

### Progression of skills, knowledge and understanding: Solids, Liquids and Gases

- National curriculum level statements
  - Additional statements from QCA (2003)

Level	Characteristic of level
1	Know about a <b>range of properties</b> (e.g., texture and appearance) and <i>communicate observations</i> of materials in terms of these <b>properties</b> .
2	<ul style="list-style-type: none"> <li>• <b>Identify</b> a range of common materials and know about <b>some of their properties</b></li> <li>• <b>Describe similarities and differences</b> between materials.</li> <li>• <b>Sort</b> materials into groups and <b>describe</b> the basis for their <b>grouping in everyday terms</b> (e.g. shininess, hardness, smoothness)</li> </ul>
3	<ul style="list-style-type: none"> <li>• <b>Use knowledge and understanding of materials</b> when they <b>describe a variety</b> of ways of <b>sorting them into group according to their properties</b>.               <ul style="list-style-type: none"> <li>➤ <b>Define solids</b> as hard, heavy substances, which keep their shape and size.</li> <li>➤ <b>Define liquids</b> as wet substances, which can be poured and take on the shape of their containers.</li> <li>➤ Use these <i>definitions to sort</i> simple examples (such as a wooden ruler, a ceramic tile, tap water, cooking oil) into solids and liquids.</li> </ul> </li> </ul>
4	<ul style="list-style-type: none"> <li>• <b>Describe the differences between the properties</b> of different materials and <b>explain how these differences are used to classify substances</b> (e.g. as solids, liquids and gases)               <ul style="list-style-type: none"> <li>➤ <b>Define solids</b> as rigid substances which keep their size and shape (unless squashed or stretched) and flow only if in very small pieces.</li> <li>➤ <b>Define liquids</b> as substances which flow, take on the shape of their containers but maintain their volume.</li> </ul> </li> </ul>

	<ul style="list-style-type: none"><li>➤ <b>Define gases</b> as very light substances which flow easily and fill any container into which they are put.</li><li>➤ Use these <i>definitions to sort</i> many substances into solids, liquids and gases.</li><li>➤ Refer to solid, liquid and gas as the <b>three 'states of matter'</b>.</li></ul>
5	<ul style="list-style-type: none"><li>• Demonstrate an <b>increasing knowledge</b> of materials and their properties<ul style="list-style-type: none"><li>➤ Recognise <b>many everyday substances as mixtures of solids, liquids and/or gases</b>.</li><li>➤ Know that <b>gases can easily be compressed and the solids cannot</b>.</li><li>➤ Recognise that, for a substance to be <b>detected by smell, some of it must be in the gas state</b>.</li><li>➤ Recognise that substances are made up of <b>particles</b>.</li></ul></li></ul>