

States of Matter: Solid, Liquid or Gas?

Aim: To compare and group materials together, according to whether they are solids, liquids or gases by sorting and describing materials into solids, liquids and gases. 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.	Resources: Lesson Pack Access to the school hall or an outside space
	Key/New Words: Solid, liquid, gas, particles, state, material, properties.	Preparation: Differentiated Solids, Liquids and Gases Sorting Cards cut out - one per group. Particle Information Cards Differentiated Particles and Properties Activity Sheet - one per child.

Prior Learning: It will be helpful if children have studied materials and their properties in earlier year groups.

Learning Sequence

	Sorting Materials: Explain that there are three states of matter: solid, liquid and gas. Ask the children to sort the items on the differentiated Solids, Liquids and Gases Sorting Cards . Look for children who have a good prior knowledge of the states of matter and their properties to assist with future planning.	
 Children use the pack of cards containing more straightforward items.	 Children use the pack of cards containing some more ambiguous items.	 Children describe the materials while sorting them.
	Properties of Materials: Share the answers from the sorting card activity using the images on the Lesson Presentation . Point out and explain the trickier materials: honey is a liquid even though it is viscous; a sponge is a solid, but the spaces inside the sponge are full of air, which is a gas; and the bubbles are a thin film of soapy water (liquid) surrounding air (gas). Ask HA children to feedback on the words they thought of to describe the materials and states. Explain the properties of solids, liquids and gases using the information on the Lesson Presentation . Address any misconceptions or issues arising.	
	Properties of Materials: Ask children to talk to a partner to match the states to their properties on the Lesson Presentation .	
	Particles: Using the Lesson Presentation , share key information about particles. Look at how they are arranged and how they behave in solids, liquids and gases.	
	Particle Behaviour: Organise children into three equal groups to demonstrate the difference between the particles in solids, liquids and gases using drama and movement. Give each group a card from the Particle Information Cards and ask them to follow the instructions to prepare their demonstration. Allow the groups to watch one another's demonstrations in the Hall or outside.	
	Particles and Properties: Children match the three states with their particles and properties using the Particles and Properties Activity Sheet . Look for children who can accurately identify solids, liquids and gases and understand their properties.	
 Children match the materials to the particles and states.	 Children match the properties of materials to the states of matter.	
	Spotting States of Matter: Show the States of Matter Photo Pack Lesson 1 . Ask the children to spot the different materials and their states while they look through them. Collect responses.	

Task it

Collectit: Make a collection of materials and display them in three groups - a group of solids, a group of liquids and a group of gases.

Labelit: Use [this worksheet](#) to label the different items as solids, liquids or gases.

Craftit: Make a collage of different materials by cutting pictures out of magazines or catalogues. Group the materials into solids, liquids and gases.