water will also freeze at 0°c which is its melting point. We can see this happening around us.

Key Vocabulary

Properties	A way to describe something
Material	The 'stuff' an object is made out of
Melt	This is when a solid changes to a liquid.
Freeze	Liquid turns to a solid during the freezing process.
Evaporate	Turn a liquid into a gas.
Condense	Turn a gas into a liquid.
Precipitation	Liquid or solid particles that fall from a cloud as rain, sleet, hail or snow.
Particle	The smallest part or building block of a material.

What I can do at home

Investigate	Look around your home. Can you find examples of times where water changes state? When might you see water boiling or being frozen? When might it melt? How is this happening with the
Explore	Most gasses, like the air, are so spread out we can't see them. Which gasses can we see?

Communicate

Talk to an adult at home about the things below. You don't need to record this.

People are solids as we have a fixed shape.

Would a feeling such as happiness or joy be a solid, liquid or a gas?

What state would God be?