|  |
| --- |
| Year 5 Mathematics Curriculum and assessment plan  [Insert school name, implementation year] |

Use this template to plan an overview or summary of the teaching, learning and assessment for a year level in the Australian Curriculum: Mathematics. For planning advice, refer to the *Planning for teaching, learning and assessment* document available on the Planning tab for each learning area at [www.qcaa.qld.edu.au/p-10/aciq/version-9/learning-areas](http://www.qcaa.qld.edu.au/p-10/aciq/version-9/learning-areas).

**How to use this template:** Type information into the fields (yellow shading). When the plan is complete, delete the highlighted instructions (blue shading). To do so, select the instruction text, click the **Home tab > Styles dropdown > Clear All/Clear Formatting >** text will revert to Normal style and you can delete the text.

| Level description | Context and cohort considerations (if applicable) |
| --- | --- |
| In Year 5, learning in Mathematics builds on each student’s prior learning and experiences. Students engage in a range of approaches to learning and doing mathematics that develop their understanding of and fluency with concepts, procedures and processes by making connections, reasoning, problem-solving and practice. Proficiency in mathematics enables students to respond to familiar and unfamiliar situations by employing mathematical strategies to make informed decisions and solve problems efficiently.  Students further develop proficiency and positive dispositions towards mathematics and its use as they:   * apply their understanding of relationships to convert between forms of numbers, units and spatial representations * use mathematical modelling to solve practical problems, with guidance, using natural numbers and operations, and report on insights and conclusions they reach about the context * use common percentages to make proportional comparisons of quantities * use appropriate instruments and digital tools to construct and measure angles in degrees * use appropriate metric units to directly measure the area and perimeter of regular and irregular spaces * locate and move positions within a grid coordinate system * recognise what stays the same and what changes when shapes undergo transformations * experiment with factors and multiples using algorithms and digital tools * plan, conduct and report findings from statistical investigations that involve an increasing range of types of data and means for representing data * develop their reasoning skills when they consider relationships between events and connect long-term frequency over many trials to the likelihood of an event occurring. | Describe the context and cohort.  Consider the following to make informed professional decisions during the planning process:   * + relevant student data and information, e.g. achievement data   + available resources, e.g. timetabling   + school and sector priorities.   [Insert context and cohort considerations] |

**Note:** Insert/delete rows/columns, as required, to provide an overview of the teaching, learning and assessment sequence across the year level.

| Unit 1 — [Insert unit title] | Unit 2 — [Insert unit title] | Unit 3 — [Insert unit title] | Unit 4 — [Insert unit title] |
| --- | --- | --- | --- |
| Duration: [Insert semester, term and/or weeks] | Duration: [Insert semester, term and/or weeks] | Duration: [Insert semester, term and/or weeks] | Duration: [Insert semester, term and/or weeks] |
| [Insert unit description and learning focus] | [Insert unit description and learning focus] | [Insert unit description and learning focus] | [Insert unit description and learning focus] |

**Note:**

Adjust the table to reflect the number of units you will offer.

Highlight the aspects of the achievement standard that will be assessed within each unit.

|  | Unit 1 | | Unit 2 | | Unit 3 | | Unit 4 | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Assessment — [Insert assessment title] | Timing | Assessment — [Insert assessment title] | Timing | Assessment — [Insert assessment title] | Timing | Assessment — [Insert assessment title] | Timing |
| Assessment | [Insert concise description of assessment]  [Insert technique]  [Insert mode, if applicable]  [Insert conditions] | [Insert week/s or date/s] | [Insert concise description of assessment]  [Insert technique]  [Insert mode, if applicable]  [Insert conditions] | [Insert week/s or date/s] | [Insert concise description of assessment]  [Insert technique]  [Insert mode, if applicable]  [Insert conditions] | [Insert week/s or date/s] | [Insert concise description of assessment]  [Insert technique]  [Insert mode, if applicable]  [Insert conditions] | [Insert week/s or date/s] |
| 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. | | 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. | | 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. | | 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. | |
| Moderation | [Insert moderation details, including when moderation will occur and how it will be conducted] | | [Insert moderation details, including when moderation will occur and how it will be conducted] | | [Insert moderation details, including when moderation will occur and how it will be conducted] | | [Insert moderation details, including when moderation will occur and how it will be conducted] | |

**Note:** Adjust the table to reflect the number of units you will offer. Check or uncheck the columns as appropriate for each unit.

| Content descriptions | Units | | | | Content descriptions | Units | | | | Content descriptions | Units | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Number | 1 | 2 | 3 | 4 | Algebra | 1 | 2 | 3 | 4 | Measurement | 1 | 2 | 3 | 4 | |
| **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 |  |  |  |  | recognise and explain the connection between multiplication and division as inverse operations and use this to develop families of number facts **AC9M5A01** |  |  |  |  | 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** |  |  |  |  | |
| express natural numbers as products of their factors, recognise multiples and determine if one number is divisible by another  AC9M5N02 |  |  |  |  | find unknown values in numerical equations involving multiplication and division using the properties of numbers and operations  AC9M5A02 |  |  |  |  | solve practical problems involving the perimeter and area of regular and irregular shapes using appropriate metric units  AC9M5M02 |  |  |  |  | |
| 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 |  |  |  |  |  |  |  |  |  | compare 12- and 24-hour time systems and solve practical problems involving the conversion between them  AC9M5M03 |  |  |  |  | |
| 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 |  |  |  |  |  |  |  |  |  | estimate, construct and measure angles in degrees, using appropriate tools including a protractor, and relate these measures to angle names  AC9M5M04 |  |  |  |  | |
| solve problems involving addition and subtraction of fractions with the same or related denominators, using different strategies  AC9M5N05 |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |
| 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 |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |
| 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 |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |
| check and explain the reasonableness of solutions to problems including financial contexts using estimation strategies appropriate to the context AC9M5N08 |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |
| 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 |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |
| 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 |  |  |  |  |  |  |  |  |  |  |  |  |  |  | |

**Note:** Adjust the table to reflect the number of units you will offer. Check or uncheck the columns as appropriate for each unit.

| Content descriptions | Units | | | | Content descriptions | Units | | | | Content descriptions | Units | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Space | 1 | 2 | 3 | 4 | Statistics | 1 | 2 | 3 | 4 | Probability | 1 | 2 | 3 | 4 | |
| **connect objects to their nets and build objects from their nets using spatial and geometric reasoning** AC9M5SP01 |  |  |  |  | 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** |  |  |  |  | list the possible outcomes of chance experiments involving equally likely outcomes and compare to those which are not equally likely  AC9M5P01 |  |  |  |  | |
| 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 |  |  |  |  | interpret line graphs representing change over time; discuss the relationships that are represented and conclusions that can be made  AC9M5ST02 |  |  |  |  | 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 |  |  |  |  | |
| 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 |  |  |  |  | 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 |  |  |  |  |  |  |  |  |  | |

**Note:** Adjust the table to reflect the number of units you will offer. Check or uncheck the columns as appropriate for each unit.

| General capabilities | Units | | | |  | Cross-curriculum priorities | Units | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 1 | 2 | 3 | 4 |  |  | 1 | 2 | 3 | 4 |
| Critical and creative thinking |  |  |  |  |  | Aboriginal and Torres Strait Islander histories and cultures |  |  |  |  |
| Digital literacy |  |  |  |  |  | Asia and Australia’s engagement with Asia |  |  |  |  |
| Ethical understanding |  |  |  |  |  | Sustainability |  |  |  |  |
| Intercultural understanding |  |  |  |  |
| Literacy |  |  |  |  |
| Numeracy |  |  |  |  |
| Personal and social capability |  |  |  |  |

[](https://www.qcaa.qld.edu.au/copyright) © State of Queensland (QCAA) 2023

**Licence:** <https://creativecommons.org/licenses/by/4.0> **| Copyright notice:** [www.qcaa.qld.edu.au/copyright](https://www.qcaa.qld.edu.au/copyright) — lists the full terms and conditions, which specify certain exceptions to the licence. **| Attribution** (include the link): © State of Queensland ([QCAA](https://www.qcaa.qld.edu.au/copyright)) 2023 [www.qcaa.qld.edu.au/copyright](https://www.qcaa.qld.edu.au/copyright).

Unless otherwise indicated material from the Australian Curriculum is © ACARA 2010–present, licensed under CC BY 4.0. For the latest information and additional terms of use, please check the [Australian Curriculum website](https://www.australiancurriculum.edu.au/) and its [copyright notice](https://www.acara.edu.au/contact-us/copyright).