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| Prep–Year 2 multi-age MathematicsCurriculum and assessment planExample |

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| Context and cohort considerations (if applicable) |
| The multi-age Prep–Year 2 cohort participate in daily mathematics learning.This plan has considered: * information provided in kindergarten transition statements about students’ prior numeracy experiences with early counting, measurement and patterning (Prep students)
* summative and formative data from the previous year showing the need to consolidate and expand upon number system understandings and calculation strategies (Years 1–2 students)
* exploration and use of digital tools (e.g. virtual materials) in Number and Statistics in relevant contexts that support the learning and doing of mathematics.

Across the year, the contexts for teaching and learning reflect authentic learning experiences for the students. |

| Level description — Prep  |  Level description — Year 1  |  Level description — Year 2 |
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| In Foundation, learning in Mathematics builds on the Early Years Learning Framework and 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, skills, 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:* explore situations, sparked by curiosity, using physical and virtual materials to represent, sort, quantify, compare and solve everyday problems
* look for and make connections between number names, numerals and quantities, and compare quantities and shapes, using elementary mathematical reasoning in active learning experiences
* bring mathematical meaning to their use of familiar terms and language when they pose and respond to questions, and explain their thinking and reasoning
* build confidence and autonomy in being able to make and justify mathematical decisions based on quantification and direct comparisons
* learn to recognise repetition in pattern sequences and apply this to creatively build repeating patterns in a range of contexts
* develop a sense of sameness, difference and change when they engage in play-based activities.
 | In Year 1, 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:* use their curiosity and imagination to explore situations, recognise patterns in their environment and choose ways of representing their thinking when communicating with others
* demonstrate that numbers can be represented, partitioned and composed in various ways, recognise patterns in numbers and extend their knowledge of numbers beyond two digits
* use physical or virtual materials and diagrams when modelling practical problems through active learning experiences, recognise existing patterns, employ different strategies and discuss the reasonableness of answers
* explain ways of making direct and indirect comparisons and begin to use uniform, informal units to measure some attributes
* reason spatially and use spatial features to classify shapes and objects; they recognise these shapes and objects in their environment and use simple transformations, directions and pathways to move the positions of shapes and objects within a space
* use simple surveys to collect and sort data, based on a question of interest, recognise that data can be represented in different ways, and explain patterns that they see in the results
* develop a sense of equivalence, fairness, repetition and variability when they engage in play-based and practical activities.
 | In Year 2, 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 with positive dispositions towards mathematics and its use as they:* recognise that mathematics can be used to investigate things they are curious about, to solve practical problems and model everyday situations, describing their thinking and reasoning using familiar mathematical language
* partition and combine numbers flexibly, recognising and describing the relationship between addition and subtraction and employing part-part-whole reasoning and relational thinking to solve additive problems
* use number sentences to formulate additive situations and represent simple multiplicative situations using equal groups and arrays
* use mathematical modelling to solve practical problems involving authentic situations by representing problems with physical and virtual materials, diagrams, and using different calculation strategies to find solutions
* compare and contrast related operations and use known addition and subtraction facts to develop strategies for unfamiliar calculations
* recognise types of patterns in different contexts
* partition collections, shapes and objects into equal parts and build a sense of fractions as a measure, connecting this to measures of turn and representations of time
* use uniform units to measure, compare and discuss the attributes of shapes and objects, and the duration of events
* describe spatial relationships such as the relative position of objects represented within a two-dimensional space
* build the foundations for statistical inquiry by choosing questions based on their interests as they collect, represent, and interpret data, and recognise features of different representations
* develop a sense of equivalence, chance and variability when they engage in play-based and practical activities.
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| Unit 1 — Navigating connections | Unit 2 — Quantities and comparisons | Unit 3 — Practical problems and possibilities | Unit 4 — Mathematical investigators |
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| Duration: 10 weeks | Duration: 10 weeks | Duration: 10 weeks | Duration: 10 weeks |
| Connecting mathematics to realistic contexts helps young learners build confidence and recognise the usefulness of mathematics. In this unit, students explore real-world applications of spatial reasoning, number sense and data representations within the school and classroom environments. They develop critical and creative thinking skills by posing questions that reflect their curiosity about topics and ideas.In the first phase of this unit, students investigate positions, locations and directions within their classroom and school environments. They develop Literacy skills using terms such as forwards, backwards, straight ahead, left or right, inside, underneath, and on top of. Prep students describe the position of themselves and objects in relation to other people or items. Year 1 students give and follow directions to move people and objects. Year 2 students locate positions in two-dimensional representations of a familiar space (e.g. class floor plan or school map) and move positions by following directions and pathways. In the second phase of this unit, students recognise and name numbers and make connections to numerals and quantities. They use physical and virtual materials (e.g. number tracks, hundreds chart, number lines) to represent numbers in a variety of ways. They also develop Literacy skills as they communicate mathematically. Prep students learn the sequence of numbers from zero to at least 20, Year 1 students build on their number understandings to at least 120, and Year 2 students consolidate their understanding of numbers to at least 1000. In the third phase of this unit, number understandings are applied to statistical contexts. Students collect and sort data on topics of interest and in response to questions about familiar situations. Prep students collect, sort and compare data represented by objects. Year 1 students acquire and record data using digital tools, objects, images, lists, and tally marks, and create one-to-one picture graphs. Year 2 students use digital tools where appropriate to sort and display data into lists and tables, and construct one-to-one picture graphs and column graphs. Students develop digital literacy skills as they collect and count data, and classify and group data to answer simple questions. | Comparing numbers and objects promotes critical and creative thinking about their properties and characteristics. It involves analysis as students interpret concepts and draw conclusions. In this unit, students quantify, compare and partition collections in different ways. They also measure and compare objects based on attributes of length, mass, and capacity.In the first phase of this unit, students build on their number understandings from Unit 1 to quantify and compare collections and develop calculation strategies. Prep students use subitising and counting strategies to quantify and compare collections to at least 20. Year 1 students partition one- and two-digit numbers in different ways using physical and virtual materials. They add and subtract numbers within 20, using part-part-whole knowledge to 10 and a variety of calculation strategies. Year 2 students apply their knowledge of place value to partition, rearrange and rename two- and three-digit numbers, and regroup partitioned numbers to assist in calculations. In the second phase of this unit, students’ ability to analyse is applied to measurement contexts. Students identify and use the attributes of mass, capacity and length to measure and compare shapes and objects. Prep students use direct comparison. Year 1 students compare directly and indirectly and use uniform informal units to measure length. Year 2 students use appropriate uniform informal units and smaller units for accuracy to measure and compare objects. Critical and creative thinking skills are developed through hands-on measurement investigations where students analyse different physical attributes and draw conclusions. The investigations also reinforce understanding of numbers in practical contexts.  | Through the exploration of practical problems, ideas can be connected, or creatively expanded on to create new possibilities. In this unit students engage in a range of investigations focusing on shapes and objects, patterns and addition and subtraction problems. In the first phase of this unit, students build on their early understandings of shapes from previous year levels by investigating and recognising shapes and objects in the environment. Prep students name, create and sort familiar shapes and give reasoning on how the shapes have been sorted into groups. Year 1 students make, compare and classify shapes and objects using obvious features. They use their understanding of features to identify similarities and differences. Year 2 students compare and classify shapes, describing features using formal spatial terms, e.g. opposite, parallel, curved and straight. In the second phase of this unit, students build on number understandings from Unit 2 as they investigate a range of patterns and structures in Algebra. Students explore a range of pattern contexts and create patterns using numbers, symbols, shapes and objects. Prep students copy and continue repeating patterns. Year 1 students create skip counting and repeating patterns, identifying the repeating unit. Year 2 students use their proficiency with addition and subtraction facts within 20 to describe and continue patterns that increase and decrease. They identify missing elements in the pattern.In the third phase of this unit, students draw on their number understandings from Units 1 and 2 to represent situations (Prep) or use mathematical modelling to solve problems involving addition and subtraction (Years 1 and 2). Using a local, relevant context (e.g. book fair in book week), students are guided to represent authentic problem scenarios, including simple money transactions. Students demonstrate problem-solving strategies by using think boards, diagrams, physical materials, written calculations and verbal explanations. Critical and creative thinking skills are developed as students explore possibilities, make choices when completing tasks, and identify the reasons for choices made. | Mathematical investigations support students to identify, process and evaluate information, make decisions and communicate their thinking. In this unit, students explore the concepts of partitioning quantities into equal parts through practical situations involving equal sharing and grouping, time and, for Year 2 students, fractions.In the first phase of this unit, students consolidate and expand on number system understandings and calculation strategies learnt throughout the year. Through an engaging, relevant context students represent practical situations involving equal sharing and grouping, e.g. planning an end-of-year picnic or a Grandparents Day celebration. Prep students use counting or subitising strategies with physical materials. Year 1 and 2 students use mathematical modelling to represent the situations with diagrams and physical materials, and use calculation strategies to solve problems. Year 2 students choose from a range of strategies such as using repeated addition, equal grouping, arrays, and partitioning. Year 2 students then make connection between their understanding of equal groups to fractions, by identifying and representing part-whole relationships of halves, quarters and eighths through repeated halving. They use a variety of representations, materials and fraction models, and explore measures of turn in everyday situations. In the second phase of this unit, students explore events and duration. They realise time can be divided into smaller parts, e.g. morning, lunchtime and afternoon, or years, months, weeks, days and hours. Prep students sequence and connect familiar events to the time of day and they use direct comparison to compare events, such as starting two events at the same time to determine which takes longer. Year 1 students compare and order events based on the attributes of duration, use sand timers to make comparisons, and describe the duration and sequence of events using years, months, weeks, days and hours. Year 2 students determine the number of days between events using a calendar and use their developing fractional understandings to read time on an analog clock to the hour, half hour and quarter hour. |

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|  | **Unit 1 — Navigating connections** | **Unit 2 — Quantities and comparisons** | **Unit 3 — Practical problems and possibilities** | **Unit 4 — Mathematical investigators** |
| Prep | **Assessment 1 — Project****Description:** In a learning journal, students document discoveries relating to describing position and location of themselves and objects within a familiar space, numbers from zero to at least 20, and collecting, sorting and comparing data collection in response to questions.**Technique:** Project **Mode:** Multimodal (using digital tools where appropriate)**Conditions:** Practical components are observed by the teacher. | **Assessment 2 — Observed demonstration****Description:** Through practical tasks, students demonstratetheir proficiency with subitising and counting strategies, comparing the size of collections to at least 20, partitioning and combining collections up to 10, and using direct comparison strategies to identify the attributes of mass, capacity, length.**Technique:** Observed demonstration**Mode:** Multimodal **Conditions:** Practical components are observed by the teacher. | **Assessment 3 — Project****Description:** Students compile an investigation folio showing evidence of naming, creating and sorting familiar shapes, copying and continuing repeating patterns and responding to practical situations that involve quantifying, adding to and taking away from collections to at least 10.**Technique:** Project **Mode:** Multimodal **Conditions:** Practical components are observed by the teacher. | **Assessment 4 — Supervised assessment****Description:** Students respond to questions, scenarios, or problems that involve equal sharing of collections to at least 10, direct comparison strategies for events, and sequencing and connecting familiar events to the time of day.**Technique:** Supervised assessment**Mode:** Written and practical **Conditions:** Practical components are observed by the teacher. |
| Year 1 | **Assessment 1 — Project****Description:** In a learning journal, students document discoveries relating to giving and following directions within a space, numbers to at least 120, collecting and recording categorical data, creating one-to-one displays and comparing and discussing the data.**Technique:** Project **Mode:** Multimodal (using digital tools where appropriate)**Conditions:** Practical components are observed by the teacher. | **Assessment 2 — Observed demonstration****Description:** Through practical tasks, students demonstratetheir proficiency with one- and two-digit partitioning, comparing and ordering objects based on the attributes of length, mass, capacity, and measuring the length of shapes and objects using uniform informal units.**Technique:** Observed demonstration**Mode:** Multimodal **Conditions:** Practical components are observed by the teacher. | **Assessment 3 — Project, including mathematical modelling****Description:** Students compile an investigation folio showing evidence of making, comparing and classifying shapes and objects using obvious features, creating skip counting and repeating patterns, and responding to practical situations that involve addition and subtraction. of numbers to 20**Technique:** Project **Mode:** Multimodal **Conditions:** Practical components are observed by the teacher. | **Assessment 4 — Supervised assessment, including mathematical modelling****Description:** Students respond to questions, scenarios, or problems that involve partitioning and skip counting in twos, fives or tens to quantify collections to at least 120, equal sharing and grouping, and comparing and ordering events.**Technique:** Supervised assessment**Mode:** Written and practical **Conditions:** Practical components are observed by the teacher. |
| Year 2 | **Assessment 1 — Project****Description:** In a learning journal, students document discoveries relating to locating and identifying positions of features in two-dimensional representations, moving position by following directions and pathways, numbers to at least 1000, and using a range of methods to collect, record, represent and interpret categorical data in response to questions.**Technique:** Project **Mode:** Multimodal (using digital tools where appropriate)**Conditions:** Practical components are observed by the teacher. | **Assessment 2 — Observed demonstration****Description:** Through practical tasks, students demonstratetheir proficiency with two- and three-digit partitioning, using uniform informal units to measure and compare shapes and objects.**Technique:** Observed demonstration**Mode:** Multimodal **Conditions:** Practical components are observed by the teacher. | **Assessment 3 — Project, including mathematical modelling****Description:** Students compile an investigation folio showing evidence of comparing and classifying shapes, describing features, describing and continuing patterns, identifying missing elements in patterns, and responding to practical situations that involve additive problems.**Technique:** Project **Mode:** Multimodal **Conditions:** Practical components are observed by the teacher. | **Assessment 4 — Supervised assessment, including mathematical modelling****Description:** Students respond to questions, scenarios, or problems that involve multiplicative situations, part-whole relationships of halves, quarters and eighths, reading time on an analog clock and determining the number of days between events using a calendar.**Technique:** Supervised assessment**Mode:** Written and practical **Conditions:** Practical components are observed by the teacher. |

# Prep

|  | Unit 1 — Navigating connections | Unit 2 — Quantities and comparisons | Unit 3 — Practical problems and possibilities | Unit 4 — Mathematical investigators |
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|  | Assessment 1 — Project | Term/ week | Assessment 2 — Observed demonstration | Term/ week | Assessment 3 — Project | Term/ week | Assessment 4 — Supervised assessment | Term/ week |
| Assessment | **Description:** Through a learning journal (e.g. drawings, photographs, video explanations) students document their mathematics discoveries. They demonstrate proficiency when:* making connections between number names, numerals and position in the sequence of numbers from zero to at least 20
* describing the position and the location of themselves and objects in relation to other objects and people within a familiar space
* collecting, sorting and comparing data in response to questions in familiar contexts.

**Technique:** Project **Mode:** Multimodal (written, spoken/signed and practical with physical materials and digital tools where appropriate)**Conditions:*** issued in Week 2 and completed over multiple lessons by end of Week 10
* practical components are observed by the teacher.
 | Term 1Week 10 | **Description:** Through practical tasks, in response to questions and scenarios, and during teacher–student conferences, students demonstratetheir proficiency when:* using subitising and counting strategies to quantify collections
* comparing the size of collections to at least 20
* partitioning and combining collections up to 10 in different ways, representing these with numbers
* identifying the attributes of mass, capacity, length
* using direct comparison strategies to compare objects.

**Technique:** Observed demonstration**Mode:** Multimodal (written, spoken/signed and practical with physical materials)**Conditions:*** started in Week 2 and completed over multiple lessons by end of Week 9
* may be completed in small groups
* practical components are observed by the teacher.
 | Term 2Week 9 | **Description:** A collection of annotated responses from practical investigations is collated in an investigation folio. The investigation folio shows evidence of students’ learning, focusing on: * representing practical situations that involve quantifying, adding to and taking away from collections to at least 10
* copying and continuing repeating patterns
* naming, creating and sorting familiar shapes and giving their reasoning.

**Technique:** Project **Mode:** Multimodal (written, spoken/signed and practical with physical materials) **Conditions:*** started in Week 2 and completed over multiple lessons by end of Week 10
* practical components are observed by the teacher.
 | Term 3Week 10 | **Description:** Students respond to questions, scenarios, or problems that involve:* representing practical situations that involve equal sharing collections to at least 10
* identifying the attribute of duration, and using direct comparison strategies to compare events
* sequencing and connecting familiar events to the time of day.

**Technique:** Supervised assessment**Mode:** Written and practical (with physical materials)**Conditions:*** may be completed one-on-one, in small groups or in whole class settings
* may be completed over multiple lessons or broken into components in Week 8
* questions or instructions can be read to students
* practical components are observed by the teacher.
 | Term 4Week 8 |
| Achievement standard | By the end of Foundation Year, students make connections between number names, numerals and position in the sequence of numbers from zero to at least 20. They use subitising and counting strategies to quantify collections. Students compare the size of collections to at least 20. They partition and combine collections up to 10 in different ways, representing these with numbers. Students represent practical situations that involve quantifying, equal sharing, adding to and taking away from collections to at least 10. They copy and continue repeating patterns.Students identify the attributes of mass, capacity, length and duration, and use direct comparison strategies to compare objects and events. They sequence and connect familiar events to the time of day. Students name, create and sort familiar shapes and give their reasoning. They describe the position and the location of themselves and objects in relation to other objects and people within a familiar space.Students collect, sort and compare data in response to questions in familiar contexts. | By the end of Foundation Year, students make connections between number names, numerals and position in the sequence of numbers from zero to at least 20. They use subitising and counting strategies to quantify collections. Students compare the size of collections to at least 20. They partition and combine collections up to 10 in different ways, representing these with numbers. Students represent practical situations that involve quantifying, equal sharing, adding to and taking away from collections to at least 10. They copy and continue repeating patterns.Students identify the attributes of mass, capacity, length and duration, and use direct comparison strategies to compare objects and events. They sequence and connect familiar events to the time of day. Students name, create and sort familiar shapes and give their reasoning. They describe the position and the location of themselves and objects in relation to other objects and people within a familiar space.Students collect, sort and compare data in response to questions in familiar contexts. | By the end of Foundation Year, students make connections between number names, numerals and position in the sequence of numbers from zero to at least 20. They use subitising and counting strategies to quantify collections. Students compare the size of collections to at least 20. They partition and combine collections up to 10 in different ways, representing these with numbers. Students represent practical situations that involve quantifying, equal sharing, adding to and taking away from collections to at least 10. They copy and continue repeating patterns.Students identify the attributes of mass, capacity, length and duration, and use direct comparison strategies to compare objects and events. They sequence and connect familiar events to the time of day. Students name, create and sort familiar shapes and give their reasoning. They describe the position and the location of themselves and objects in relation to other objects and people within a familiar space.Students collect, sort and compare data in response to questions in familiar contexts. | By the end of Foundation Year, students make connections between number names, numerals and position in the sequence of numbers from zero to at least 20. They use subitising and counting strategies to quantify collections. Students compare the size of collections to at least 20. They partition and combine collections up to 10 in different ways, representing these with numbers. Students represent practical situations that involve quantifying, equal sharing, adding to and taking away from collections to at least 10. They copy and continue repeating patterns.Students identify the attributes of mass, capacity, length and duration, and use direct comparison strategies to compare objects and events. They sequence and connect familiar events to the time of day. Students name, create and sort familiar shapes and give their reasoning. They describe the position and the location of themselves and objects in relation to other objects and people within a familiar space.Students collect, sort and compare data in response to questions in familiar contexts. |
| Moderation | **Expert:** Refer to QCAA moderation advice on the QCAA website under the Assessment tab in the learning area. | **Consensus:** Refer to QCAA moderation advice on the QCAA website under the Assessment tab in the learning area. | **Calibration:** Refer to QCAA moderation advice on the QCAA website under the Assessment tab in the learning area. | **Calibration:** Refer to QCAA moderation advice on the QCAA website under the Assessment tab in the learning area. |

| Content descriptions | Units | Content descriptions | Units | Content descriptions | Units |
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| Number | 1 | 2 | 3 | 4 | Algebra | 1 | 2 | 3 | 4 | Measurement | 1 | 2 | 3 | 4 |
| name, represent and order numbers including zero to at least 20, using physical and virtual materials and numerals AC9MFN01 | [x]  | [ ]  | [ ]  | [ ]  | recognise, copy and continue repeating patterns represented in different ways AC9MFA01  | [ ]  | [ ]  | [x]  | [ ]  | identify and compare attributes of objects and events, including length, capacity, mass and duration, using direct comparisons and communicating reasoningAC9MFM01 | [ ]  | [x]  | [ ]  | [x]  |
| recognise and name the number of objects within a collection up to 5 using subitising AC9MFN02 | [ ]  | [x]  | [ ]  | [ ]  |  |  |  |  |  | sequence days of the week and times of the day including morning, lunchtime, afternoon and night time, and connect them to familiar events and actions AC9MFM02 | [ ]  | [ ]  | [ ]  | [x]  |
| quantify and compare collections to at least 20 using counting and explain or demonstrate reasoningAC9MFN03 | [ ]  | [x]  | [x]  | [ ]  |  |  |  |  |  |  |  |  |  |  |
| partition and combine collections up to 10 using part-part-whole relationships and subitising to recognise and name the parts AC9MFN04 | [ ]  | [x]  | [ ]  | [ ]  |  |  |  |  |  |  |  |  |  |  |
| represent practical situations involving addition, subtraction and quantification with physical and virtual materials and use counting or subitising strategies AC9MFN05 | [ ]  | [x]  | [x]  | [ ]  |  |  |  |  |  |  |  |  |  |  |
| represent practical situations that involve equal sharing and grouping with physical and virtual materials and use counting or subitising strategiesAC9MFN06 | [ ]  | [ ]  | [ ]  | [x]  |  |  |  |  |  |  |  |  |  |  |

| Content descriptions | Units | Content descriptions | Units |
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| Space | 1 | 2 | 3 | 4 | Statistics | 1 | 2 | 3 | 4 |
| **sort, name and create familiar shapes; recognise and describe familiar shapes within objects in the environment, giving reasons** AC9MFSP01 | [ ]  | [ ]  | [x]  | [ ]  | collect, sort and compare data represented by objects and images in response to given investigative questions that relate to familiar situations**AC9MFST01** | [x]  | [ ]  | [ ]  | [ ]  |
| describe the position and location of themselves and objects in relation to other people and objects within a familiar space AC9MFSP02 | [x]  | [ ]  | [ ]  | [ ]  |  |  |  |  |  |

# Year 1

|  | Unit 1 — Navigating connections | Unit 2 — Quantities and comparisons | Unit 3 — Practical problems and possibilities | Unit 4 — Mathematical investigators |
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|  | Assessment 1 — Project | Term/ week | Assessment 2 — Observed demonstration | Term/ week | Assessment 3 — Project, including mathematical modelling | Term/ week | Assessment 4 — Supervised assessment, including mathematical modelling | Term/ week |
| Assessment | **Description:** Through a learning journal (e.g. drawings, photographs, video explanations) students document their mathematics discoveries. They demonstrate proficiency when:* connecting number names, numerals and quantities
* ordering numbers to at least 120
* giving and following directions to move people and objects within a space
* collecting and recording categorical data
* creating one-to-one displays
* comparing and discussing the data using frequencies.

**Technique:** Project **Mode:** Multimodal (written, spoken/signed and practical with physical materials and digital tools where appropriate)**Conditions:*** issued in Week 2 and completed over multiple lessons by end of Week 10
* practical components are observed by the teacher.
 | Term 1Week 10 | **Description:** Through practical tasks, in response to questions and scenarios, and during teacher-student conferences, students demonstratetheir proficiency when:* demonstrating how one- and two-digit numbers can be partitioned in different ways
* demonstrating that two-digit numbers can be partitioned into tens and ones
* comparing and ordering objects based on the attributes of length, mass, capacity, communicating reasoning
* measuring the length of shapes and objects using uniform informal units.

**Technique:** Observed demonstration**Mode:** Multimodal (written, spoken/signed and practical with physical materials)**Conditions:*** started in Week 2 and completed over multiple lessons by end of Week 9
* may be completed in small groups
* practical components are observed by the teacher.
 | Term 2Week 9 | **Description:** A collection of annotated responses from practical investigations is collated in an investigation folio. The investigation folio shows evidence of students’ learning, focusing on: * solving problems involving addition and subtraction of numbers to 20
* using mathematical modelling to solve practical problems involving addition, subtraction, using calculation strategies
* using numbers, symbols and objects to create skip counting and repeating patterns
* identifying the repeating unit
* making, comparing and classifying shapes and objects using obvious features.

**Technique:** Project **Mode:** Multimodal (written, spoken/signed and practical with physical materials) **Conditions:*** started in Week 2 and completed over multiple lessons by end of Week 10
* practical components are observed by the teacher.
 | Term 3Week 10 | **Description:** Students respond to questions, scenarios, or problems that involve:* partitioning collections into equal groups and skip counting in twos, fives or tens to quantify collections to at least 120
* using mathematical modelling to solve practical problems involving equal sharing and grouping, using calculation strategies
* comparing and ordering events based on the attributes of duration, communicating reasoning.

**Technique:** Supervised assessment**Mode:** Written and practical (with physical materials)**Conditions:*** may be completed one-on-one, in small groups or in whole class settings
* may be completed over multiple lessons or broken into components in Week 8
* questions or instructions can be read to students
* practical components are observed by the teacher.
 | Term 4Week 8 |
| Achievement standard | By the end of Year 1, students connect number names, numerals and quantities, and order numbers to at least 120. They demonstrate how one- and two-digit numbers can be partitioned in different ways and that two-digit numbers can be partitioned into tens and ones. Students partition collections into equal groups and skip count in twos, fives or tens to quantify collections to at least 120. They solve problems involving addition and subtraction of numbers to 20 and use mathematical modelling to solve practical problems involving addition, subtraction, equal sharing and grouping, using calculation strategies. Students use numbers, symbols and objects to create skip counting and repeating patterns, identifying the repeating unit.They compare and order objects and events based on the attributes of length, mass, capacity and duration, communicating reasoning. Students measure the length of shapes and objects using uniform informal units. They make, compare and classify shapes and objects using obvious features. Students give and follow directions to move people and objects within a space.They collect and record categorical data, create one-to-one displays, and compare and discuss the data using frequencies. | By the end of Year 1, students connect number names, numerals and quantities, and order numbers to at least 120. They demonstrate how one- and two-digit numbers can be partitioned in different ways and that two-digit numbers can be partitioned into tens and ones. Students partition collections into equal groups and skip count in twos, fives or tens to quantify collections to at least 120. They solve problems involving addition and subtraction of numbers to 20 and use mathematical modelling to solve practical problems involving addition, subtraction, equal sharing and grouping, using calculation strategies. Students use numbers, symbols and objects to create skip counting and repeating patterns, identifying the repeating unit.They compare and order objects and events based on the attributes of length, mass, capacity and duration, communicating reasoning. Students measure the length of shapes and objects using uniform informal units. They make, compare and classify shapes and objects using obvious features. Students give and follow directions to move people and objects within a space.They collect and record categorical data, create one-to-one displays, and compare and discuss the data using frequencies. | By the end of Year 1, students connect number names, numerals and quantities, and order numbers to at least 120. They demonstrate how one- and two-digit numbers can be partitioned in different ways and that two-digit numbers can be partitioned into tens and ones. Students partition collections into equal groups and skip count in twos, fives or tens to quantify collections to at least 120. They solve problems involving addition and subtraction of numbers to 20 and use mathematical modelling to solve practical problems involving addition, subtraction, equal sharing and grouping, using calculation strategies. Students use numbers, symbols and objects to create skip counting and repeating patterns, identifying the repeating unit.They compare and order objects and events based on the attributes of length, mass, capacity and duration, communicating reasoning. Students measure the length of shapes and objects using uniform informal units. They make, compare and classify shapes and objects using obvious features. Students give and follow directions to move people and objects within a space.They collect and record categorical data, create one-to-one displays, and compare and discuss the data using frequencies. | By the end of Year 1, students connect number names, numerals and quantities, and order numbers to at least 120. They demonstrate how one- and two-digit numbers can be partitioned in different ways and that two-digit numbers can be partitioned into tens and ones. Students partition collections into equal groups and skip count in twos, fives or tens to quantify collections to at least 120. They solve problems involving addition and subtraction of numbers to 20 and use mathematical modelling to solve practical problems involving addition, subtraction, equal sharing and grouping, using calculation strategies. Students use numbers, symbols and objects to create skip counting and repeating patterns, identifying the repeating unit.They compare and order objects and events based on the attributes of length, mass, capacity and duration, communicating reasoning. Students measure the length of shapes and objects using uniform informal units. They make, compare and classify shapes and objects using obvious features. Students give and follow directions to move people and objects within a space.They collect and record categorical data, create one-to-one displays, and compare and discuss the data using frequencies. |

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| --- | --- | --- | --- | --- | --- |
| Number | 1 | 2 | 3 | 4 | Algebra | 1 | 2 | 3 | 4 | Measurement | 1 | 2 | 3 | 4 |
| recognise, represent and order numbers to at least 120 using physical and virtual materials, numerals, number lines and charts AC9M1N01 | [x]  | [ ]  | [ ]  | [ ]  | recognise, continue and create pattern sequences, with numbers, symbols, shapes and objects, formed by skip counting, initially by twos, fives and tensC9M1A01 | [ ]  | [ ]  | [x]  | [ ]  | compare directly and indirectly and order objects and events using attributes of length, mass, capacity and duration, communicating reasoning**AC9M1M01**  | [ ]  | [x]  | [ ]  | [x]  |
| partition one- and two-digit numbers in different ways using physical and virtual materials, including partitioning two-digit numbers into tens and onesAC9M1N02 | [ ]  | [x]  | [ ]  | [ ]  | recognise, continue and create repeating patterns with numbers, symbols, shapes and objects, identifying the repeating unit AC9M1A02 | [ ]  | [ ]  | [x]  | [ ]  | measure the length of shapes and objects using informal units, recognising that units need to be uniform and used end-to-end AC9M1M02 | [ ]  | [x]  | [ ]  | [ ]  |
| quantify sets of objects, to at least 120, by partitioning collections into equal groups using number knowledge and skip counting AC9M1N03 | [ ]  | [ ]  | [ ]  | [x]  |  |  |  |  |  | describe the duration and sequence of events using years, months, weeks, days and hours AC9M1M03 | [ ]  | [ ]  | [ ]  | [x]  |
| add and subtract numbers within 20, using physical and virtual materials, part-part-whole knowledge to 10 and a variety of calculation strategiesAC9M1N04 | [ ]  | [x]  | [x]  | [ ]  |  |  |  |  |  |  |  |  |  |  |
| use mathematical modelling to solve practical problems involving additive situations including simple money transactions; represent the situations with diagrams, physical and virtual materials, and use calculation strategies to solve the problemAC9M1N05 | [ ]  | [ ]  | [x]  | [ ]  |  |  |  |  |  |  |  |  |  |  |
| use mathematical modelling to solve practical problems involving equal sharing and grouping; represent the situations with diagrams, physical and virtual materials, and use calculation strategies to solve the problemAC9M1N06 | [ ]  | [ ]  | [ ]  | [x]  |  |  |  |  |  |  |  |  |  |  |

| Content descriptions | Units | Content descriptions | Units |
| --- | --- | --- | --- |
| Space | 1 | 2 | 3 | 4 | Statistics | 1 | 2 | 3 | 4 |
| make, compare and classify familiar shapes; recognise familiar shapes and objects in the environment, identifying the similarities and differences between them AC9M1SP01 | [ ]  | [ ]  | [x]  | [ ]  | acquire and record data for categorical variables in various ways including using digital tools, objects, images, drawings, lists, tally marks and symbols**AC9M1ST01**  | [x]  | [ ]  | [ ]  | [ ]  |
| give and follow directions to move people and objects to different locations within a spaceAC9M1SP02 | [x]  | [ ]  | [ ]  | [ ]  | represent collected data for a categorical variable using one-to-one displays and digital tools where appropriate; compare the data using frequencies and discuss the findings AC9M1ST02 | [x]  | [ ]  | [ ]  | [ ]  |

## Year 2

|  | Unit 1 — Navigating connections | Unit 2 — Quantities and comparisons | Unit 3 — Practical problems and possibilities | Unit 4 — Mathematical investigators |
| --- | --- | --- | --- | --- |
|  | Assessment 1 — Project | Term/ week | Assessment 2 — Observed demonstration | Term/ week | Assessment 3 — Project, including mathematical modelling | Term/ week | Assessment 4 — Supervised assessment, including mathematical modelling | Term/ week |
| Assessment | **Description:** Through a learning journal (e.g. drawings, photographs, and video explanations) students document their mathematics discoveries. They demonstrate proficiency when:* ordering and representing numbers to at least 1000
* locating and identifying positions of features in two-dimensional representations
* moving position by following directions and pathways
* using a range of methods to collect, record, represent and interpret categorical data in response to questions.

**Technique:** Project **Mode:** Multimodal (written, spoken/signed and practical with physical materials and digital tools where appropriate)**Conditions:*** issued in Week 2 and completed over multiple lessons by end of Week 10
* practical components are observed by the teacher.
 | Term 1Week 10 | **Description:** Through practical tasks, in response to questions and scenarios, and during teacher-student conferences, students demonstratetheir proficiency when:* applying knowledge of place value to partition, rearranging and renaming two- and three-digit numbers in terms of their parts
* regrouping partitioned numbers to assist in calculations
* using uniform informal units to measure and compare shapes and objects.

**Technique:** Observed demonstration**Mode:** Multimodal (written, spoken/signed and practical with physical materials)**Conditions:*** started in Week 2 and completed over multiple lessons by end of Week 9
* may be completed in small groups
* practical components are observed by the teacher.
 | Term 2Week 9 | **Description:** A collection of annotated responses from practical investigations is collated in an investigation folio. The investigation folio shows evidence of students’ learning, focusing on: * using mathematical modelling to solve practical additive problems, including money transactions, representing the situation and choosing calculation strategies
* describing and continuing patterns that increase and decrease additively by a constant amount
* identify missing elements in the pattern
* recalling and demonstrating proficiency with addition and subtraction facts within 20
* comparing and classifying shapes, describing features using formal spatial terms.

**Technique:** Project **Mode:** Multimodal (written, spoken/signed and practical with physical materials) **Conditions:*** started in Week 2 and completed over multiple lessons by end of Week 10
* practical components are observed by the teacher.
 | Term 3Week 10 | **Description:** Students respond to questions, scenarios, or problems that involve:* using mathematical modelling to solve practical multiplicative problems, representing the situation and choosing calculation strategies
* identifying and representing part-whole relationships of halves, quarters and eighths in measurement contexts
* recalling and demonstrating proficiency with multiplication facts for twos
* determining the number of days between events using a calendar
* reading time on an analog clock to the hour, half hour and quarter hour.

**Technique:** Supervised assessment**Mode:** Written and practical (with physical materials)**Conditions:*** may be completed one-on-one, in small groups or in whole class settings
* may be completed over multiple lessons or broken into components in Week 8
* questions or instructions can be read to students
* practical components are observed by the teacher.
 | Term 4Week 8 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Unit 1 — Navigating connections | Unit 2 — Quantities and comparisons | Unit 3 — Practical problems and possibilities | Unit 4 — Mathematical investigators |
| Achievement standard | By the end of Year 2, students order and represent numbers to at least 1000, apply knowledge of place value to partition, rearrange and rename two- and three-digit numbers in terms of their parts, and regroup partitioned numbers to assist in calculations. They use mathematical modelling to solve practical additive and multiplicative problems, including money transactions, representing the situation and choosing calculation strategies. Students identify and represent part-whole relationships of halves, quarters and eighths in measurement contexts. They describe and continue patterns that increase and decrease additively by a constant amount and identify missing elements in the pattern. Students recall and demonstrate proficiency with addition and subtraction facts within 20 and multiplication facts for twos.They use uniform informal units to measure and compare shapes and objects. Students determine the number of days between events using a calendar and read time on an analog clock to the hour, half hour and quarter hour. They compare and classify shapes, describing features using formal spatial terms. Students locate and identify positions of features in two-dimensional representations and move position by following directions and pathways.They use a range of methods to collect, record, represent and interpret categorical data in response to questions. | By the end of Year 2, students order and represent numbers to at least 1000, apply knowledge of place value to partition, rearrange and rename two- and three-digit numbers in terms of their parts, and regroup partitioned numbers to assist in calculations. They use mathematical modelling to solve practical additive and multiplicative problems, including money transactions, representing the situation and choosing calculation strategies. Students identify and represent part-whole relationships of halves, quarters and eighths in measurement contexts. They describe and continue patterns that increase and decrease additively by a constant amount and identify missing elements in the pattern. Students recall and demonstrate proficiency with addition and subtraction facts within 20 and multiplication facts for twos.They use uniform informal units to measure and compare shapes and objects. Students determine the number of days between events using a calendar and read time on an analog clock to the hour, half hour and quarter hour. They compare and classify shapes, describing features using formal spatial terms. Students locate and identify positions of features in two-dimensional representations and move position by following directions and pathways.They use a range of methods to collect, record, represent and interpret categorical data in response to questions. | By the end of Year 2, students order and represent numbers to at least 1000, apply knowledge of place value to partition, rearrange and rename two- and three-digit numbers in terms of their parts, and regroup partitioned numbers to assist in calculations. They use mathematical modelling to solve practical additive and multiplicative problems, including money transactions, representing the situation and choosing calculation strategies. Students identify and represent part-whole relationships of halves, quarters and eighths in measurement contexts. They describe and continue patterns that increase and decrease additively by a constant amount and identify missing elements in the pattern. Students recall and demonstrate proficiency with addition and subtraction facts within 20 and multiplication facts for twos.They use uniform informal units to measure and compare shapes and objects. Students determine the number of days between events using a calendar and read time on an analog clock to the hour, half hour and quarter hour. They compare and classify shapes, describing features using formal spatial terms. Students locate and identify positions of features in two-dimensional representations and move position by following directions and pathways.They use a range of methods to collect, record, represent and interpret categorical data in response to questions. | By the end of Year 2, students order and represent numbers to at least 1000, apply knowledge of place value to partition, rearrange and rename two- and three-digit numbers in terms of their parts, and regroup partitioned numbers to assist in calculations. They use mathematical modelling to solve practical additive and multiplicative problems, including money transactions, representing the situation and choosing calculation strategies. Students identify and represent part-whole relationships of halves, quarters and eighths in measurement contexts. They describe and continue patterns that increase and decrease additively by a constant amount and identify missing elements in the pattern. Students recall and demonstrate proficiency with addition and subtraction facts within 20 and multiplication facts for twos.They use uniform informal units to measure and compare shapes and objects. Students determine the number of days between events using a calendar and read time on an analog clock to the hour, half hour and quarter hour. They compare and classify shapes, describing features using formal spatial terms. Students locate and identify positions of features in two-dimensional representations and move position by following directions and pathways.They use a range of methods to collect, record, represent and interpret categorical data in response to questions. |
| Moderation | **Expert:** Refer to QCAA moderation advice on the QCAA website under the Assessment tab in the learning area. | **Consensus:** Refer to QCAA moderation advice on the QCAA website under the Assessment tab in the learning area. | **Calibration:** Refer to QCAA moderation advice on the QCAA website under the Assessment tab in the learning area. | **Calibration:** Refer to QCAA moderation advice on the QCAA website under the Assessment tab in the learning area. |

| 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, represent and order numbers to at least 1000 using physical and virtual materials, numerals and number lines AC9M2N01 | [x]  | [ ]  | [ ]  | [ ]  | recognise, describe and create additive patterns that increase or decrease by a constant amount, using numbers, shapes and objects, and identify missing elements in the pattern AC9M2A01 | [ ]  | [ ]  | [x]  | [ ]  | measure and compare objects based on length, capacity and mass using appropriate uniform informal units and smaller units for accuracy when necessaryAC9M2M01 | [ ]  | [x]  | [ ]  | [ ]  |
| partition, rearrange, regroup and rename two- and three-digit numbers using standard and non-standard groupings; recognise the role of a zero digit in place value notation AC9M2N02 | [ ]  | [x]  | [ ]  | [ ]  | recall and demonstrate proficiency with addition facts to 20; extend and apply facts to develop related subtraction facts AC9M2A02 | [ ]  | [ ]  | [x]  | [ ]  | identify common uses and represent halves, quarters and eighths in relation to shapes, objects and events AC9M2M02 | [ ]  | [ ]  | [ ]  | [x]  |
| recognise and describe one-half as one of 2 equal parts of a whole and connect halves, quarters and eighths through repeated halving AC9M2N03 | [ ]  | [ ]  | [ ]  | [x]  | recall and demonstrate proficiency with multiplication facts for twos; extend and apply facts to develop the related division facts using doubling and halving AC9M2A03 | [ ]  | [ ]  | [ ]  | [x]  | identify the date and determine the number of days between events using calendars AC9M2M03 | [ ]  | [ ]  | [ ]  | [x]  |
| add and subtract one- and two-digit numbers, representing problems using number sentences, and solve using part-part-whole reasoning and a variety of calculation strategies AC9M2N04 | [ ]  | [x]  | [x]  | [ ]  |  |  |  |  |  | recognise and read the time represented on an analog clock to the hour, half-hour and quarter-hourAC9M2M04 | [ ]  | [ ]  | [ ]  | [x]  |
| multiply and divide by one-digit numbers using repeated addition, equal grouping, arrays, and partitioning to support a variety of calculation strategies AC9M2N05 | [ ]  | [ ]  | [ ]  | [x]  |  |  |  |  |  | identify, describe and demonstrate quarter, half, three-quarter and full measures of turn in everyday situations AC9M2M05 | [ ]  | [ ]  | [ ]  | [x]  |
| use mathematical modelling to solve practical problems involving additive and multiplicative situations, including money transactions; represent situations and choose calculation strategies; interpret and communicate solutions in terms of the situationAC9M2N06 | [ ]  | [ ]  | [x]  | [x]  |  |  |  |  |  |  |  |  |  |  |

| Content descriptions | Units | Content descriptions | Units |
| --- | --- | --- | --- |
| Space | 1 | 2 | 3 | 4 | Statistics | 1 | 2 | 3 | 4 |
| recognise, compare and classify shapes, referencing the number of sides and using spatial terms such as “opposite”, “parallel”, “curved” and “straight”AC9M2SP01 | [ ]  | [ ]  | [x]  | [ ]  | acquire data for categorical variables through surveys, observation, experiment and using digital tools; sort data into relevant categories and display data using lists and tablesAC9M2ST01 | [x]  | [ ]  | [ ]  | [ ]  |
| locate positions in two dimensional representations of a familiar space; move positions by following directions and pathwaysAC9M2SP02 | [x]  | [ ]  | [ ]  | [ ]  | create different graphical representations of data using software where appropriate; compare the different representations, identify and describe common and distinctive features in response to questionsAC9M2ST02 | [x]  | [ ]  | [ ]  | [ ]  |

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

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