

## Mapping tool – preamble for Science

This mapping tool matches essential content elements from two curriculum frameworks: *Every chance to learn* ELA 19, ELA 2 and ELA 20 to the Australian Curriculum (Science) V1.1. Teachers using this tool are reminded to consider the underlying principles and philosophy as well.

The **Overview** of each ELA in *Every chance to learn* discusses the scope, features, concepts, values and attitudes of

- ELA 19 *The student understands and applies scientific knowledge*
- ELA 2 *The student understands and applies the inquiry process*
- ELA 20 *The student acts for an environmentally sustainable future*

The **Rationale** of the Australian Curriculum (Science) reminds readers that the interrelated strands have different intentions:

- The *Science Understanding* strand refers to *the facts, concepts, laws theories and models that have been established by scientists over time.*
- The *Science as a Human Endeavour* strand *highlights the development of science as a unique way of knowing and doing, and the role of science in contemporary decision making and problem solving.*
- The *Science Inquiry Skills* strand outlines the process of working scientifically.

As Sustainability is a cross-curriculum priority, the elaborations of all phase 1 learning areas provide examples of how sustainability may be embedded within content.

Given that the documents are differently organised, the similarity of some essential content in both documents may appear superficial. These types of matches have been identified using a paler font colour.

Further information can be inferred from

- **strand** and **sub-stand** headings
- opening **hyperlinked codes** to the Australian Curriculum, and pasting them into the 'search' function to identify content elaborations, general capabilities and links to cross-curriculum priorities.

## Science – Early Childhood

Every chance to learn		Australian Curriculum		
19. The student understands and applies scientific knowledge		AC Strand/s SU = science understanding SHE = Science as a Human Endeavour SIS = Science Inquiry Skills		
		Foundation	Year 1	Year 2
<b>19.EC.1</b>	scientific aspects of their everyday activities and applications of science in their own lives (e.g. uses of energy in the home, ball games, pet care, decisions influenced by weather) and the place of science in the work of people in the community	<ul style="list-style-type: none"> <li><b>Earth and space sciences</b> (ACSSU004) Daily and seasonal changes in our environment, including the weather, affect everyday life</li> </ul>	<ul style="list-style-type: none"> <li><b>Use and influence of science</b> (ACSHE022) People use science in their daily lives, including when caring for their environment and living things</li> </ul>	<ul style="list-style-type: none"> <li><b>Use and influence of science</b> (ACSHE035) People use science in their daily lives, including when caring for their environment and living things</li> </ul>
<b>19.EC.2</b>	how pushing and pulling objects affects their motion and shape	<ul style="list-style-type: none"> <li><b>Physical sciences</b> (ACSSU005) The way objects move depends on a variety of factors, including their size and shape</li> </ul>		<ul style="list-style-type: none"> <li><b>Physical sciences</b> (ACSSU033) A push or a pull affects how an object moves or changes shape</li> </ul>

19.EC.3	the concept of energy being needed to get things done and different forms of energy they use in familiar situations (e.g. light from the sun, heat used in cooking, electricity from batteries to make toys work)	•	•	•
19.EC.4	observable properties of common materials in a variety of everyday objects	<ul style="list-style-type: none"> <li>• <b>Chemical sciences</b> (ACSSU003) Objects are made of materials that have observable properties</li> </ul>		•
19.EC.5	how changing familiar materials changes their properties (e.g. heating, cooling, wetting, mixing)	•	<ul style="list-style-type: none"> <li>• <b>Chemical sciences</b> (ACSSU018) Everyday materials can be physically changed in a variety of ways</li> </ul>	•
19.EC.6	obvious features of a variety of plants and animals	•	<ul style="list-style-type: none"> <li>• <b>Biological sciences</b> (ACSSU017) Living things have a variety of external features</li> </ul>	
19.EC.7	differences between living and non-living things using basic criteria (e.g. characteristics and basic needs)	•	•	•

<b>19.EC.8</b>	some of the changes that take place as living things grow, and similarities of parents and their offspring	•	•	<ul style="list-style-type: none"> <li>• <b>Biological sciences</b> (ACSSU030) Living things grow, change and have offspring similar to themselves</li> </ul>
<b>19.EC.9</b>	some of the ways in which living things depend on their environment and each other (e.g. basic needs for survival)	<ul style="list-style-type: none"> <li>• <b>Biological sciences</b> (ACSSU002) Living things have basic needs, including food and water</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Biological sciences</b> (ACSSU211) Living things live in different places where their needs are met</li> </ul>	
<b>19.EC.10</b>	changes on Earth and in space (e.g. weather, night and day, seasons), recognising that some are more predictable than others	<ul style="list-style-type: none"> <li>• <b>Earth and space sciences</b> (ACSSU004) Daily and seasonal changes in our environment, including the weather, affect everyday life</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Earth and space sciences</b> (ACSSU019) Observable changes occur in the sky and landscape</li> </ul>	
<b>19.EC.11</b>	some of the ways in which living things depend on the Earth (e.g. soil, water, air) and are affected by its changes	<ul style="list-style-type: none"> <li>• <b>Biological sciences</b> (ACSSU002) Living things have basic needs, including food and water (repeat)</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Biological sciences</b> (ACSSU211) Living things live in different places where their needs are met (repeat)</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Earth and space sciences</b> (ACSSU032) Earth's resources, including water, are used in a variety of ways</li> </ul>

19.EC.12	ask questions about and explore phenomena, relationships and ideas	<ul style="list-style-type: none"> <li>• <b>Planning and conducting</b> (AC SIS011) Explore and make observations by using the senses</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Questioning and predicting</b> (AC SIS024) Respond to and pose questions, and make predictions about familiar objects and events</li> <li>• <b>Nature and development of science</b> (AC SHE021) Science involves asking questions about, and describing changes in, objects and events</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Questioning and predicting</b> (AC SIS037) Respond to and pose questions, and make predictions about familiar objects and events</li> <li>• <b>Nature and development of science</b> (AC SHE034) Science involves asking questions about, and describing changes in, objects and events</li> </ul>
19.EC.13	observe, identify and describe features, properties and the ways things change	<ul style="list-style-type: none"> <li>• <b>Questioning and predicting</b> (AC SIS014) Respond to questions about familiar objects and events</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Nature and development of science</b> (AC SHE021) Science involves asking questions about, and describing changes in, objects and events (repeat)</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Nature and development of science</b> (AC SHE034) Science involves asking questions about, and describing changes in, objects and events (repeat)</li> </ul>
19.EC.14	examine and compare materials, living things and non-living things	<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
19.EC.15	talk about their investigations and observations	<ul style="list-style-type: none"> <li>• <b>Communicating</b> (AC SIS012) Share observations and ideas</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>

NEW MATERIAL		<ul style="list-style-type: none"> <li><b>Nature and development of science</b></li> </ul> <p>(ACSHE013) Science involves exploring and observing the world using the senses</p>	<ul style="list-style-type: none"> <li><b>Physical sciences</b></li> </ul> <p>(ACSSU020) Light and sound are produced by a range of sources and can be sensed</p>	<ul style="list-style-type: none"> <li><b>Chemical sciences</b></li> </ul> <p>(ACSSU031) Different materials can be combined, including by mixing, for a particular purpose</p>
<b>Every chance to learn</b>		<b>Australian Curriculum</b>		
2. The student understands and applies the inquiry process		<b>AC Strand/s</b> SU = science understanding SHE = Science as a Human Endeavour SIS = Science Inquiry Skills		
		<b>Foundation</b>	<b>Year 1</b>	<b>Year 2</b>
<b>2. EC.1</b>	explore inquiry as a useful process for creating knowledge and understanding the world around them	•	•	•
<b>2. EC.2</b>	contribute to planning and conducting simple investigations by asking questions and seeking answers through observing, experimenting, engaging with information in texts, discussing ideas with others and using ICT	•	<ul style="list-style-type: none"> <li><b>Planning and conducting</b></li> </ul> <p>(AC SIS025) Participate in different types of guided investigations to explore and answer questions, such as manipulating materials, testing ideas, and accessing information sources</p>	<ul style="list-style-type: none"> <li><b>Planning and conducting</b></li> </ul> <p>(AC SIS038) Participate in different types of guided investigations to explore and answer questions, such as manipulating materials, testing ideas, and accessing information sources</p>

2. EC.3	ask questions and identify possible sources of information to seek answers	<ul style="list-style-type: none"> <li>• <b>Planning and conducting</b> (AC SIS011) Explore and make observations by using the senses</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Questioning and predicting</b> (AC SIS024) Respond to and pose questions, and make predictions about familiar objects and events</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Questioning and predicting</b> (AC SIS037) Respond to and pose questions, and make predictions about familiar objects and events</li> </ul>
2. EC.4	make predictions or conjectures related to their everyday experience and think through ways to test them	<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
2. EC.5	make observations about what is happening around them using their senses	<ul style="list-style-type: none"> <li>• <b>Planning and conducting</b> (AC SIS011) Explore and make observations by using the senses</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
2. EC.6	follow suggestions to collect and record data or information from a small range of sources (e.g. from simple experimentation, mathematical procedures, talking with others or from one or two text sources)	<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Planning and conducting</b> (AC SIS026) Use informal measurements in the collection and recording of observations, with the assistance of digital technologies as appropriate</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Planning and conducting</b> (AC SIS039) Use informal measurements in the collection and recording of observations, with the assistance of digital technologies as appropriate</li> </ul>
2. EC.7	learn how to use appropriate tools and equipment safely to make measurements and record information	<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>

2. EC.8	make judgements about the usefulness of data or information collected	<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Processing and analysing data and information</b></li> </ul> <p>(AC SIS212) Through discussion, compare observations with predictions</p>	<ul style="list-style-type: none"> <li>• <b>Processing and analysing data and information</b></li> </ul> <p>(AC SIS214) Through discussion, compare observations with predictions</p>
2. EC.9	follow suggestions to order and present data or information (e.g. grouping or sequencing, drawing, simple table, graph or timeline)	<ul style="list-style-type: none"> <li>• <b>Processing and analysing data and information</b></li> </ul> <p>(AC SIS233) Engage in discussions about observations and use methods such as drawing to represent ideas</p>	<ul style="list-style-type: none"> <li>• <b>Processing and analysing data and information</b></li> </ul> <p>(AC SIS027) Use a range of methods to sort information, including drawings and provided tables</p>	<ul style="list-style-type: none"> <li>• <b>Processing and analysing data and information</b></li> </ul> <p>(AC SIS040) Use a range of methods to sort information, including drawings and provided tables</p>
2. EC.10	revisit their questions in the light of results or information collected, talk about the way in which the investigation could be changed and begin to consider the fairness of tests	<ul style="list-style-type: none"> <li>• <b>Processing and analysing data and information</b></li> </ul> <p>(AC SIS233) Engage in discussions about observations and use methods such as drawing to represent ideas</p>	<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
2. EC.11	attempt to convince themselves and others that their findings are true	<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Evaluating</b></li> </ul> <p>(AC SIS213) Compare observations with those of others</p>	<ul style="list-style-type: none"> <li>• <b>Evaluating</b></li> </ul> <p>(AC SIS041) Compare observations with those of others</p>
2. EC.12	share and communicate observations, findings, ideas and understandings.	<ul style="list-style-type: none"> <li>• <b>Communicating</b></li> </ul> <p>(AC SIS012) Share observations and ideas</p>	<ul style="list-style-type: none"> <li>• <b>Communicating</b></li> </ul> <p>(AC SIS029) Represent and communicate observations and ideas in a variety of ways such as oral and written language, drawing and role play</p>	<ul style="list-style-type: none"> <li>• <b>Communicating</b></li> </ul> <p>(AC SIS042) Represent and communicate observations and ideas in a variety of ways such as oral and written language, drawing and role play</p>

Every chance to learn		Australian Curriculum		
20. The student acts for an environmentally sustainable future		AC Strand/s		
		SU = science understanding SHE = Science as a Human Endeavour SIS = Science Inquiry Skills		
		Foundation	Year 1	Year 2
<b>20.EC.1</b>	elements of the natural environment that humans, animals and plants need for survival	•	•	•
<b>20.EC.2</b>	different living things in their local environment and some observable relationships between living things and their environment	•	•	•
<b>20.EC.3</b>	how people cooperate to care for places in a community	•	•	•
<b>20.EC.4</b>	why it is important to conserve resources, protect the environment and participate in positive environmental action	•	•	•

<p><b>20.EC.5</b></p>	<p>observe and discuss changes evident in the local environment, both natural (e.g. seasonal changes) and those caused by human action (e.g. changes to the built environment)</p>	<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
<p><b>20.EC.6</b></p>	<p>share responsibility for the quality of their immediate environments and for resource conservation (e.g. dispose of litter, reuse and recycle some materials, and switch off unused lights)</p>	<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>
<p><b>20.EC.7</b></p>	<p>describe preferred future scenarios in relation to particular aspects of their local environment (e.g. suggest ways the school playground could be improved)</p>	<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>•</li> </ul>