# Year 1 standard elaborations — Australian Curriculum: Mathematics

**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:

- aligning curriculum, assessment and reporting, and connecting curriculum and evidence in assessment, so that what is assessed relates directly to what students have had the opportunity to learn

- continuing skill development from one year of schooling to another

- making judgments on a five-point scale based on evidence of learning in a folio of student work

- developing task-specific standards and grading guides.

**Structure**

The SEs are developed using the **Australian Curriculum achievement standard**. In Prep* to Year 6, the Mathematics SEs have been organised using the **content and proficiency strands**. Performance is frequently represented in terms of complexity and familiarity of the standard being assessed. Across the elaborations this is described according to:

AP — unfamiliar, MC — complex familiar, WW — simple familiar, EX — some simple familiar, BA — partial, isolated and obvious.

The Mathematics achievement standard 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.

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**Year 1 Australian Curriculum: Mathematics achievement standard**

By the end of Year 1, students describe number sequences resulting from skip counting by 2s, 5s and 10s. They identify representations of one half. They recognise Australian coins according to their value. Students explain time durations. They describe two-dimensional shapes and three-dimensional objects. Students describe data displays.

Students count to and from 100 and locate numbers on a number line. They carry out simple additions and subtractions using counting strategies. They partition numbers using place value. They continue simple patterns involving numbers and objects. Students order objects based on lengths and capacities using informal units. They tell time to the half-hour. They use the language of direction to move from place to place. Students classify outcomes of simple familiar events. They collect data by asking questions, draw simple data displays and make simple inferences.

| Source | Australian Curriculum, Assessment and Reporting Authority (ACARA), *Australian Curriculum Version 8 Mathematics for Foundation–10*, www.australiancurriculum.edu.au/Mathematics/Curriculum/F-10 |
|---|---|

**\*** Prep in Queensland is the Foundation Year of the Australian Curriculum and refers to the year before Year 1. Children beginning Prep in January must be five years of age by 30 June.

# Year 1 Mathematics standard elaborations

| | | Applying (AP) | Making connections (MC) | Working with (WW) | Exploring (EX) | Becoming aware (BA) |
|---|---|---|---|---|---|---|
| | | **The folio of a student's work has the following characteristics:** | | | | |
| **Number and algebra** | **Understanding** | description of number sequences resulting from skip counting by 2s, 5s and 10s from any starting point in unfamiliar situations | description of number sequences resulting from skip counting by 2s, 5s and 10s from any starting point | description of number sequences resulting from skip counting by 2s, 5s and 10s | description of aspects of number sequences resulting from skip counting by 2s, 5s and 10s | skip counting of aspects of 2s, 5s and 10s sequences |
| | | reasoned identification and description of representations of one half in unfamiliar situations | identification and description of representations of one half | identification of representations of one half | guided identification of representations of one half | directed identification of representations of one half |
| | | recognition and ordering of Australian coins according to their value and explanation of ordering | recognition and ordering of Australian coins according to their value | recognition of Australian coins according to their value | recognition of aspects of Australian coins according to their value | directed recognition of aspects of Australian coins according to their value |
| | | location of numbers to 100 on an open number line and explanation of number placement | location of numbers to 100 on a number line and explanation of number placement | location of numbers to 100 on a number line | location of aspects of numbers to 100 on a number line | directed location of aspects of numbers to 100 on a number line |
| | **Fluency** | counting to and from 100 from any starting point and counting collections by partitioning using place value | counting to and from 100 from any starting point | counting to and from 100 | counting using aspects of the sequence of numbers to and from 100 | directed counting using aspects of the sequence of numbers to and from 100 |
| | | partitioning of numbers using a range of strategies and explanation of strategies used | partitioning of numbers using a range of strategies | partitioning of numbers using place value | guided partitioning of numbers using place value | directed partitioning of numbers using place value |

| | | Applying (AP) | Making connections (MC) | Working with (WW) | Exploring (EX) | Becoming aware (BA) |
|---|---|---|---|---|---|---|
| **Number and algebra** | **Problem-solving** | carrying out additions and subtractions using a range of strategies in unfamiliar situations | carrying out simple additions and subtractions using a range of strategies | carrying out simple additions and subtractions using counting strategies | carrying out aspects of simple additions and subtractions | directed additions and subtractions |
| | **Reasoning** | continuation and description of patterns involving numbers and objects in unfamiliar situations | continuation and description of simple patterns involving numbers and objects | continuation of simple patterns involving numbers and objects | continuation of aspects of simple patterns involving numbers and objects | directed continuation of aspects of simple patterns involving numbers and objects |
| **Measurement and geometry** | **Understanding and fluency** | representation and telling of time to the half hour and explanation of time durations in an unfamiliar situation | telling of time to the half hour and explanation of time durations in a complex familiar situation | telling of time to the half hour and explanation of time durations | guided telling of time to the half hour and guided explanation of time durations | directed telling of time to the half hour and directed explanation of time durations |
| | **Problem-solving** | use of the language of direction to move from place to place and to guide others to move from place to place in unfamiliar situations | use of the language of direction to move from place to place and to guide others to move from place to place | use of the language of direction to move from place to place | guided use of the language of direction to move from place to place | directed use of the language of direction to move from place to place |
| | **Problem-solving** | explanation and classification of two-dimensional shapes and three-dimensional objects | description and classification of two-dimensional shapes and three-dimensional objects | description of two-dimensional shapes and three-dimensional objects | description of aspects of two-dimensional shapes and three-dimensional objects | directed description of aspects of two-dimensional shapes and three-dimensional objects |
| | **Reasoning** | ordering of objects based on lengths and capacities using informal units, and explanation of strategy used | ordering of objects based on lengths and capacities using informal units, and description of strategy used | ordering of objects based on lengths and capacities using informal units | guided ordering of objects based on lengths and capacities using informal units | directed ordering of objects based on lengths and capacities using informal units |

| | | Applying (AP) | Making connections (MC) | Working with (WW) | Exploring (EX) | Becoming aware (BA) |
|---|---|---|---|---|---|---|
| **Statistics and probability** | **Understanding** | description of data displays in <mark>unfamiliar situations</mark> | description of data displays in <mark>complex familiar situations</mark> | description of data displays | description of <mark>aspects of</mark> data displays | <mark>statements</mark> about data displays |
| | **Fluency** | classification of outcomes of events <mark>and explanation of classification</mark> | classification of outcomes of familiar events | classification of outcomes of simple familiar events | classification of outcomes of <mark>aspects of everyday</mark> events | <mark>directed</mark> classification of outcomes of <mark>aspects of everyday</mark> events |
| | **Problem-solving and reasoning** | • collection of data by asking questions<br>• drawing a range of data displays<br>• explaining inferences | • collection of data by asking questions<br>• drawing simple data displays<br>• explaining inferences | • collection of data by asking questions<br>• drawing of simple data displays<br>• making of simple inferences | • guided collection of data by asking questions<br>• drawing of simple data displays<br>• guided making of simple inferences | • directed collection of data by asking questions<br>• drawing of aspects of simple data displays<br>• guided making of simple inferences |

| Key | <mark>shading</mark> emphasises the <mark>qualities that discriminate between the AP–BA descriptors</mark> |
|---|---|
| **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 and 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 Mathematics SEs

The following terms are used in the Year 1 Mathematics SEs. Definitions are drawn from the ACARA Australian Curriculum Mathematics glossary (www.australiancurriculum.edu.au/f-10-curriculum/mathematics/glossary) and from other sources to ensure consistent understanding.

| Term | Description |
|---|---|
| **appropriate** | fitting, suitable to the context |
| **aspects** | particular parts or features |
| **classify; classification** | arrange into named categories in order to sort, group or identify |
| **complex familiar** | students are required to choose and apply procedures in a situation involving a number of elements, components or steps in a context that has been a focus of prior learning |
| **description; descriptive; describe** | give an account of characteristics or features |
| **directed; direction** | following the instructions of the facilitator |
| **effective** | meeting the assigned purpose in a considered and/or efficient manner to produce a desired or intended result |
| **explanation; explanatory; explain** | provide additional information that demonstrates understanding of reasoning and/or application; in mathematics this could include showing working to justify a response |
| **fluency** | students develop skills in choosing appropriate procedures; carrying out procedures flexibly, accurately, efficiently and appropriately; and recalling factual knowledge and concepts readily; <br><br> students are fluent when they calculate answers efficiently, when they recognise robust ways of answering questions, when they choose appropriate methods and approximations, when they recall definitions and regularly use facts, and when they can manipulate expressions and equations to find solutions; <br><br> in Year 1, *fluency* includes such things as readily counting number in sequences forwards and backwards, locating numbers on a line and naming the days of the week |
| **guided; guidance** | visual and/or verbal prompts to facilitate or support independent action |
| **identification; identify** | establish or indicate who or what someone or something is |

| Term | Description |
|---|---|
| **interpretation; interpret** | explaining the meaning of information or actions;<br><br>in the context of Mathematics, this involves giving meaning to information presented in various forms, e.g. words, symbols, diagrams, graphs |
| **partitioning** | dividing a quantity into parts;<br><br>in the early years, *partitioning* commonly refers to the ability to think about numbers as made up of two parts, such as 10 is 8 and 2 |
| **problem-solving** | students develop the ability to make choices, interpret, formulate, model and investigate problem situations, and communicate solutions effectively;<br><br>students formulate and solve problems when they use mathematics to represent unfamiliar or meaningful situations, when they design investigations and plan their approaches, when they apply their existing strategies to seek solutions, and when they verify that their answers are reasonable;<br><br>in Year 1, *problem-solving* includes such things as using materials to model authentic problems, sorting objects, using familiar counting sequences to solve unfamiliar problems and discussing the reasonableness of the answer |
| **range** | covers the scope of relevant situations or elements |
| **reasoning** | students develop an increasingly sophisticated capacity for logical thought and actions, such as analysing, proving, evaluating, explaining, inferring, justifying and generalising;<br><br>students are reasoning mathematically when they explain their thinking, when they deduce and justify strategies used and conclusions reached, when they adapt the known to the unknown, when they transfer learning from one context to another, when they prove that something is true or false and when they compare and contrast related ideas and explain their choices;<br><br>in Year 1, *reasoning* includes such things as explaining direct and indirect comparisons of length using uniform informal units, justifying representations of data and explaining patterns that have been created |
| **reasons; reasoned** | logical and sound; presented with justification |
| **represent** | use words, images, symbols or signs to convey meaning |
| **understanding** | students build a robust knowledge of adaptable and transferable mathematical concepts; they make connections between related concepts and progressively apply the familiar to develop new ideas; they develop an understanding of the relationship between the 'why' and the 'how' of mathematics;<br><br>students build understanding when they connect related ideas, when they represent concepts in different ways, when they identify commonalities and differences between aspects of content, when they describe their thinking mathematically and when they interpret mathematical information;<br><br>in Year 1, *understanding* includes such things as connecting names, numerals and quantities, and partitioning numbers in various ways |
| **unfamiliar** | students are required to choose and apply procedures in a situation involving a number of elements, components or steps in a context in which students have had limited prior experience |
| **use; use of** | to operate or put into effect |