

Australian Curriculum Version 9.0: Achievement standard aligned to content descriptions

This resource shows alignment between aspects of the achievement standard and relevant content descriptions for Year 5. A similar resource is available for other year levels.

The Australian Curriculum (AC) v9.0 code for each content description includes an element indicating the strand it is organised by, e.g. AC9M5N01 indicates Number strand.

Key to content description codes: Mathematics	
e.g. AC9M5N01 Australian Curriculum (AC) Version 9 (9) Mathematics (M) Year (5) Strand (N, A, M, SP, ST, P) Content description number (##)	Strands: <ul style="list-style-type: none"> N — Number A — Algebra M — Measurement SP — Space ST — Statistics P — Probability

Year 5 Australian Curriculum: Mathematics achievement standard

By the end of Year 5, students use place value to write and order decimals including decimals greater than one. They express natural numbers as products of factors and identify multiples. Students order and represent, add and subtract fractions with the same or related denominators. They represent common percentages and connect them to their fraction and decimal equivalents. Students use their proficiency with multiplication facts and efficient calculation strategies to multiply large numbers by one- and two-digit numbers and divide by single-digit numbers. They check the reasonableness of their calculations using estimation. Students use mathematical modelling to solve financial and other practical problems, formulating and solving problems, choosing arithmetic operations and interpreting results in terms of the situation. They apply properties of numbers and operations to find unknown values in numerical equations involving multiplication and division. Students create and use algorithms to identify and explain patterns in the factors and multiples of numbers.

They choose and use appropriate metric units to measure the attributes of length, mass and capacity, and to solve problems involving perimeter and area. Students convert between 12- and 24-hour time. They estimate, construct and measure angles in degrees. Students use grid coordinates to locate and move positions. They connect objects to their two-dimensional nets. Students perform and describe the results of transformations and identify any symmetries.

They plan and conduct statistical investigations that collect nominal and ordinal categorical and discrete numerical data using digital tools. Students identify the mode and interpret the shape of distributions of data in context. They interpret and compare data represented in line graphs. Students conduct repeated chance experiments, list the possible outcomes, estimate likelihoods and make comparisons between those with and without equally likely outcomes.

Achievement standard aspect	Relevant content description/s	AC v9.0 code
By the end of Year 5	Students learn to:	
Students use place value to write and order decimals including decimals greater than one.	<ul style="list-style-type: none"> interpret, compare and order numbers with more than 2 decimal places, including numbers greater than one, using place value understanding; represent these on a number line 	AC9M5N01
They express natural numbers as products of factors and identify multiples.	<ul style="list-style-type: none"> express natural numbers as products of their factors, recognise multiples and determine if one number is divisible by another 	AC9M5N02
They order and represent, add and subtract fractions with the same or related denominators.	<ul style="list-style-type: none"> compare and order fractions with the same and related denominators including mixed numerals, applying knowledge of factors and multiples; represent these fractions on a number line 	AC9M5N03
	<ul style="list-style-type: none"> solve problems involving addition and subtraction of fractions with the same or related denominators, using different strategies 	AC9M5N05
They represent common percentages and connect them to their fraction and decimal equivalents.	<ul style="list-style-type: none"> recognise that 100% represents the complete whole and use percentages to describe, represent and compare relative size; connect familiar percentages to their decimal and fraction equivalents 	AC9M5N04
They use their proficiency with multiplication facts and efficient calculation strategies to multiply large numbers by one- and two-digit numbers and divide by single-digit numbers.	<ul style="list-style-type: none"> solve problems involving multiplication of larger numbers by one- or two-digit numbers, choosing efficient calculation strategies and using digital tools where appropriate; check the reasonableness of answers 	AC9M5N06
	<ul style="list-style-type: none"> solve problems involving division, choosing efficient strategies and using digital tools where appropriate; interpret any remainder according to the context and express results as a whole number, decimal or fraction 	AC9M5N07
	<ul style="list-style-type: none"> recognise and explain the connection between multiplication and division as inverse operations and use this to develop families of number facts 	AC9M5A01
They check the reasonableness of their calculations using estimation.	<ul style="list-style-type: none"> check and explain the reasonableness of solutions to problems including financial contexts using estimation strategies appropriate to the context 	AC9M5N08
They use mathematical modelling to solve financial and other practical problems, formulating and solving problems, choosing arithmetic operations and interpreting results in terms of the situation.	<ul style="list-style-type: none"> solve problems involving division, choosing efficient strategies and using digital tools where appropriate; interpret any remainder according to the context and express results as a whole number, decimal or fraction 	AC9M5N07
	<ul style="list-style-type: none"> use mathematical modelling to solve practical problems involving additive and multiplicative situations including financial contexts; formulate the problems, choosing operations and efficient calculation strategies, using digital tools where appropriate; interpret and communicate solutions in terms of the situation 	AC9M5N09
They apply properties of numbers and operations to find unknown values in numerical equations involving multiplication and division.	<ul style="list-style-type: none"> recognise and explain the connection between multiplication and division as inverse operations and use this to develop families of number facts 	AC9M5A01
	<ul style="list-style-type: none"> find unknown values in numerical equations involving multiplication and division using the properties of numbers and operations 	AC9M5A02
They create and use algorithms to identify and explain patterns in the factors and multiples of numbers.	<ul style="list-style-type: none"> create and use algorithms involving a sequence of steps and decisions and digital tools to experiment with factors, multiples and divisibility; identify, interpret and describe emerging patterns 	AC9M5N010

Achievement standard aspect	Relevant content description/s	AC v9.0 code
They choose and use appropriate metric units to measure the attributes of length, mass and capacity, and to solve problems involving perimeter and area.	• choose appropriate metric units when measuring the length, mass and capacity of objects; use smaller units or a combination of units to obtain a more accurate measure	AC9M5M01
	• solve practical problems involving the perimeter and area of regular and irregular shapes using appropriate metric units	AC9M5M02
They convert between 12- and 24-hour time.	• compare 12- and 24-hour time systems and solve practical problems involving the conversion between them	AC9M5M03
They estimate, construct and measure angles in degrees.	• estimate, construct and measure angles in degrees, using appropriate tools including a protractor, and relate these measures to angle names	AC9M5M04
They use grid coordinates to locate and move positions.	• construct a grid coordinate system that uses coordinates to locate positions within a space; use coordinates and directional language to describe position and movement	AC9M5SP02
They connect objects to their two-dimensional nets.	• connect objects to their nets and build objects from their nets using spatial and geometric reasoning	AC9M5SP01
They perform and describe the results of transformations and identify any symmetries.	• describe and perform translations, reflections and rotations of shapes, using dynamic geometric software where appropriate; recognise what changes and what remains the same, and identify any symmetries	AC9M5SP03
They plan and conduct statistical investigations that collect nominal and ordinal categorical and discrete numerical data using digital tools.	• acquire, validate and represent data for nominal and ordinal categorical and discrete numerical variables, to address a question of interest or purpose using software including spreadsheets; discuss and report on data distributions in terms of highest frequency (mode) and shape, in the context of the data	AC9M5ST01
	• plan and conduct statistical investigations by posing questions or identifying a problem and collecting relevant data; choose appropriate displays and interpret the data; communicate findings within the context of the investigation	AC9M5ST03
They identify the mode and interpret the shape of distributions of data in context.	• acquire, validate and represent data for nominal and ordinal categorical and discrete numerical variables, to address a question of interest or purpose using software including spreadsheets; discuss and report on data distributions in terms of highest frequency (mode) and shape, in the context of the data	AC9M5ST01
They interpret and compare data represented in line graphs.	• interpret line graphs representing change over time; discuss the relationships that are represented and conclusions that can be made	AC9M5ST02
They conduct repeated chance experiments, list the possible outcomes, estimate likelihoods and make comparisons between those with and without equally likely outcomes.	• list the possible outcomes of chance experiments involving equally likely outcomes and compare to those which are not equally likely	AC9M5P01
	• conduct repeated chance experiments including those with and without equally likely outcomes, observe and record the results; use frequency to compare outcomes and estimate their likelihoods.	AC9M5P02

More information

If you would like more information, please visit the QCAA website www.qcaa.qld.edu.au. Alternatively, email the K–10 Curriculum and Assessment branch at australiancurriculum@qcaa.qld.edu.au.

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