

Science content in the Australian Curriculum lacks specificity. This makes it harder for teachers to know *what* to teach and to what depth and breadth. To illustrate, consider the Year 3 chemical sciences content description for the ‘states of matter’ topic in both Australia and Alberta. It clearly states the specific content to be taught about the properties of solids, liquids and gases, and how states of matter can change by adding or removing heat.

Australia	<ul style="list-style-type: none"> Investigate the observable properties of solids and liquids and how adding or removing heat energy leads to a change of state
Alberta	<ul style="list-style-type: none"> Matter is anything that takes up space and has weight States of matter include solid, liquid, and gas Melting is a change of state from solid to liquid Freezing is a change of state from liquid to solid Evaporation is a change of state from liquid to gas Condensation is a change of state from gas to liquid A solid is a state of matter that has a definite shape and volume A liquid is a state of matter that has a definite volume but no definite shape A liquid flows and takes the shape of the container it is in A gas is a state of matter that has neither definite shape nor definite volume A gas flows easily and expands to the size of the container it is in Volume is the amount of space a solid, liquid, or gas takes up Substances are made of matter that has not been mixed with other matter, including water The temperature at which a substance changes from solid to liquid is called the melting point The temperature at which a substance changes from liquid to solid is called the freezing point The melting and freezing points of a substance are the same temperature The temperature at which a substance changes from liquid to gas is called the boiling point The melting/freezing point of water is 0°C The boiling point of water is 100°C