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**Big Ideas/Substantive Concepts**

Know about states of matter

Work scientifically with states of matter

Retrieve

Pupils should be taught to:

* compare and group materials together, according to whether they are solids, liquids or gases
* observe that some materials change state when they are heated or cooled, and measure or research the
* temperature at which this happens in degrees Celsius (°C)
* identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation

with temperature

Questions

What are solids, liquids and gases?

What is matter? What does “state” mean?

Melting: how do materials change state?

Evaporating: how do materials change state?

Condensing: how do materials change state?

Summary: how do materials change their state of matter?

**Key Vocabulary**

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| --- | --- |
| **Tier 2** | **Tier 3** |
| permanent | evaporate |
| particle | condense |
| solid | melt |
| liquid | matter |
| gas | state |
| vapour | volume |
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Year 4: States of Matter

**Resources:** [CUSP curriculum](https://www.unity-curriculum.co.uk/history/history-ks2/) and [Curriculum vision](https://www.curriculumvisions.com/indexHistory.html) resources for online non-fiction texts

Making connections to prior learning

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| **Year 1:** Everyday materials  **Year 2:** Uses of everyday materials  **Year 3:** Rocks |

Working Scientifically

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| Ask relevant questions | Set up simple, practical enquiries and comparative fair tests | Make accurate measurements using standard units, using a range of equipment, eg. thermometers & data loggers | Gather, record, classify and present data in a variety of ways to help in answering questions. |
| Record findings using simple scientific language, drawings, labelled diagrams, bar charts and tables | Report on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions | Use results to draw simple conclusions and suggest improvements, new questions and predictions for setting up further tests | Identify differences, similarities or changes related to simple, scientific ideas and processes |

**Outdoor Learning Opportunities**

Alfresco Learning: Year 4: “States of Matter”