

Up, down and all around—Alignment with the Australian Curriculum

Up, down and all around is written to align to the Year 1 level of the Australian Curriculum: Science. The Science Understanding, Science Inquiry Skills, and Science as a Human Endeavour strands are interrelated and embedded throughout the unit (see page xi for further details). This unit focuses on the Earth and space sciences sub-strand.

Year 1 Science Understanding for the Earth and Space Sciences:	Observable changes occur in the sky and landscape (AUSSSU019)
Incorporation in <i>Up, down and all around</i> :	Students use direct observations and make comparisons to describe features of their local environment and to gather information about whether the features change.

 All the material in the first row of this table is sourced from the Australian Curriculum.

Year 1 Achievement Standard

The Australian Curriculum: Science Year 1 achievement standard indicates the quality of learning that students should demonstrate by the end of Year 1.

By the end of Year 1, students describe objects and events that they encounter in their everyday lives, and the effects of interacting with materials and objects. **They describe changes in their local environment** and how different places meet the needs of living things.

Students respond to questions, make predictions, and participate in guided investigations of everyday phenomena. They follow instructions to record and sort their observations and share them with others.

The sections relevant to *Up, down and all around* are bolded above. By the end of the unit, teachers will be able to make evidence-based judgements on whether the students are achieving below, at or above the achievement standard for the sections bolded above.

Up, down and all around—Australian Curriculum: Key ideas

In the Australian Curriculum: Science, there are six key ideas that represent key aspects of a scientific view of the world and bridge knowledge and understanding across the disciplines of science. The below table explains how these are represented in *Up, down and all around*.

Overarching idea	Incorporation in <i>Up, down and all around</i>
Patterns, order and organisation	Students identify patterns of change in the sky and landscape, for example, seasons, and organise changes by informal timescales.
Form and function	Students identify different features of the landscape and sky based on their forms.
Stability and change	Students explore whether different features of the sky and landscape change, and relate stability to periods of time.
Scale and measurement	Students use informal measurements of time to discuss different timescales of change.
Matter and energy	Students are introduced to simple changes that occur in the sky and landscape, providing a foundation to explore why those changes occur in later years.
Systems	Students identify observable features of the ecosystem around them, both living and non-living components.

Changes all around—Australian Curriculum: Science

Up, down and all around embeds all three strands of the Australian Curriculum: Science. For ease of reference, the table below outlines the sub-strands covered in *Up, down and all around*, the content descriptions for Year 1 and the aligned lessons.

Strand	Sub-strand	Code	Year 1 content descriptions	Lessons
Science Understanding	Earth and space sciences	ACSSU019	Observable changes occur in the sky and landscape	1–7
Science as a Human Endeavour	Nature and development of science	ACSHE021	Science involves observing, asking questions about, and describing changes in, objects and events	1–7
	Use and influence of science	ACSHE022	People use science in their daily lives, including when caring for their environment and living things	1–7
Science Inquiry Skills	Questioning and predicting	AC SIS024	Pose and respond to questions, and make predictions about familiar objects and events	1–4, 6
	Planning and conducting	AC SIS025	Participate in guided investigations to explore and answer questions	2–4, 6
		AC SIS026	Use informal measurements to collect and record observations, using digital technologies as appropriate	4, 6
	Processing and analysing data and information	AC SIS027	Use a range of methods to sort information, including drawings and provided tables and through discussion, compare observations with predictions	1–7
	Evaluating	AC SIS213	Compare observations with those of others	2–4, 6
	Communicating	AC SIS029	Represent and communicate observations and ideas in a variety of ways	1–7

 All the material in the first four columns of this table is sourced from the Australian Curriculum

General capabilities





The skills, behaviours and attributes that students need to succeed in life and work in the 21st century have been identified in the Australian Curriculum as general capabilities.

There are seven general capabilities and they are embedded throughout the curriculum.

For further information see: www.australiancurriculum.edu.au

For examples of our unit-specific general capabilities information see the next page.

Up, down and all around—Australian Curriculum general capabilities

General capabilities	Australian Curriculum description	<i>Up, down and all around</i> examples
Literacy	<p>Literacy knowledge specific to the study of science develops along with scientific understanding and skills.</p> <p>PrimaryConnections learning activities explicitly introduce literacy focuses and provide students with the opportunity to use them as they think about, reason and represent their understanding of science.</p>	<p>In <i>Up, down and all around</i> the literacy focuses are:</p> <ul style="list-style-type: none"> • science journals • tables • word walls • Venn diagrams • posters • flow charts • interviews.
 Numeracy	<p>Elements of numeracy are particularly evident in Science Inquiry Skills. These include practical measurement and the collection, representation and interpretation of data.</p>	<p>Students:</p> <ul style="list-style-type: none"> • collect, interpret and represent data about observable changes to a garden.
Information and communication technology (ICT) competence	<p>ICT competence is particularly evident in Science Inquiry Skills. Students use digital technologies to investigate, create, communicate, and share ideas and results.</p>	<p>Students are given optional opportunities to:</p> <ul style="list-style-type: none"> • use interactive resource technology to view, record and discuss information • use the internet to research further information about changes that have occurred to their local landscapes.
 Critical and creative thinking	<p>Students develop critical and creative thinking as they speculate and solve problems through investigations, make evidence-based decisions, and analyse and evaluate information sources to draw conclusions. They develop creative questions and suggest novel solutions.</p>	<p>Students:</p> <ul style="list-style-type: none"> • use reasoning to develop questions for inquiry • formulate, pose and respond to questions • develop evidence-based claims.
Ethical behaviour	<p>Students develop ethical behaviour as they explore principles and guidelines in gathering evidence, and consider the implications of their investigations on others and the environment.</p>	<p>Students:</p> <ul style="list-style-type: none"> • ask questions of others, respecting each other's point of view.
 Personal and social competence	<p>Students develop personal and social competence as they learn to work effectively in teams, develop collaborative methods of inquiry, work safely, and use their scientific knowledge to make informed choices.</p>	<p>Students:</p> <ul style="list-style-type: none"> • work collaboratively in teams • listen to and abide by rules for a new game • participate in discussions.
 Intercultural understanding	<p>Intercultural understanding is particularly evident in Science as a Human Endeavour. Students learn about the influence of people from a variety of cultures on the development of scientific understanding.</p>	<ul style="list-style-type: none"> • cultural perspectives opportunities are highlighted where relevant. • important contributions made to science by people from a range of cultures are highlighted where relevant.

Alignment with the Australian Curriculum: English and Maths

Strand	Sub-strand	Code	Year 1 content descriptions	Lessons
English— Language	Language variation and change	ACELA1443	Understand that people use different systems of communication to cater to different needs and purposes, and that many people may use sign systems to communicate with others	5
		ACELA1444	Understand that language is used in combination with other means of communication, for example, facial expressions and gestures, to interact with others	1, 2, 3, 4, 6, 7
	Language for interaction	ACELA1446	Understand that there are different ways of asking for information, making offers and giving commands	5, 6
		Text structure and organisation	ACELA1447	Understand that the purposes texts serve shape their structure in predictable ways
	ACELA1450		Understand concepts about print and screen, including how different types of texts are organised using page numbering, tables of content, headings and titles, navigation buttons, bars and links	1, 4
	Expressing and developing ideas	ACELA1451	Identify the parts of a simple sentence that represent ‘What’s happening?’, ‘What state is being described?’, ‘Who or what is involved?’ and the surrounding circumstances	1, 2, 3, 6, 7
		ACELA1452	Explore differences in words that represent people, places and things (nouns and pronouns), actions (verbs), qualities (adjectives) and details like when, where and how (adverbs)	1, 6
	English— Literacy	Interacting with others	ACELY1656	Engage in conversations and discussions, using active listening behaviours, showing interest, and contributing ideas, information and questions
ACELY1788			Use interaction skills including turn-taking, recognising the contributions of others, speaking clearly and using appropriate volume and pace	1, 2, 3, 4, 6, 7
ACELY1667			Make short presentations using some introduced text structures and language, for example, opening statements	3
Creating texts		ACELY1661	Create short imaginative and informative texts that show emerging use of appropriate text structure, sentence-level grammar, word choice, spelling, punctuation and appropriate multi-modal elements, for example, illustrations and diagrams	4
Mathematics	Measurement and geometry	ACMMG021	Describe duration using months, weeks, days and hours	1
		ACMMG023	Give and follow directions to familiar locations	1, 2, 5, 6, 7
	Statistics and probability	ACMSP024	Identify outcomes of familiar events involving chance and describe them using everyday language such as ‘will happen’, ‘won’t happen’ or ‘might happen’	2, 3, 6
		ACMSP262	Choose simple questions and gather responses	2, 3, 6

Cross-curriculum priorities

There are three cross-curriculum priorities identified by the Australian Curriculum:

- Aboriginal and Torres Strait Islander histories and cultures
- Asia and Australia's engagement with Asia
- Sustainability.

For further information see: www.australiancurriculum.edu.au



Aboriginal and Torres Strait Islander histories and cultures

The PrimaryConnections Indigenous perspectives framework supports teachers' implementation of Aboriginal and Torres Strait Islander histories and cultures in science. This framework can be accessed at: www.primaryconnections.org.au

Up, down and all around focuses on the Western science method of identifying particular components of the landscape and sky, and making evidence-based claims about whether they can change over set periods of time.

Indigenous cultures might have different explanations for changes to landscape and time. Dreamtime stories sometimes include explanations for the formation of landscapes, for example, many groups have legends about the Rainbow Serpent, an immense serpent that created mountains and gorges. Dreamtime stories can be specific to particular people or communities or can be shared across different groups.

PrimaryConnections recommends working with Indigenous community members to access local and relevant cultural perspectives. Protocols for engaging with Aboriginal and Torres Strait Islander community members are provided in state and territory education guidelines. Links to these are provided on the PrimaryConnections website.

Sustainability

In *Up, down and all around*, students explore how the ongoing management of gardens and living spaces affects the landscape. They also identify natural and constructed features of the landscape, and changes to the sky and landscape that have to do with human activity. This provides students with opportunities to develop an understanding of some of the relationships between human activity and surrounding ecosystems. This can assist students to develop knowledge, skills and values for making decisions about individual and community actions that contribute to sustainable patterns of use of the Earth's natural resources.