

Year 5 standard elaborations — Australian Curriculum v9.0: Science

Purpose

The standards elaborations (SEs) support teachers to connect curriculum to evidence in assessment so that students are assessed on what they have had the opportunity to learn. The SEs can be used to:

- make consistent and comparable judgments, on a five-point scale, about the evidence of learning in a folio of student work across a year/band
- develop task-specific standards (or marking guides) for individual assessment tasks
- quality assure planning documents to ensure coverage of the achievement standard across a year/band.

Structure

The SEs have been developed using the Australian Curriculum achievement standard. The achievement standard for Science describes what students are expected to know and be able to do at the end of each year. Teachers use the SEs during and at the end of a teaching period to make on-balance judgments about the qualities in student work that demonstrate the depth and breadth of their learning.

In Queensland, the achievement standard represents the C standard — a sound level of knowledge and understanding of the content, and application of skills. The SEs are presented in a matrix where the discernible differences and/or degrees of quality between each performance level are highlighted. Teachers match these discernible differences and/or degrees of quality to characteristics of student work to make judgments across a five-point scale.



Year 5 Australian Curriculum: Science achievement standard

By the end of Year 5 students explain how the form and behaviour of living things enables survival. They describe key processes that change Earth's surface. They identify sources of light and model the transfer of light to explain observed phenomena. They relate the particulate arrangement of solids, liquids and gases to their observable properties. They describe examples of collaboration leading to advances in science, and scientific knowledge that has changed over time. They identify examples where scientific knowledge informs the actions of individuals and communities.

Students plan safe investigations to identify patterns and relationships and make reasoned predictions. They identify risks associated with investigations and key intercultural considerations when planning field work. They identify variables to be changed and measured. They use equipment to generate data with appropriate precision. They construct representations to organise data and information and describe patterns, trends and relationships. They compare their methods and findings to those of others, identify possible sources of error in their investigation, pose questions for further investigation and draw reasoned conclusions. They use language features that reflect their purpose and audience when communicating their ideas and findings.

Source: Australian Curriculum, Assessment and Reporting Authority (ACARA), *Australian Curriculum Version 9.0 Science for Foundation–10*
<https://v9.australiancurriculum.edu.au/f-10-curriculum/learning-areas/science/year-5>

Year 5 Science standard elaborations

		A	B	C	D	E
		The folio of student work contains evidence of the following:				
Science understanding	Biological sciences	<u>considered</u> explanation of how the form and behaviour of living things enables survival	<u>informed</u> explanation of how the form and behaviour of living things enables survival	explanation of how the form and behaviour of living things enables survival	<u>description</u> of the form or behaviour of living things that enables survival	<u>statement/s about</u> form or behaviour of living things
	Earth and space sciences	<u>thorough</u> description of key processes that change Earth's surface	<u>detailed</u> description of key processes that change Earth's surface	description of key processes that change Earth's surface	description of processes that change Earth's surface	<u>statement/s about</u> changes to Earth's surface

		A	B	C	D	E
	Physical sciences	<ul style="list-style-type: none"> • <u>thorough</u> identification of sources of light • <u>purposeful</u> modelling of the transfer of light to explain observed phenomena 	<ul style="list-style-type: none"> • <u>informed</u> identification of sources of light • <u>informed</u> modelling of the transfer of light to explain observed phenomena 	<ul style="list-style-type: none"> • identification of sources of light • modelling of the transfer of light to explain observed phenomena 	<ul style="list-style-type: none"> • <u>guided</u> identification of sources of light • modelling of the transfer of light 	<u>statement/s about light</u>
	Chemical sciences	<u>purposeful</u> relating of the particulate arrangement of solids, liquids and gases to their observable properties	<u>informed</u> relating of the particulate arrangement of solids, liquids and gases to their observable properties	relating of the particulate arrangement of solids, liquids and gases to their observable properties	<u>description</u> of the particulate arrangement of solids, liquids and gases	<u>statement/s about the observable properties of solids, liquids or gases</u>
Science as a human endeavour	Nature and development of science	<u>considered</u> description of examples of: <ul style="list-style-type: none"> • collaboration leading to advances in science • scientific knowledge that has changed over time 	<u>informed</u> description of examples of: <ul style="list-style-type: none"> • collaboration leading to advances in science • scientific knowledge that has changed over time 	description of examples of: <ul style="list-style-type: none"> • collaboration leading to advances in science • scientific knowledge that has changed over time 	<u>identification</u> of examples of: <ul style="list-style-type: none"> • collaboration leading to advances in science • scientific knowledge that has changed over time 	<u>statement/s about collaboration in science</u>
	Use and influence of science	<u>purposeful</u> identification of examples where scientific knowledge informs the actions of individuals and communities	<u>informed</u> identification of examples where scientific knowledge informs the actions of individuals and communities	identification of examples where scientific knowledge informs the actions of individuals and communities	<u>guided</u> identification of examples where scientific knowledge informs the actions of individuals and communities	<u>directed</u> identification of examples where scientific knowledge informs the actions of individuals or communities

		A	B	C	D	E
Science inquiry	Questioning and predicting	purposeful planning for safe investigations to identify patterns and relationships and to make reasoned predictions	plausible planning for safe investigations to identify patterns and relationships and to make reasoned predictions	planning for safe investigations to identify patterns and relationships and to make reasoned predictions	guided planning for safe investigations to identify patterns or relationships and to make predictions	directed planning for safe investigations to identify patterns or relationships and to make predictions
	Planning and conducting	<ul style="list-style-type: none"> • thorough identification of risks associated with investigations • thorough identification of key intercultural considerations when planning field work 	<ul style="list-style-type: none"> • detailed identification of risks associated with investigations • informed identification of key intercultural considerations when planning field work 	<ul style="list-style-type: none"> • identification of risks associated with investigations • identification of key intercultural considerations when planning field work 	<ul style="list-style-type: none"> • guided identification of risks associated with investigations • guided identification of key intercultural considerations when planning field work 	<ul style="list-style-type: none"> • directed identification of risks associated with investigations • directed identification of key intercultural considerations when planning field work
		reasoned identification of variables to be changed and measured	informed identification of variables to be changed and measured	identification of variables to be changed and measured	guided identification of variables to be changed and measured	directed identification of variables to be changed and measured
		use of equipment for the purposeful generation of data with appropriate precision	use of equipment for the effective generation of data with appropriate precision	use of equipment for the generation of data with appropriate precision	use of equipment for the generation of data	directed use of equipment for the generation of data
	Processing, modelling and analysing	<ul style="list-style-type: none"> • construction of representations for the purposeful organisation of data and information • thorough description of patterns, trends and relationships 	<ul style="list-style-type: none"> • construction of representations for the effective organisation of data and information • effective description of patterns, trends and relationships 	<ul style="list-style-type: none"> • construction of representations for the organisation of data and information • description of patterns, trends and relationships 	<ul style="list-style-type: none"> • guided construction of representations for the organisation of data and information • description of patterns, trends or relationships 	use of provided representations for the organisation of data and information

		A	B	C	D	E
	Evaluating	<ul style="list-style-type: none"> • thorough comparison of their methods and findings to those of others • considered identification of possible sources of error in their investigation • posing considered questions for further investigation and reasoned conclusions drawn 	<ul style="list-style-type: none"> • detailed comparison of their methods and findings to those of others • informed identification of possible sources of error in their investigation • posing plausible questions for further investigation and reasoned conclusions drawn 	<ul style="list-style-type: none"> • comparison of their methods and findings to those of others • identification of possible sources of error in their investigation • posing questions for further investigation and reasoned conclusions drawn 	<ul style="list-style-type: none"> • description of their methods and findings • guided identification of possible sources of error in their investigation • posing questions for further investigation and conclusions drawn, with guidance 	<ul style="list-style-type: none"> • statement/s about their methods and findings • directed identification of possible sources of error in their investigation • posing questions for further investigation and conclusions drawn, with direction
	Communicating	purposeful use of language features, including scientific terminology that reflect their purpose and audience when communicating their ideas and findings.	use of language features, including scientific terminology that reflect their purpose and audience when communicating their ideas and findings.	use of language features that reflect their purpose and audience when communicating their ideas and findings.	guided use of language features that reflect their purpose and audience when communicating their ideas and findings.	use of language features when communicating ideas or findings.

Key **shading** emphasises the **qualities that discriminate between the A–E descriptors**



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