






















# SCIENCE & TECHNOLOGY K-6

Stage 1	
<b>OUTCOMES</b>	<p><b>Values &amp; Attitudes (VA)</b></p> <ul style="list-style-type: none"> <li>• shows interest in &amp; enthusiasm for science &amp; technology, responding to their curiosity, questions &amp; perceived needs, wants 7 opportunities <b>ST1-1VA</b></li> <li>• demonstrates a willingness to engage responsibly with local, national &amp; global issues relevant to their lives, &amp; to shaping sustainable futures <b>ST1-2VA</b></li> <li>• develops informed attitudes about the current and future use &amp; influence of science &amp; technology based on reason <b>ST1-3VA</b></li> </ul>
<b>SKILLS</b>	<p style="text-align: center;"><b>Content</b></p> <p><b>Working Scientifically (WS)</b></p> <ul style="list-style-type: none"> <li>• investigates questions and predictions by collecting and recording data, sharing and reflecting on their experiences and comparing what they and others know <b>ST1-4WS</b></li> </ul> <p><b>Students question and predict by:</b></p> <ul style="list-style-type: none"> <li>▸ responding to and posing questions (AC SIS024, AC SIS037)</li> <li>▸ making predictions about familiar objects &amp; events &amp; outcomes of investigations (AC SIS024, AC SIS037, AC SHE021, AC SHE034)  </li> </ul> <p><b>Students plan investigations by:</b></p> <ul style="list-style-type: none"> <li>• identifying the purpose of the investigation</li> <li>• suggesting some types of activities that need to be undertaken during the processes of Working Scientifically</li> <li>• suggesting observations that could be made to collect data and/ or information about their questions and predictions  </li> <li>▸ recognising that the results of investigations can inform the processes of Working Technologically</li> </ul> <p><b>Students conduct investigations by:</b></p> <ul style="list-style-type: none"> <li>• working cooperatively &amp; individually when participating in different types of guided investigations to explore &amp; answer</li> <li>• questions, such as manipulating materials, testing ideas, &amp; accessing information sources, surveys &amp; fieldwork (AC SIS025, AC SIS038) </li> <li>• using a range of methods to gather data and/or information, including using their senses to make observations safely and carefully, using simple tools and equipment </li> <li>• using informal measurements in the collection &amp; recording of observations, with the assistance of digital technologies as appropriate (AC SIS026, AC SIS039)  </li> <li>• making and recording observations and measurements honestly, using tally marks and informal units  </li> </ul> <p><b>Students process and analyse data and information by:</b></p> <ul style="list-style-type: none"> <li>• using a range of methods to sort information, including drawings &amp; provided tables, to match objects &amp; events based on easily observable characteristics (AC SIS027, AC SIS040) </li> <li>• describing changes in objects &amp; events observed in investigations (AC SHE021, AC SHE034)</li> <li>• comparing observations with those of others to identify similarities &amp; differences in the findings of their investigations (AC SIS213, AC SIS041)</li> <li>• comparing observations with predictions through discussion, as to whether observations were expected &amp; related to their questions and/or predictions (AC SIS212, AC SIS214) </li> <li>• sharing their ideas about the need for safety, care &amp; honesty in observing, recording, displaying &amp; interpreting data/or information  </li> </ul> <p><b>Students communicate by:</b></p> <ul style="list-style-type: none"> <li>• representing &amp; communicating observations &amp; ideas using oral &amp; written language, drawing &amp; role-play (AC SIS029, AC SIS042) </li> <li>• displaying data and information in a variety of ways, including drawings, simple texts, provided tables and graphs, using digital technologies as appropriate  </li> <li>• sharing what they did and what they could do differently throughout the investigating process  </li> </ul>

<b>SKILLS</b>	<b>Working Technologically (WT)</b>	<ul style="list-style-type: none"> <li>uses a structured design process, everyday tools, materials, equipment and techniques to produce solutions that respond to identified needs and wants <b>ST1-5WT</b></li> </ul>	<p><b>Students explore and define a task by:</b></p> <ul style="list-style-type: none"> <li>identifying needs and wants of users/audiences, eg using interviews, observations and surveys 🗣️👥</li> </ul> <p><b>Students generate and develop ideas by:</b></p> <ul style="list-style-type: none"> <li>researching and exploring different sources of information, including the internet</li> <li>exploring different materials by observing and manipulating them and using trial-and-error ⚙️</li> <li>using techniques for documenting and communicating design ideas, including simple plans, drawings and models, using familiar materials 📁</li> <li>describing the features of design ideas and the materials they select</li> <li>using feedback from others to refine design ideas 👥</li> <li>using the results of investigations to refine design ideas</li> </ul> <p><b>Students produce solutions by:</b></p> <ul style="list-style-type: none"> <li>suggesting simple steps for production</li> <li>using range of everyday tools, equipment, materials &amp; techniques</li> <li>working cooperatively and safely 👥</li> </ul> <p><b>Students evaluate by:</b></p> <ul style="list-style-type: none"> <li>explaining the strengths and limitations of what they did and what could have been done differently to improve the solution ⚙️</li> <li>identifying how their solution meets the needs and wants of users/audiences 👥</li> </ul>
	<b>KNOWLEDGE &amp; UNDERSTANDING</b>	<b>Natural Environment (NE)</b> Physical World	<ul style="list-style-type: none"> <li>describes some sources of light and sound that they sense in their daily lives <b>ST1-6PW</b></li> <li>describes effects of pushes and pulls on objects they encounter <b>ST1-7PW</b></li> </ul>

<p style="writing-mode: vertical-rl; transform: rotate(180deg);">KNOWLEDGE &amp; UNDERSTANDING</p>	<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Natural Environment (NE)</p>	<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Earth &amp; Space</p>	<ul style="list-style-type: none"> <li>describes some observable changes that occur in the sky and landscape <b>ST1-8ES</b></li> <li>identifies ways that people use science in their daily lives to care for the environment and the Earth's resources <b>ST1-9ES</b></li> </ul>	<p><b>Observable changes occur in the sky and landscape.</b> (ACSSU019)  <b>Students:</b></p> <ul style="list-style-type: none"> <li>use a range of methods to describe observable, short-term changes in the sky, eg clouds, the appearance of the stars at night and the position of the sun during the day</li> <li>observe and record environmental changes that occur over a longer time to identify patterns of events, eg seasonal changes in temperature and the appearance of the moon 📅 📊</li> <li>describe some physical features of a landscape that have been changed by floods, droughts or processes, eg weathering &amp; erosion 🌿</li> </ul> <p><b>Earth's resources, including water, are used in a variety of ways.</b>(ACSSU032)  <b>Students:</b></p> <ul style="list-style-type: none"> <li>identify that some common resources are obtained from the Earth, including soil, minerals and water ⚙️</li> <li>describe how some materials obtained from the Earth are used in a range of products at home or at school</li> <li>share their observations and ideas about the ways that water is used by people in their daily lives 🏠 👤</li> <li>identify some actions which could be taken to care for &amp; use water sustainably, eg turning off dripping taps/taking shorter showers 🌿 ⚖️</li> <li>explore ways in which people use science knowledge and skills in their daily lives to care for the environment and use resources sustainably (ACSHE022, ACSHE035) 🇺🇸 🌿 ⚙️ 🎓</li> </ul>
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">KNOWLEDGE &amp; UNDERSTANDING</p>	<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Natural Environment (NE)</p>	<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Living World</p>	<ul style="list-style-type: none"> <li>describes external features, changes in and growth of living things <b>ST1-10LW</b></li> <li>describes ways that different places in the environment provide for the needs of living things <b>ST1-11LW</b></li> </ul>	<p><b>Living things have a variety of external features.</b> (ACSSU017)  <b>Students:</b></p> <ul style="list-style-type: none"> <li>describe some external features of variety of living things, including plants &amp; animals</li> <li>use a range of methods, including fieldwork, to identify plants or animals in their local area</li> <li>devise simple classification systems based on the observable external features of plants or animals identified in the local area</li> </ul> <p><b>Living things grow, change and have offspring similar to themselves.</b> (ACSSU030)  <b>Students:</b></p> <ul style="list-style-type: none"> <li>record the changes in growth of a common plant or animal, using informal units, provided tables &amp; digital technologies as appropriate 📄 📊</li> <li>observe &amp; record some of the changes a common plant or animal shows during its life, using an appropriate digital technology, eg a camera 📷 📊 🎓</li> <li>compare the appearance of adult living things with their offspring, eg trees, insects, birds, reptiles, cats or humans</li> </ul> <p><b>Living things live in different places where their needs are met.</b>(ACSSU211)  <b>Students:</b></p> <ul style="list-style-type: none"> <li>observe the different places in a local land or aquatic environment where living things can be found, eg a schoolyard, pond, beach or bush</li> <li>explore the needs of a plant or an animal in its environment</li> <li>describe how some different places in a local land or aquatic environment provide for the needs of the animals or plants that live there ⚙️</li> <li>observe and record ways people use science knowledge &amp; skills in their daily lives to care for living things, such as gardeners, farmers or pet carers (ACSHE022, ACSHE035) 🇺🇸 🎓 ⚖️</li> </ul>

<p style="writing-mode: vertical-rl; transform: rotate(180deg);"><b>KNOWLEDGE &amp; UNDERSTANDING</b></p>	<p style="writing-mode: vertical-rl; transform: rotate(180deg);"><b>Natural &amp; Made Environment</b></p>	<p style="writing-mode: vertical-rl; transform: rotate(180deg);"><b>Material World (MW)</b></p> <ul style="list-style-type: none"> <li>identifies ways that everyday materials can be physically changed and combined for a particular purpose <b>ST1-12MW</b></li> <li>relates the properties of common materials to their use for particular purposes <b>ST1-13MW</b></li> </ul>	<p><b>Everyday materials can be physically changed in a variety of ways.</b> (ACSSU018)</p> <p><b>Students:</b></p> <ul style="list-style-type: none"> <li>explore how some everyday materials can be physically changed by actions, eg bending, twisting, stretching, squashing or heating</li> </ul> <p><b>Different materials can be combined, including by mixing, for a particular purpose.</b> (ACSSU031)</p> <p><b>Students:</b></p> <ul style="list-style-type: none"> <li>predict the changes materials will undergo when they are combined, eg sugar in water or different colours of paint; and when they are mixed, eg sand and water or cake ingredients </li> <li>compare their observations with their predictions when materials are combined and mixed</li> <li>explore examples of how people at home &amp; work change &amp; combine different materials for a particular purpose, eg food preparation &amp; making concrete  </li> </ul> <p><b>The different properties of materials enable them to be used for particular purposes.</b></p> <p><b>Students:</b></p> <ul style="list-style-type: none"> <li>use their senses to identify the similarities and differences in the properties of materials, eg textures of different fabrics, difference in hardness of solid materials &amp; the runniness of different liquids</li> <li>identify the properties of some common materials and why they are used for particular purposes, eg the waterproof property of plastic rainwear or insulating property of a woollen jumper </li> <li>identify a range of natural materials used by Aboriginal and Torres Strait Islander peoples and share ideas about the ways they are used to suit a particular purpose, eg the use of wood, stone and fibres in the built environment </li> </ul>
	<p style="writing-mode: vertical-rl; transform: rotate(180deg);"><b>KNOWLEDGE &amp; UNDERSTANDING</b></p>	<p style="writing-mode: vertical-rl; transform: rotate(180deg);"><b>Made Environment (ME)</b></p>	<p style="writing-mode: vertical-rl; transform: rotate(180deg);"><b>Built Environments</b></p> <ul style="list-style-type: none"> <li>describes a range of places and spaces in the local environment and how their purposes influence their design <b>ST1-14BE</b></li> </ul>

KNOWLEDGE & UNDERSTANDING	Made Environment (ME)	Information	<ul style="list-style-type: none"> <li>describes a range of familiar information sources and technologies and how their purposes influence their design <b>ST1-15I</b></li> </ul> <p><b>There is a range of information sources and technologies.</b></p> <p><b>Students:</b></p> <ul style="list-style-type: none"> <li>use a range of information technologies to communicate with others, eg letters, telephones, cameras and emails  </li> <li>interact with an information source or technology to explore the ways that different forms of information are combined, including text, image and sound, eg a website or digital game  </li> <li>explore communication methods used by Aboriginal &amp; Torres Strait Islander peoples to share stories, music and art  </li> </ul> <p><b>The purposes of information sources and technologies influence their design.</b></p> <p><b>Students:</b></p> <ul style="list-style-type: none"> <li>interact with a range of familiar information sources &amp; technologies and identify their purposes, eg television programs, websites, digital games, newspapers and magazines  </li> <li>describe how the purpose of a specific information source or technology influences its design, eg a website or game   </li> </ul>
	Made Environment (ME)	Products	<ul style="list-style-type: none"> <li>describes a range of manufactured products in the local environment and how their different purposes influence their design <b>ST1-16P</b></li> </ul> <p><b>There is a range of manufactured products in the local environment.</b></p> <p><b>Students:</b></p> <ul style="list-style-type: none"> <li>explore a variety of products in the local environment, eg food products and industrial products</li> <li>discuss the purpose &amp; usefulness of familiar applications of science &amp; technology products used in everyday life, eg rechargeable batteries, recycled materials &amp; single-use disposable food containers  </li> <li>describe a variety of ways in which Aboriginal and Torres Strait Islander peoples have used or continue to use natural materials to make products that meet their needs, eg the use of natural fibres to make woven products </li> </ul> <p><b>The different purposes of products influence their design.</b></p> <p><b>Students:</b></p> <ul style="list-style-type: none"> <li>identify the purpose of some familiar products and explore the features of their designs that make the products work, eg the broad brim on a sun hat or a plastic raincoat</li> <li>explore ways that products may be designed and made to conserve resources, eg recyclable materials and reusable containers </li> <li>discuss the strengths and limitations of a specific product, considering the materials from which it is made </li> </ul>

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