Year 1 standard elaborations — Australian Curriculum: Science

Purpose

The standard elaborations (SEs) provide additional clarity when using the Australian Curriculum achievement standard to make judgments on a five-point scale. They can be used as a tool for:

- making consistent and comparable judgments about the evidence of learning in a folio of student work

- developing task-specific standards for individual assessment tasks.

Structure

The SEs are developed using the **Australian Curriculum achievement standard**. The achievement standard for Science describes the learning expected of students at each year level. Teachers use the achievement standard during and at the end of a period of teaching to make on-balance judgments about the quality of learning students demonstrate.

In Queensland the achievement standard represents the **working with (WW) standard** — a sound level of knowledge and understanding of the content, and application of skills. The SEs are presented in a matrix. The discernible differences or degrees of quality associated with the five-point scale are highlighted to identify the characteristics of student work on which teacher judgments are made. Terms are described in the Notes section following the matrix.

Year 1 Australian Curriculum: Science achievement standard
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.
Source: Australian Curriculum, Assessment and Reporting Authority (ACARA), *Australian Curriculum Version 8 Science for Foundation–10*, www.australiancurriculum.edu.au/Science/Curriculum/F-10

Year 1 Science standard elaborations

		Applying (AP)	Making connections (MC)	Working with (WW)	Exploring (EX)	Becoming aware (BA)
		The folio of a child's work has the following characteristics:				
Science understanding; Science as a human endeavour		clear and informed description of: - objects and events encountered in everyday lives - effects of interacting with materials and objects - changes in local environments - how different places meet the needs of living things	informed description: - objects and events encountered in everyday lives - effects of interacting with materials and objects - changes in local environments - how different places meet the needs of living things	description of: - objects and events encountered in everyday lives - effects of interacting with materials and objects - changes in local environments - how different places meet the needs of living things	guided description of: - objects and events encountered in everyday lives - effects of interacting with materials and objects - changes in local environments - how different places meet the needs of living things	statements about: - objects and events encountered in everyday lives - effects of interacting with materials and objects - changes in local environments - how different places meet the needs of living things
Science inquiry skills	Questioning and predicting	responding to and posing of questions and making reasoned predictions	responding to and posing of questions, and making plausible predictions	responding to questions and making predictions	guided responding to questions and guided making predictions	directed responding to questions and directed making predictions

		Applying (AP)	Making connections (MC)	Working with (WW)	Exploring (EX)	Becoming aware (BA)
		The folio of a child's work has the following characteristics:				
Science inquiry skills	Planning and conducting; Processing and analysing data and information	participation in guided investigations of everyday phenomena and following of instructions to accurately record and sort relevant observations	participation in guided investigations of everyday phenomena and following of instructions to record and sort relevant observations	participation in guided investigations of everyday phenomena and following of instructions to record and sort observations	participation in guided investigations of everyday phenomena and guided recording and sorting observations	directed participation in guided investigations of everyday phenomena and directed recording and sorting observations
	Communicating	sharing of observations with others using clear representations and relevant scientific terminology	sharing of observations with others using representations and scientific terminology	sharing of observations with others	fragmented sharing of observations	directed sharing of observations

Key	shading emphasises the qualities that discriminate between the AP–BA descriptors
AP	applies the curriculum content; demonstrates a thorough understanding of the required knowledge; demonstrates a high level of skill that can be transferred to new situations
MC	makes connections using the curriculum content; demonstrates a clear understanding of the required knowledge; applies a high level of skill in situations familiar to them, and is beginning to transfer skills to new situations
WW	works with the curriculum content; demonstrates understanding of the required knowledge; applies skills in situations familiar to them
EX	exploring the curriculum content; demonstrates understanding of aspects of the required knowledge; uses a varying level of skills in situations familiar to them
BA	becoming aware of the curriculum content; demonstrates a basic understanding of aspects of required knowledge; beginning to use skills in situations familiar to them

Notes

Australian Curriculum common dimensions

The SEs describe the qualities of achievement in the two dimensions common to all Australian Curriculum learning area achievement standards:

- understanding
- skills.

Dimension	Description
understanding	the concepts underpinning and connecting knowledge in a learning area, related to a student's ability to appropriately select and apply knowledge to solve problems in that learning area
skills	the specific techniques, strategies and processes in a learning area

Terms used in Year 1 Science SEs

These terms clarify the descriptors in the Year 1 Science SEs. They help to clarify the descriptors and should be used in conjunction with the ACARA Australian Curriculum Science glossary: www.australiancurriculum.edu.au/f-10-curriculum/science/glossary.

Term	Description
accuracy; accurate	consistent with a standard, rule, convention or known fact; in the context of Science: • *accurate* measurements are close to the accepted value • *accurate* representations are a true representation of observations or collected data
clear; clearly	easy to perceive, understand, or interpret, without ambiguity
communicating (sub-strand)	conveying information or ideas to others through appropriate representations, text types and modes
description; descriptive; describe	give an account of characteristics or features
direction; directed	following the instructions of the facilitator
evaluating (sub-strand)	considering the quality of available evidence and the merit or significance of a claim, proposition or conclusion with reference to that evidence; in Year 1, this includes comparing observations with those of others
fragmented	disjointed, incomplete or isolated
guided	visual and/or verbal prompts to facilitate or support independent action
informed	having relevant knowledge; being conversant with the topic; in the context of Science, *informed* means referring to scientific background knowledge and/or empirical observations

Term	Description
planning and conducting (sub-strand)	making decisions regarding how to investigate or solve a problem and carrying out an investigation, including the collection of data; in Year 1, this includes: • participating in guided investigations to explore and answer questions • using informal measurements to collect and record observations
plausibility; plausible	credible and possible; in the context of science, a *plausible* prediction is based on scientific knowledge
processing and analysing data and information (sub-strand)	representing data in meaningful and useful ways; identifying trends, patterns and relationships in data, and using this evidence to justify conclusions; in Year 1, this includes: • using a range of methods to sort information • discussing the comparison of observations with predictions
questioning and predicting (sub-strand)	identifying and constructing questions, proposing hypotheses and suggesting possible outcomes; in Year 1, this includes: • posing and responding to questions • making predictions about familiar objects and events
reasons; reasoned	logical and sound; presented with justification; in the context of Science, *reasoned* also means that the evidence is provided through reference to scientific background knowledge and/or empirical observations as part of the justification
relevance; relevant	having some logical connection with; applicable and pertinent
representation	use words, images, symbols or signs to convey meaning; in the context of Science, *representation* is an important learning and presentation tool that contributes strongly to science literacy development; scientists represent ideas in a variety of ways, including models, graphs, charts, drawings, diagrams and written texts; the use of these models and other representations is to help understand or present meaning about an idea, an object, a process or a system, or even something that cannot be directly observed, e.g. an atom or inside our body
science knowledge	*science knowledge* refers to facts, concepts, principles, laws, theories and models that have been established by scientists over time; from Prep to Year 2, students learn that observations can be organised to reveal patterns, and that these patterns can be used to make predictions about phenomena
statement; state	a sentence or assertion