|  |
| --- |
| Year 4 MathematicsCurriculum 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 4, 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:* draw on their proficiency with number facts, fractions and decimals to deepen their appreciation of how numbers work
* develop and use strategies for multiplication that are based on their understanding of multiplication as an operation and their knowledge of laws for arithmetic operations
* choose and use efficient strategies when modelling problems, communicating their solutions within the context of the situation
* use algorithms to generate sets of numbers, recognising and describing any patterns that emerge
* become aware of the importance of context and purpose when they make judgements and reflect on the reasonableness of measurements and the results of calculations, and how they choose to represent mathematics and mathematical information
* measure and estimate common attributes of objects using conventional instruments and appropriate metric units
* develop and use surveys to obtain data that is directly relevant to their statistical investigations
* draw on their reasoning skills to analyse, categorise and order chance events and identify independent and dependent events
* investigate variability by conducting repeated chance experiments and observing results.
 | 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 4, students use their understanding of place value to represent tenths and hundredths in decimal form and to multiply natural numbers by multiples of 10. They use mathematical modelling to solve financial and other practical problems, formulating the problem using number sentences, solving the problem choosing efficient strategies and interpreting results in terms of the situation. Students use their proficiency with addition and multiplication facts to add and subtract, multiply and divide numbers efficiently. They choose rounding and estimation strategies to determine whether results of calculations are reasonable. Students use the properties of odd and even numbers. They recognise equivalent fractions and make connections between fraction and decimal notations. Students count and represent fractions on a number line. They find unknown values in numerical equations involving addition and subtraction. Students follow and create algorithms that generate sets of numbers and identify emerging patterns.They use scaled instruments and appropriate units to measure length, mass, capacity and temperature. Students measure and approximate perimeters and areas. They convert between units of time when solving problems involving duration. Students compare angles relative to a right angle using angle names. They represent and approximate shapes and objects in the environment. Students create and interpret grid references. They identify line and rotational symmetry in plane shapes and create symmetrical patterns.Students create many-to-one data displays, assess the suitability of displays for representing data and discuss the shape of distributions and variation in data. They use surveys and digital tools to generate categorical or discrete numerical data in statistical investigations and communicate their findings in context. Students order events or the outcomes of chance experiments in terms of likelihood and identify whether events are independent or dependent. They conduct repeated chance experiments and describe the variation in results. | By the end of Year 4, students use their understanding of place value to represent tenths and hundredths in decimal form and to multiply natural numbers by multiples of 10. They use mathematical modelling to solve financial and other practical problems, formulating the problem using number sentences, solving the problem choosing efficient strategies and interpreting results in terms of the situation. Students use their proficiency with addition and multiplication facts to add and subtract, multiply and divide numbers efficiently. They choose rounding and estimation strategies to determine whether results of calculations are reasonable. Students use the properties of odd and even numbers. They recognise equivalent fractions and make connections between fraction and decimal notations. Students count and represent fractions on a number line. They find unknown values in numerical equations involving addition and subtraction. Students follow and create algorithms that generate sets of numbers and identify emerging patterns.They use scaled instruments and appropriate units to measure length, mass, capacity and temperature. Students measure and approximate perimeters and areas. They convert between units of time when solving problems involving duration. Students compare angles relative to a right angle using angle names. They represent and approximate shapes and objects in the environment. Students create and interpret grid references. They identify line and rotational symmetry in plane shapes and create symmetrical patterns.Students create many-to-one data displays, assess the suitability of displays for representing data and discuss the shape of distributions and variation in data. They use surveys and digital tools to generate categorical or discrete numerical data in statistical investigations and communicate their findings in context. Students order events or the outcomes of chance experiments in terms of likelihood and identify whether events are independent or dependent. They conduct repeated chance experiments and describe the variation in results. | By the end of Year 4, students use their understanding of place value to represent tenths and hundredths in decimal form and to multiply natural numbers by multiples of 10. They use mathematical modelling to solve financial and other practical problems, formulating the problem using number sentences, solving the problem choosing efficient strategies and interpreting results in terms of the situation. Students use their proficiency with addition and multiplication facts to add and subtract, multiply and divide numbers efficiently. They choose rounding and estimation strategies to determine whether results of calculations are reasonable. Students use the properties of odd and even numbers. They recognise equivalent fractions and make connections between fraction and decimal notations. Students count and represent fractions on a number line. They find unknown values in numerical equations involving addition and subtraction. Students follow and create algorithms that generate sets of numbers and identify emerging patterns.They use scaled instruments and appropriate units to measure length, mass, capacity and temperature. Students measure and approximate perimeters and areas. They convert between units of time when solving problems involving duration. Students compare angles relative to a right angle using angle names. They represent and approximate shapes and objects in the environment. Students create and interpret grid references. They identify line and rotational symmetry in plane shapes and create symmetrical patterns.Students create many-to-one data displays, assess the suitability of displays for representing data and discuss the shape of distributions and variation in data. They use surveys and digital tools to generate categorical or discrete numerical data in statistical investigations and communicate their findings in context. Students order events or the outcomes of chance experiments in terms of likelihood and identify whether events are independent or dependent. They conduct repeated chance experiments and describe the variation in results. | By the end of Year 4, students use their understanding of place value to represent tenths and hundredths in decimal form and to multiply natural numbers by multiples of 10. They use mathematical modelling to solve financial and other practical problems, formulating the problem using number sentences, solving the problem choosing efficient strategies and interpreting results in terms of the situation. Students use their proficiency with addition and multiplication facts to add and subtract, multiply and divide numbers efficiently. They choose rounding and estimation strategies to determine whether results of calculations are reasonable. Students use the properties of odd and even numbers. They recognise equivalent fractions and make connections between fraction and decimal notations. Students count and represent fractions on a number line. They find unknown values in numerical equations involving addition and subtraction. Students follow and create algorithms that generate sets of numbers and identify emerging patterns.They use scaled instruments and appropriate units to measure length, mass, capacity and temperature. Students measure and approximate perimeters and areas. They convert between units of time when solving problems involving duration. Students compare angles relative to a right angle using angle names. They represent and approximate shapes and objects in the environment. Students create and interpret grid references. They identify line and rotational symmetry in plane shapes and create symmetrical patterns.Students create many-to-one data displays, assess the suitability of displays for representing data and discuss the shape of distributions and variation in data. They use surveys and digital tools to generate categorical or discrete numerical data in statistical investigations and communicate their findings in context. Students order events or the outcomes of chance experiments in terms of likelihood and identify whether events are independent or dependent. They conduct repeated chance experiments and describe the variation in results. |
| 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 |
| **recognise and extend the application of place value to tenths and hundredths and use the conventions of decimal notation to name and represent decimals** AC9M4N01 | [ ]  | [ ]  | [ ]  | [ ]  | find unknown values in numerical equations involving addition and subtraction, using the properties of numbers and operations**AC9M4A01**  | [ ]  | [ ]  | [ ]  | [ ]  | interpret unmarked and partial units when measuring and comparing attributes of length, mass, capacity, duration and temperature, using scaled and digital instruments and appropriate units **AC9M4M01** | [ ]  | [ ]  | [ ]  | [ ]  |
| explain and use the properties of odd and even numbers AC9M4N02 | [ ]  | [ ]  | [ ]  | [ ]  | recall and demonstrate proficiency with multiplication facts up to 10 x 10 and related division facts; extend and apply facts to develop efficient mental strategies for computation with larger numbers without a calculatorAC9M4A02 | [ ]  | [ ]  | [ ]  | [ ]  | recognise ways of measuring and approximating the perimeter and area of shapes and enclosed spaces, using appropriate formal and informal units AC9M4M02 | [ ]  | [ ]  | [ ]  | [ ]  |
| find equivalent representations of fractions using related denominators and make connections between fractions and decimal notation AC9M4N03  | [ ]  | [ ]  | [ ]  | [ ]  |  |  |  |  |  | solve problems involving the duration of time including situations involving “am” and “pm” and conversions between units of time AC9M4M03 | [ ]  | [ ]  | [ ]  | [ ]  |
| count by fractions including mixed numerals; locate and represent these fractions as numbers on number lines AC9M4N04 | [ ]  | [ ]  | [ ]  | [ ]  |  |  |  |  |  | estimate and compare angles using angle names including acute, obtuse, straight angle, reflex and revolution, and recognise their relationship to a right angle AC9M4M04 | [ ]  | [ ]  | [ ]  | [ ]  |
| solve problems involving multiplying or dividing natural numbers by multiples and powers of 10 without a calculator, using the multiplicative relationship between the place value of digits AC9M4N05 | [ ]  | [ ]  | [ ]  | [ ]  |  |  |  |  |  |  |  |  |  |  |
| develop efficient strategies and use appropriate digital tools for solving problems involving addition and subtraction, and multiplication and division where there is no remainder AC9M4N06 | [ ]  | [ ]  | [ ]  | [ ]  |  |  |  |  |  |  |  |  |  |  |
| choose and use estimation and rounding to check and explain the reasonableness of calculations including the results of financial transactions AC9M4N07 | [ ]  | [ ]  | [ ]  | [ ]  |  |  |  |  |  |  |  |  |  |  |
| use mathematical modelling to solve practical problems involving additive and multiplicative situations including financial contexts; formulate the problems using number sentences and choose efficient calculation strategies, using digital tools where appropriate; interpret and communicate solutions in terms of the situationAC9M4N08 | [ ]  | [ ]  | [ ]  | [ ]  |  |  |  |  |  |  |  |  |  |  |
| follow and create algorithms involving a sequence of steps and decisions that use addition or multiplication to generate sets of numbers; identify and describe any emerging patterns AC9M4N09 | [ ]  | [ ]  | [ ]  | [ ]  |  |  |  |  |  |  |  |  |  |  |

**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 |
| **represent and approximate composite shapes and objects in the environment, using combinations of familiar shapes and objects** AC9M4SP01 | [ ]  | [ ]  | [ ]  | [ ]  | acquire data for categorical and discrete numerical variables to address a question of interest or purpose, using digital tools; represent data using many-to-one pictographs, column graphs and other displays or visualisations; interpret and discuss the information that has been created**AC9M4ST01** | [ ]  | [ ]  | [ ]  | [ ]  | describe possible everyday events and the possible outcomes of chance experiments and order outcomes or events based on their likelihood of occurring; identify independent or dependent events AC9M4P01 | [ ]  | [ ]  | [ ]  | [ ]  |
| create and interpret grid reference systems using grid references and directions to locate and describe positions and pathways AC9M4SP02 | [ ]  | [ ]  | [ ]  | [ ]  | analyse the effectiveness of different displays or visualisations in illustrating and comparing data distributions, then discuss the shape of distributions and the variation in the data AC9M4ST02 | [ ]  | [ ]  | [ ]  | [ ]  | conduct repeated chance experiments to observe relationships between outcomes; identify and describe the variation in results AC9M4P02 | [ ]  | [ ]  | [ ]  | [ ]  |
| recognise line and rotational symmetry of shapes and create symmetrical patterns and pictures, using dynamic geometric software where appropriate AC9M4SP03 | [ ]  | [ ]  | [ ]  | [ ]  | conduct statistical investigations, collecting data through survey responses and other methods; record and display data using digital tools; interpret the data and communicate the results AC9M4ST03 | [ ]  | [ ]  | [ ]  | [ ]  |  |  |  |  |  |

**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 | [ ]  | [ ]  | [ ]  | [ ]  |

 © 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).