

MATHEMATICS

CONSULTATION CURRICULUM

Comparative information F–6

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COMPARISON OF CURRENT AND REVISED CURRICULUM IN MATHEMATICS

Content descriptions Foundation to Year 2

| Strand | | | |
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| Original | Number and Algebra | | |
| Proposed | Number | | |
| Sub-strand (original): Number and place value | Foundation <i>Students learn to:</i> | Year 1 <i>Students learn to:</i> | Year 2 <i>Students learn to:</i> |
| Original | Establish understanding of the language and processes of counting by naming numbers in sequences, initially to and from 20, moving from any starting point (ACMNA001) | Develop confidence with number sequences to and from 100 by ones from any starting point. Skip count by twos, fives and tens starting from zero (ACMNA012) | Investigate number sequences, initially those increasing and decreasing by twos, threes, fives and tens from any starting point, then moving to other sequences (ACMNA026) |
| Proposed | establish understanding of the language and processes of counting to quantify, compare, order and make correspondences between collections, initially to 20, and explain reasoning (AC9MFN03) | <i>Removed see (AC9M1A01)</i> | <i>Removed see (AC9M2A01)</i> |
| Original | Connect number names, numerals and quantities, including zero, initially up to 10 and then beyond (ACMNA002) | Recognise, model, read, write and order numbers to at least 100. Locate these numbers on a number line (ACMNA013) | Recognise, model, represent and order numbers to at least 1000 (ACMNA027) |
| Proposed | connect numbers (including zero) to their representative quantities, numerals, number names and position in the sequence, initially up to 10 and then beyond (AC9MFN01) | recognise, read, write and order natural numbers to at least 100 and represent them using physical and virtual materials (including Australian coins and notes), number lines and charts (AC9M1N01) | recognise, read, write and order natural numbers to at least 1000 and represent them using physical or virtual materials, number lines and charts, recognising the place value of each digit (AC9M2N01) |

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| Original | Subitise small collections of objects (ACMNA003) | | Group, partition and rearrange collections up to 1000 in hundreds, tens and ones to facilitate more efficient counting (ACMNA028) |
| Proposed | instantly recognise and name the number of objects within collections of up to five items without counting (subitise). Quantify and compare collections of at least 10 objects by recognising and naming the partitions using part-part-whole relationships (AC9MFN02) | recognise that two-digit numbers are composed of groups of tens and ones and can be partitioned into other number groupings (AC9M1N02) | group, partition, rearrange and rename numbers up to 1000 according to their place value and into other number groupings. Explain the role of a zero digit in place value notation (AC9M2N02) |
| Original | | Count collections to 100 by partitioning numbers using place value (ACMNA014) | |
| Proposed | | quantify larger sets of objects, to at least 100, by partitioning collections into groups to facilitate more efficient counting. Continue the count, using knowledge place value and skip-counting, recognising that the last number said in the count represents the total quantity of objects, (AC9M1N03) | estimate the quantity of objects in large sets using knowledge of the size of numbers to make and justify reasonable estimates (AC9M2N03) |
| Original | Compare, order and make correspondences between collections, initially to 20, and explain reasoning (ACMNA289) | Represent and solve simple addition and subtraction problems using a range of strategies including counting on, partitioning and rearranging parts (ACMNA015) | Explore the connection between addition and subtraction (ACMNA029) |
| Proposed | Included in (AC9MFN03) | model situations (including money transactions) and solve problems involving one-digit and two-digit addition and subtraction using physical or virtual materials, diagrams and a range of strategies (AC9M1N04) | Included in (AC9M1N05), (AC9M2N02) and (AC9M2N04) |

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| Original | Represent practical situations to model addition and sharing (ACMNA004) | | Solve simple addition and subtraction problems using a range of efficient mental and written strategies (ACMNA030) |
| Proposed | model practical situations and solve problems involving addition and subtraction with physical and virtual materials, using counting or subitising strategies to determine the total or the number of objects remaining (AC9MFN04) | | model situations (including money transactions) and solve problems involving addition and subtraction of two-digit numbers using part-whole reasoning, number sentences, physical or virtual materials, diagrams and efficient strategies. Explain the results in terms of the situation (AC9M2N04) |
| Original | See above (ACMNA004) | | Recognise and represent multiplication as repeated addition, groups and arrays (ACMNA031) |
| Proposed | model practical situations and solve problems that involve equal sharing, through role play and games using physical and virtual materials (AC9MFN05) | model situations and solve problems that involve equal sharing and grouping using physical or virtual materials (including money) and diagrams, counting or subitising to find the number in each share or the combined total of the groups (AC9M1N05) | model situations (including money transactions) and solve problems involving multiplication and division, representing the situation as repeated addition, equal groups and arrays. Use a range of efficient strategies to find a solution. Explain the results in terms of the situation (AC9M2N05) |
| Original | | | Recognise and represent division as grouping into equal sets and solve simple problems using these representations (ACMNA032) |
| Proposed | | | See above (AC9M2N05) |

| Sub-strand (original): Fractions and decimals | Foundation <i>Students learn to:</i> | Year 1 <i>Students learn to:</i> | Year 2 <i>Students learn to:</i> |
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| Original | | Recognise and describe one-half as one of two equal parts of a whole. (ACMNA016) | Recognise and interpret common uses of halves, quarters and eighths of shapes and collections (ACMNA033) |
| Proposed | | <i>Moved to year 2 (AC9M2N06)</i> | recognise and describe one-half as one of two equal parts of a whole. Connect halves, quarters and eighths through repeated halving and interpret common uses of halves, quarters and eighths of shapes and collections (AC9M2N06) |

| Sub-strand (original): Money and financial mathematics | Foundation <i>Students learn to:</i> | Year 1 <i>Students learn to:</i> | Year 2 <i>Students learn to:</i> |
|---|---|--|---|
| Original | | Recognise, describe and order Australian coins according to their value (ACMNA017) | Count and order small collections of Australian coins and notes according to their value (ACMNA034) |
| Proposed | | <i>Moved to Number (AC9M1N01) and Space elaboration (AC9M1SP01_E4)</i> | <i>Moved to Number elaborations (AC9M2N01_E4) and (AC9M2N02_E4)</i> |

| Strand | | | |
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| Original | Number and Algebra | | |
| Proposed | Algebra | | |
| Sub-strand (original): Patterns and algebra | Foundation <i>Students learn to:</i> | Year 1 <i>Students learn to:</i> | Year 2 <i>Students learn to:</i> |
| Original | Sort and classify familiar objects and explain the basis for these classifications. Copy, continue and create patterns with objects and drawings (ACMNA005) | Investigate and describe number patterns formed by skip-counting and patterns with objects (ACMNA018) | Describe patterns with numbers and identify missing elements (ACMNA035) |
| Proposed | describe, copy, continue and create repeating patterns using different elements including movement, sounds, colours, objects, shapes, and numbers (AC9MFA01) | recognise, describe, continue and create growing number patterns formed by skip-counting, initially by twos, fives and tens starting from zero (AC9M1A01) | recognise, identify, describe, and continue additive patterns that increase or decrease by fixed amounts and identify missing elements in the pattern (AC9M2A01) |
| Original | | | Solve problems by using number sentences for addition or subtraction (ACMNA036) |
| Proposed | | | <i>Moved to Number (AC9M2N04)</i> |
| Original | | | |
| Proposed | | recognise, describe, continue and create repeating pattern sequences with numbers and objects, identifying the unit of repeat, including recognising the 0-9 repeating sequence within and between the decades (AC9M1A02) | recognise and connect number patterns from one context to a pattern of the same form in another context (AC9M2A02) |

| Strand | | | |
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| Original | Measurement and Geometry | | |
| Proposed | Measurement | | |
| Sub-strand (original): Using units of measurement | Foundation <i>Students learn to:</i> | Year 1 <i>Students learn to:</i> | Year 2 <i>Students learn to:</i> |
| Original | Use direct and indirect comparisons to decide which is longer, heavier or holds more, and explain reasoning in everyday language (ACMMG006) | Measure and compare the lengths and capacities of pairs of objects using uniform informal units (ACMMG019) | Compare and order several shapes and objects based on length, area, volume and capacity using appropriate uniform informal units (ACMMG037) |
| Proposed | explore and identify attributes of objects and events including length, capacity, mass and duration. Use direct comparisons and everyday language to compare pairs of objects and events, using these attributes and communicating reasoning (AC9MFM01) | measure and compare objects and events using familiar attributes including length, mass, capacity and duration and order objects and events using direct and indirect comparisons, communicating reasoning for strategies (AC9M1M01) | select attributes and appropriate uniform informal units to measure, compare and order objects and events based on length, capacity, mass and duration, using units without gaps or overlaps and smaller units for accuracy when necessary (AC9M2M01) |
| Original | | | Compare masses of objects using balance scales (ACMMG038) |
| Proposed | | recognise that units need to be uniform and used end to end for consistency when measuring. Explore informal ways to measure, compare and communicate the length of objects using informal units (AC9M1M02) | See above (AC9M2M01) |
| Original | Compare and order duration of events using everyday language of time | Tell time to the half hour (ACMMG020) | Tell time to the quarter-hour, using the language of 'past' and 'to' (ACMMG039) |

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| | (ACMMG007) | | |
| Proposed | See above (AC9MFM01) | <i>Removed</i> | recognise and tell time to the hour, half hour and quarter-hour (AC9M2M03) |
| Original | Connect days of the week to familiar events and actions (ACMMG008) | Describe duration using months, weeks, days and hours (ACMMG021) | Name and order months and seasons (ACMMG040) |
| Proposed | connect days of the week and times of day (morning, lunchtime, afternoon, evening) to familiar events and actions (AC9MFM02) | compare sequences and cycles of events and describe their duration using familiar units of time including years, months, weeks, days and hours (AC9M1M03) | <i>Removed</i> |
| Original | | | use a calendar to identify the date and determine the number of days in each month (ACMMG041) |
| Proposed | | | use a calendar to identify the date and determine the number of days in each month and the total number of days in a year (AC9M2M02) |
| Original | | | <i>Moved from Location and transformation (ACMMG046)</i> |
| Proposed | | | identify and describe measures of turn (quarter, half, three-quarters and full turns) in everyday situations (AC9M2M04) |

| Strand | | | |
|---|--|--|--|
| Original | Measurement and Geometry | | |
| Proposed | Space | | |
| Sub-strand (original): Shape | Foundation <i>Students learn to:</i> | Year 1 <i>Students learn to:</i> | Year 2 <i>Students learn to:</i> |
| Original | Sort, describe and name familiar two-dimensional shapes and three-dimensional objects in the environment (ACMMG009) | Recognise and classify familiar two-dimensional shapes and three-dimensional objects using obvious features (ACMMG022) | Describe and draw two-dimensional shapes, with and without digital technologies (ACMMG042) |
| Proposed | sort, name and make familiar shapes and objects. Recognise and describe familiar shapes and objects within the environment using everyday language (AC9MFSP01) | recognise, compare and classify familiar shapes and objects in the environment, using obvious features. Identify the similarities and differences between them (AC9M1SP01) | recognise, compare and classify regular and irregular shapes and objects describing features and properties using spatial terms (including parallel sides) (AC9M2SP01) |
| Original | | | Describe the features of three-dimensional objects (ACMMG043) |
| Proposed | | | See above (AC9M2SP05) |

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| Sub-strand (original): Location and transformation | Foundation <i>Students learn to:</i> | Year 1 <i>Students learn to:</i> | Year 2 <i>Students learn to:</i> |
| Original | Describe position and movement (ACMMG010) | Give and follow directions to familiar locations (ACMMG023) | Interpret simple maps of familiar locations and identify the relative positions of key features (ACMMG044) |
| Proposed | describe position and movement of self and objects in relation to other | give and follow directions to move people and objects to different locations | locate positions and identify relative positions of key features of a familiar space |

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| | objects and locations within a familiar space (AC9MFSP02) | (AC9M1SP02) | represented in two-dimensions. Move positions following directions and pathways (AC9M2SP02) |
| Original | | | Investigate the effect of one-step slides and flips with and without digital technologies (ACMMG045) |
| Proposed | | | recognise and explain the effect of one-step transformations (including translation, reflection and rotation) on shapes using dynamic geometric software where appropriate (AC9M2SP03) |
| Original | | | Identify and describe half and quarter turns (ACMMG046) |
| Proposed | | | <i>Moved to Measurement (AC9M2M09)</i> |

| Strand | | | |
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| Original | Statistics and Probability | | |
| Proposed | Probability | | |
| Sub-strand (original): Chance | Foundation <i>Students learn to:</i> | Year 1 <i>Students learn to:</i> | Year 2 <i>Students learn to:</i> |
| Original | | Identify outcomes of familiar events involving chance and describe them using everyday language such as 'will happen', 'won't happen' or 'might happen' (ACMSP024) | Identify practical activities and everyday events that involve chance. Describe outcomes as 'likely' or 'unlikely' and identify some events as 'certain' or 'impossible' (ACMSP047) |
| Proposed | discuss and explore the outcomes of games and familiar events involving | identify outcomes of familiar events involving chance and describe them | identify practical activities and everyday events that involve chance. Describe |

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| | chance (AC9MFP01) | using everyday language such as 'will happen', 'won't happen' or 'might happen' (AC9M1P01) | outcomes in terms of their relative likelihood and recognise that while a chance event may occur, it may also not occur and there is no way of knowing which will be the case in advance (AC9M2P01) |
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| Strand | | | |
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| Original | Statistics and Probability | | |
| Proposed | Statistics | | |
| Sub-strand (original): Data representation and interpretation | Foundation <i>Students learn to:</i> | Year 1 <i>Students learn to:</i> | Year 2 <i>Students learn to:</i> |
| Original | Answer yes/no questions to collect information and make simple inferences (ACMSP011) | Choose simple questions and gather responses and make simple inferences (ACMSP262) | Identify a question of interest based on one categorical variable. Gather data relevant to the question (ACMSP048) |
| Proposed | collect, record, sort and compare data represented by objects and images in response to investigative questions relating to familiar contexts (AC9MFST01) | explore various types of investigative questions used to collect data. Discuss the type of data they produce and the sorts of decisions that could be made) (AC9M1ST01) | identify a question of interest involving one categorical variable. Gather data relevant to the question and use the variation in data to reason and respond to these questions (AC9M2ST01) |
| Original | | Represent data with objects and drawings where one object or drawing represents one data value. Describe the displays (ACMSP263) | Collect, check and classify data (ACMSP049) |
| Proposed | | acquire data and record in various ways | acquire categorical data sets through |

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| | | (objects, images, drawings, lists, tally marks and symbols) using digital tools where appropriate (AC9M1ST02) | surveys, observation or experiment using digital tools to assist where appropriate. Sort into relevant categories and display data for summary using lists and tables (AC9M2ST02) |
| Original | | See above (ACMSP263) | Create displays of data using lists, table and picture graphs and interpret them (ACMSP050) |
| Proposed | | represent collected categorical data using one-to-one displays (including pictographs and tally charts) using digital tools where appropriate. Quantify and compare the data using total frequencies and discuss the findings (AC9M1ST03) | create different graphical representations of data sets using software to assist where appropriate. Compare the different representations, identify and describe common and distinctive features (AC9M2ST03) |

Achievement standard Foundation to Year 2

| | Foundation | Year 1 | Year 2 |
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| Original | <p>By the end of the Foundation year, students make connections between number names, numerals and quantities up to 10. They compare objects using mass, length and capacity. Students connect events and the days of the week. They explain the order and duration of events. They use appropriate language to describe location.</p> <p>Students count to and from 20 and order small collections. They group objects based on common characteristics and sort shapes and objects. Students answer</p> | <p>By the end of Year 1, students describe number sequences resulting from skip counting by 2s, 5s and 10s. They identify representations of one half. They recognise Australian coins according to their value. Students explain time durations. They describe two-dimensional shapes and three-dimensional objects. Students describe data displays.</p> <p>Students count to and from 100 and locate numbers on a number line. They carry out simple additions and subtractions using counting strategies.</p> | <p>By the end of Year 2, students recognise increasing and decreasing number sequences involving 2s, 3s and 5s. They represent multiplication and division by grouping into sets. They associate collections of Australian coins with their value. Students identify the missing element in a number sequence. Students recognise the features of three-dimensional objects. They interpret simple maps of familiar locations. They explain the effects of one-step transformations. Students make sense of collected information.</p> |

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| | <p>simple questions to collect information and make simple inferences.</p> | <p>They partition numbers using place value. They continue simple patterns involving numbers and objects. Students order objects based on lengths and capacities using informal units. They tell time to the half-hour. They use the language of direction to move from place to place. Students classify outcomes of simple familiar events. They collect data by asking questions, draw simple data displays and make simple inferences.</p> | <p>Students count to and from 1000. They perform simple addition and subtraction calculations using a range of strategies. They divide collections and shapes into halves, quarters and eighths. Students order shapes and objects using informal units. They tell time to the quarter-hour and use a calendar to identify the date and the months included in seasons. They draw two-dimensional shapes. They describe outcomes for everyday events. Students collect, organise and represent data to make simple inferences.</p> |
| Proposed | <p>By the end of Foundation year, students can use subitising and counting strategies to demonstrate that numbers represent a quantity and have an order. They compare and match the size of collections to at least 20 for a purpose. Students make and describe connections between number names, numerals and position in the sequence of numbers. They identify numbers represented in different ways and demonstrate that numbers can be partitioned using two or more partitions or can be combined to make numbers up to 10. Students model practical situations that involve equal sharing, adding to, and taking away from a collection to 10. They describe, continue and create repeating patterns using a variety of mediums.</p> | <p>By the end of Year 1, students connect number names, numerals and quantities. They describe how numbers can be partitioned in different ways and use multiple representations of these numbers. Students demonstrate that numbers are composed in groups of tens and ones and into other number groupings. Students identify the 0–9 repeating sequence in and between the decades and can skip count from different starting points. They partition collections into groups and use skip counting and other quantifying strategies to quantify the number of objects in collections to at least 100. They use materials, including money, and a variety of strategies to model situations and solve everyday</p> | <p>By the end of Year 2, students apply knowledge of place value to group, partition, rearrange and rename two-digit and three-digit numbers in terms of their parts and regroup partitioned numbers to enable more efficient computation. They formulate situations, including financial contexts and solve practical problems involving addition and subtraction, using number sentences and efficient strategies. Students represent practical situations involving multiplication and division using equal groups, arrays, repeated addition and subtraction and solve practical problems using physical and virtual materials. They identify part-whole relationships and interpret common uses of halves and quarters of shapes, objects and collections applied in practical contexts.</p> |

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| | <p>Students distinguish between the attributes of mass, capacity and length when comparing objects, using appropriate direct comparison strategies. They directly compare the duration of events by starting events at the same time. Students identify, describe and sort familiar shapes and objects and explain their reasoning using everyday language. They describe position and respond to instructions to move themselves or objects to other locations within a familiar space and use everyday language to describe their movements in relation to other objects.</p> <p>Students collect, sort, compare and quantify objects and images in response to given questions in familiar contexts. They discuss the outcomes of familiar activities and chance events.</p> | <p>problems involving addition, subtraction, equal sharing and grouping. Students identify, describe and create repeating patterns using shapes, objects and number patterns formed by skip counting from different starting points.</p> <p>They compare and order objects based on their attributes of length, mass and capacity, and events based on their duration. Students make direct and indirect comparison of lengths, masses, capacities and durations and explain their strategies. They measure the length of shapes and objects using uniform informal units. Students sort and classify shapes and objects using obvious features. They use directions to move objects within a familiar space.</p> <p>Students collect and record data, create one-to-one displays and compare and discuss the data using total frequencies. They can list and describe the outcomes of familiar chance events using everyday language.</p> | <p>Students estimate the size of large collections applying their knowledge of place value. They describe and continue patterns formed by increasing or decreasing additively by a fixed amount and connect patterns represented in different contexts.</p> <p>Students use consistent informal units repeatedly to compare different measurements of shapes and objects. They explain the effects of one-step transformations and compare shapes and objects describing features and properties using spatial terms. Students identify relative positions, locate things on two-dimensional representations and move within a space by giving and following directions and pathways.</p> <p>They use a range of methods, including digital tools, to collect and record categorical data, representing and interpreting the data in response to investigative questions. Students describe and order the likelihood of outcomes for everyday events and explain their reasoning.</p> |
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Content descriptions Year 3 to Year 6

| Strand | | | | |
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| Original | Number and Algebra | | | |
| Proposed | Number Algebra | | | |
| Sub-strand (original): Number and place value | Year 3 <i>Students learn to:</i> | Year 4 <i>Students learn to:</i> | Year 5 <i>Students learn to:</i> | Year 6 <i>Students learn to:</i> |
| Original | Investigate the conditions required for a number to be odd or even and identify odd and even numbers (ACMNA051) | Investigate and use the properties of odd and even numbers (ACMNA071) | Identify and describe factors and multiples of whole numbers and use them to solve problems (ACMNA098) | Identify and describe properties of prime, composite, square and triangular numbers (ACMNA122) |
| Proposed | describe, follow and create algorithms involving a sequence of steps and decisions to investigate numbers including odd and even numbers and multiples of 2, 3, 5 and 10 using computational thinking to recognise, describe and explain emerging patterns (AC9M3A04) | apply the properties of odd and even numbers when solving problems (AC9M4N04) | decompose natural numbers into products of factors and recognise multiples using divisibility rules to determine if one number is divisible by another (AC9M5N02) | identify and describe the properties of prime and composite numbers and use to solve problems and simplify calculations (AC9M6N02) |

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| Original | Recognise, model, represent and order numbers to at least 10 000 (ACMNA052) | Recognise, represent and order numbers to at least tens of thousands (ACMNA072) | | |
| Proposed | represent, read, write, rename and order natural numbers to at least 10 000 using naming and writing conventions for larger numbers and relate these representations to place value in the base 10 number system (AC9M3N01) | <i>Removed</i> | | |
| Original | Apply place value to partition, rearrange and regroup numbers to at least 10 000 to assist calculations and solve problems (ACMNA053) | Apply place value to partition, rearrange and regroup numbers to at least tens of thousands to assist calculations and solve problems (ACMNA073) | | |
| Proposed | apply place value to partition, rearrange and regroup numbers to at least 10 000 to assist in calculations when solving problems (AC9M3N02) | recognise the multiplicative relationship between the place value of digits and apply to solve problems involving multiplying or dividing natural numbers by multiples of ten (AC9M4N02) | | |
| Original | | | Use estimation and rounding to check the reasonableness of answers to calculations (ACMNA099) | |

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| Proposed | | use estimation and rounding to check and explain the reasonableness of solutions to problems (including purchases and the calculation of change to the nearest five cents) by recalling and applying number facts and rounding results of calculations where appropriate (AC9M4N03) | use estimation strategies appropriate to the context (including financial contexts) when making decisions about approaches to solving problems and to check the reasonableness of solutions (AC9M5N03) | use estimation strategies appropriate to the context (including financial contexts) to approximate numerical solutions to problems involving rational numbers and percentages, including substituting easier values into calculations to obtain an approximate solution (AC9M6N03) |
| Original | Recognise and explain the connection between addition and subtraction (ACMNA054) | Investigate number sequences involving multiples of 3, 4, 6, 7, 8, and 9 (ACMNA074) | | Investigate everyday situations that use integers. Locate and represent these numbers on a number line (ACMNA124) |
| Proposed | recognise and explain the connection between addition and subtraction as inverse operations and apply to partition numbers when generating equivalent number sentences (AC9M3A02) | continue and create extended number sequences involving multiples of 3, 4, 6, 7, 8, and 9 using technology to assist where appropriate. Identify and explain emerging patterns (AC9M4A01) | | recognise everyday situations that use integers (including financial contexts). Locate and represent these numbers on a number line and as coordinates on the Cartesian plane (AC9M6N01) |
| Original | Recall addition facts for single-digit numbers and related subtraction facts to develop increasingly efficient mental strategies for computation (ACMNA055) | | | |
| Proposed | recognise and explain patterns in basic addition | | | |

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| | facts up to $10 + 10$ and related subtraction facts. Extend apply these patterns to develop efficient mental strategies for computation with larger numbers (AC9M3A03) | | | |
| Original | | | | |
| Proposed | model situations and solve problems (including representing money in different ways) involving addition and subtraction of two-digit and three-digit numbers, applying knowledge of partitioning, place value and basic facts. Explain results in terms of the situation (AC9M3N05) | model situations (including financial contexts) and solve problems involving addition and subtraction of numbers to at least 10 000, by formulating expressions and choosing efficient strategies, including digital tools where appropriate. Justify choices and explain results in terms of the situation (AC9M4N07) | | |
| Original | Recall multiplication facts of two, three, five and ten and related division facts (ACMNA056) | Recall multiplication facts up to 10×10 and related division facts (ACMNA075) | | |
| Proposed | describe, follow and create algorithms involving a sequence of steps and decisions to investigate numbers including odd and even numbers and multiples of 2, 3, 5 and 10 | recognise, recall and explain patterns in basic multiplication facts up to 10×10 and related division facts. Extend and apply these patterns to develop increasingly efficient mental strategies for | | |

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| | using computational thinking to recognise, describe and explain emerging patterns (AC9M3A04) | computation with larger numbers (AC9M4A03) | | |
| Original | | | Solve problems involving division by a one-digit number, including those that result in a remainder (ACMNA101) | |
| Proposed | | | choose efficient strategies to represent and solve division problems, using basic facts, place value, the inverse relationship between multiplication and division and digital tools where appropriate. Interpret any remainder according to the context and express results as a mixed fraction or decimal (AC9M5N08) | |
| Original | Represent and solve problems involving multiplication using efficient mental and written strategies and appropriate digital technologies (ACMNA057) | Develop efficient mental and written strategies, and use appropriate digital technologies for multiplication and for division where there is no remainder (ACMNA076) | Use efficient mental and written strategies and apply appropriate digital technologies to solve problems (ACMNA291) | Select and apply efficient mental and written strategies and appropriate digital technologies to solve problems involving all four operations with whole numbers (ACMNA123) |
| Proposed | model situations (including financial contexts) and solve problems involving | model situations (including financial contexts) and solve problems involving | model situations (including financial contexts) formulating expressions using addition, | model situations (including financial contexts) by identifying and describing a mathematical |

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| | <p>multiplication and division using diagrams, equal groups and arrays. Represent the situation as a number sentence and solve using digital tools where appropriate. Explain the results in terms of the situation (AC9M3N06)</p> | <p>multiplication and division where there is no remainder, using diagrams, arrays and number sentences choosing efficient strategies and using digital tools where appropriate. Explain results in terms of the situation (AC9M4N08)</p> | <p>subtraction, multiplication and/or division. Choose efficient strategies using the properties of operations and digital tools where appropriate. Justify choices and explain results in terms of the situation (AC9M5N09)</p> | <p>problem and formulating expressions using combinations of all four operations and brackets as appropriate. Choose efficient strategies, using digital tools where appropriate. Justify choices and explain results in terms of the situation (AC9M6N09)</p> |
| Original | | | <p>Solve problems involving multiplication of large numbers by one- or two-digit numbers using efficient mental, written strategies and appropriate digital technologies (ACMNA100)</p> | |
| Proposed | | | <p>choose efficient strategies to represent and solve problems involving multiplication of large numbers by one-digit or two-digit numbers using basic facts, place value, properties of operations and digital tools where appropriate, explaining the reasonableness of the answer (AC9M5N07)</p> | |

| Strand | | | | |
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| Original | Number and Algebra | | | |
| Proposed | Number | | | |
| Sub-strand (original): Fractions and decimals | Year 3 <i>Students learn to:</i> | Year 4 <i>Students learn to:</i> | Year 5 <i>Students learn to:</i> | Year 6 <i>Students learn to:</i> |
| Original | Model and represent unit fractions including $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{3}$, $\frac{1}{5}$ and their multiples to a complete whole (ACMNA058) | Investigate equivalent fractions used in contexts (ACMNA077) | Compare and order common unit fractions and locate and represent them on a number line (ACMNA102) | Compare fractions with related denominators and locate and represent them on a number line (ACMNA125) |
| Proposed | recognise and use different models to represent the unit fractions $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, $\frac{1}{5}$ and their multiples. Combine fractions with the same denominator to complete the whole using part-whole understanding (AC9M3N04) | recognise the relationships between families of fractions (halves, quarters and eighths; fifths and tenths; thirds, sixths and twelfths) including equivalence. Use different representations (including fraction notation) to designate parts of a whole (AC9M4N05) | apply knowledge of factors and multiples to compare and order fractions with the same and related denominators (including numbers greater than one) and represent them on number lines explaining any equivalences and the order (AC9M5N04) | apply knowledge of equivalence to compare, order, locate and represent common unit fractions and their multiples (including halves, thirds and quarters) on the same number line and justify their order (AC9M6N04) |
| Original | | Count by quarters halves and thirds, including with mixed numerals. Locate and represent these fractions on a number line (ACMNA078) | Investigate strategies to solve problems involving addition and subtraction of fractions with the same denominator (ACMNA103) | Solve problems involving addition and subtraction of fractions with the same or related denominators (ACMNA126) |
| Proposed | | count by fractions (including quarters, halves, thirds and | solve problems involving addition and subtraction of | solve problems involving addition and subtraction of fractions with |

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| | | mixed numerals). Locate and represent these fractions on number lines (AC9M4N06) | fractions with the same denominator, investigating different strategies, including using different representations (AC9M5N06) | the related denominators using knowledge of equivalent fractions (AC9M6N06) |
| Original | | Recognise that the place value system can be extended to tenths and hundredths. Make connections between fractions and decimal notation (ACMNA079) | Recognise that the place value system can be extended beyond hundredths (ACMNA104) | Find a simple fraction of a quantity where the result is a whole number, with and without digital technologies (ACMNA127) |
| Proposed | | recognise, explain and extend the application of place value to tenths and hundredths and use the conventions of decimal notation to name, rename and represent decimal numbers (AC9M4N01) | use place value understanding to interpret, write, name and rename numbers with more than two decimal places (including numbers greater than one). Compare, order, locate and represent these on a number line (AC9M5N01) | connect and use equivalent forms of rational numbers to solve problems that require finding a familiar fraction or percentage of a quantity (including percentage discounts of 10%, 25% and 50%). Choose efficient strategies using digital tools where appropriate (AC9M6N05) |
| Original | | | Compare, order and represent decimals (ACMNA105) | Add and subtract decimals, with and without digital technologies, and use estimation and rounding to check the reasonableness of answers (ACMNA128) |
| Proposed | | | See above (AC9M5N01) | apply knowledge of place value to add and subtract decimals, using digital tools where appropriate, and use estimation and rounding to check the reasonableness of answers (AC9M6N07) |

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| Original | | | | Multiply decimals by whole numbers and perform divisions by non-zero whole numbers where the results are terminating decimals, with and without digital technologies (ACMNA129) |
| Proposed | | | use percentages to describe, represent and compare relative size and recognise that 100% represents the complete whole. Connect familiar percentages to their decimal and fraction equivalents (AC9M5N05) | apply knowledge of place value and multiplication facts to multiply and divide decimals by natural numbers using efficient strategies and appropriate digital tools. Use estimation and rounding to check the reasonableness of answers (AC9M6N08) |
| Original | | | | Multiply and divide decimals by powers of 10 (ACMNA130) |
| Proposed | | | | <i>Removed</i> |
| Original | | | | Make connections between equivalent fractions, decimals and percentages (ACMNA131) |
| Proposed | | | | See below (AC9M6N05) |

| Sub-strand (original): Money and financial mathematics | Year 3 <i>Students learn to:</i> | Year 4 <i>Students learn to:</i> | Year 5 <i>Students learn to:</i> | Year 6 <i>Students learn to:</i> |
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| Original | Represent money values in multiple ways and | Solve problems involving purchases and the calculation | Create simple financial plans (ACMNA106) | Investigate and calculate percentage discounts of 10%, |

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| | count the change required for simple transactions to the nearest five cents (ACMNA059) | of change to the nearest five cents with and without digital technologies (ACMNA080) | | 25% and 50% on sale items, with and without digital technologies (ACMNA132) |
| Proposed | round natural numbers to the nearest multiple of five or ten to make estimates for financial transactions and to solve other practical problems (AC9M3N03) | <i>Moved to Number (AC9M4N03)</i> | <i>Moved to Number (AC9M5N09)</i> | <i>Moved to Number (AC9M6N05)</i> |

| Strand | | | | |
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| Original | <i>Number and Algebra</i> | | | |
| Proposed | <i>Algebra</i> | | | |
| Sub-strand (original): Patterns and algebra | Year 3 <i>Students learn to:</i> | Year 4 <i>Students learn to:</i> | Year 5 <i>Students learn to:</i> | Year 6 <i>Students learn to:</i> |
| Original | Describe, continue, and create number patterns resulting from performing addition or subtraction (ACMNA060) | Explore and describe number patterns resulting from performing multiplication (ACMNA081) | Describe, continue and create patterns with fractions, decimals and whole numbers resulting from addition and subtraction (ACMNA107) | Continue and create sequences involving whole numbers, fractions and decimals. Describe the rule used to create the sequence (ACMNA133) |
| Proposed | identify, continue and create extended number sequences formed by doubling and halving using | continue and create extended number sequences involving multiples of 3, 4, 6, 7, 8, and 9 using technology to assist | continue and create extended number sequences with fractions, decimals and natural numbers resulting from | continue and create extended number sequences involving natural numbers, fractions and decimals, using digital tools to |

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| | technology to assist where appropriate. Identify and describe emerging patterns (AC9M3A01) | where appropriate. Identify and explain emerging patterns (AC9M4A01) | addition and subtraction using technology to assist where appropriate. Recognise and explain emerging patterns (AC9M5A01) | assist where appropriate. Describe the rule used to create the sequence and explain emerging patterns (AC9M6A01) |
| Original | | Solve word problems by using number sentences involving multiplication or division where there is no remainder (ACMNA082) | | Explore the use of brackets and order of operations to write number sentences (ACMNA134) |
| Proposed | | <i>Moved to Number (AC9M4N08)</i> | | explore the use of brackets and order of operations to write number sentences. Construct equivalent number sentences involving brackets and combinations of the four operations and use the properties of numbers and operations to determine unknown values (AC9M6A03) |
| Original | | Find unknown quantities in number sentences involving addition and subtraction Identify equivalent number sentences involving addition and subtraction (ACMNA083) | Find unknown quantities in number sentences involving multiplication and division. Identify equivalent number sentences involving multiplication and division (ACMNA121) | |
| Proposed | | find unknown values in equivalent number sentences applying an understanding of associative and commutative | find unknown values in equivalent number sentences involving multiplication and division applying an | recognise and distinguish between patterns growing additively and multiplicatively and connect patterns in one context to |

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| | | properties of addition and the inverse property of addition and subtraction (AC9M4A02) | understanding of the associative, distributive, commutative and inverse properties, using factors and multiples. Identify and use equivalent number sentences involving multiplication and division to form numerical equations (AC9M5A02) | a pattern of the same form in another context (AC9M6A02) |
| Original | | | | |
| Proposed | describe, follow and create algorithms involving a sequence of steps and decisions to investigate numbers including odd and even numbers and multiples of 2, 3, 5 and 10 using computational thinking to recognise, describe and explain emerging patterns (AC9M3A04) | describe, follow and create algorithms that generate a sequence of numbers resulting from performing multiplication and use computational thinking to recognise, describe and explain emerging patterns (AC9M4A04) | use algorithms and digital tools to explore factors and multiples and apply computational thinking to recognise, interpret and explain emerging patterns (AC9M5A03) | use function machines and rules to generate sets of numbers and apply computational thinking to recognise, interpret and explain emerging patterns (AC9M6A04) |

| Strand | | | | |
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| Original | Measurement and Geometry | | | |
| Proposed | Measurement | | | |
| Sub-strand (original): Using units of measurement | Year 3 <i>Students learn to:</i> | Year 4 <i>Students learn to:</i> | Year 5 <i>Students learn to:</i> | Year 6 <i>Students learn to:</i> |
| Original | Measure, order and compare objects using familiar metric units of length, mass and capacity (ACMMG061) | Use scaled instruments to measure and compare lengths, masses, capacities and temperatures (ACMMG084) | Choose appropriate units of measurement for length, area, volume, capacity and mass (ACMMG108) | Connect decimal representations to the metric system (ACMMG135) |
| Proposed | measure, order and compare objects using familiar metric units of length, mass and capacity to solve practical problems (AC9M3M01) | use scaled instruments and appropriate units to measure and compare attributes of length, mass, capacity and temperature and solve practical problems (AC9M4M01) | recognise the relationship between the prefixes for metric units and choose to use smaller units or a combination of units to obtain a more accurate measure when measuring the length, mass and capacity of objects (AC9M5M01) | convert between common metric units of length, mass and capacity and other standard units of measurement relevant to the context of a problem. Use and convert decimal representations of metric measurements where appropriate (AC9M6M01) |
| Original | Tell time to the minute and investigate the relationship between units of time (ACMMG062) | Use 'am' and 'pm' notation and solve simple time problems (ACMMG086) | Compare 12- and 24-hour time systems and convert between them (ACMMG110) | Interpret and use timetables (ACMMG139) |
| Proposed | communicate estimates and measures of duration using formal units including days, | solve everyday problems involving the duration of time including situations involving | compare 12-hour and 24-hour time systems and solve practical problems involving | interpret and use timetables and itineraries to plan activities and determine the duration of |

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| | hours, minutes and seconds (AC9M3M03) | references to 'am' and 'pm' and conversions between units of time (AC9M4M04) | the conversion between them (AC9M5M03) | events and journeys (AC9M6M03) |
| Original | | Convert between units of time (ACMMG085) | | Convert between common metric units of length, mass and capacity (ACMMG136) |
| Proposed | recognise which metric units are used to measure everyday items and use known measures and related units as a benchmark to make, improve and check the reasonableness of estimates (AC9M3M02) | See above (AC9M4M04) | | See above (AC9M6M01) |
| Original | | Compare objects using familiar units of area and volume (ACMMG290) | Calculate perimeter and area of rectangles using familiar metric units (ACMMG109) | Solve problems involving the comparison of lengths and areas using appropriate units (ACMMG137) |
| Proposed | | recognise and describe area as a measure of two-dimensional space and use square units to measure and approximate the area of regular and irregular shapes (AC9M4M03) | model situations and solve practical problems involving the perimeter of common shapes and the area of rectangles using appropriate metric units (AC9M5M02) | establish the formula for the area of a rectangle and use to solve practical problems (AC9M6M02) |
| Original | | | | Connect volume and capacity and their units of measurement (ACMMG138) |
| Proposed | | recognise ways of measuring | | <i>Removed</i> |

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| | | and use appropriate units to measure and approximate the perimeter of shapes and enclosed spaces (AC9M4M02) | | |
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| Strand | | | | |
|-------------------------------------|---|---|---|---|
| Original | Measurement and Geometry | | | |
| Proposed | Space | | | |
| Sub-strand (original): Shape | Year 3 <i>Students learn to:</i> | Year 4 <i>Students learn to:</i> | Year 5 <i>Students learn to:</i> | Year 6 <i>Students learn to:</i> |
| Original | Make models of three-dimensional objects and describe key features (ACMMG063) | Compare the areas of regular and irregular shapes by informal means (ACMMG087) | Connect three-dimensional objects with their nets and other two-dimensional representations (ACMMG111) | Construct simple prisms and pyramids (ACMMG140) |
| Proposed | analyse, classify and make models of objects, identifying key features and explaining why these features make them suited to their uses (AC9M3SP01) | <i>Moved to Measurement (AC9M4M03)</i> | connect and construct objects from their nets and create nets for objects using spatial and geometric reasoning (AC9M5SP01) | compare the parallel cross sections of objects and recognise their relationship to prisms (AC9M6SP01) |
| Original | | Compare and describe two dimensional shapes that result from combining and splitting common shapes, with and without the use of digital technologies (ACMMG088) | | |

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| Proposed | | use combinations of shapes and objects to make or approximate more complex shapes and objects in the environment (AC9M4SP01) | | |
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| Sub-strand (original): Location and transformation | Year 3 <i>Students learn to:</i> | Year 4 <i>Students learn to:</i> | Year 5 <i>Students learn to:</i> | Year 6 <i>Students learn to:</i> |
|---|---|---|---|---|
| Original | Create and interpret simple grid maps to show position and pathways (ACMMG065) | Use simple scales, legends and directions to interpret information contained in basic maps (ACMMG090) | Use a grid reference system to describe locations. Describe routes using landmarks and directional language (ACMMG113) | Investigate combinations of translations, reflections and rotations, with and without the use of digital technologies (ACMMG142) |
| Proposed | create, use and interpret models of familiar environments positioning representations of key landmarks and objects relative to each other (AC9M3SP02) | create and interpret grid maps using grid references and directions to locate and describe positions and pathways (AC9M4SP02) | 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) | recognise and use combinations of transformations to create tessellations and other geometric patterns using dynamic geometric software where appropriate (AC9M6SP03) |
| Original | Identify symmetry in the environment (ACMMG066) | Create symmetrical patterns, pictures and shapes with and without digital technologies (ACMMG091) | Describe translations, reflections and rotations of two-dimensional shapes. Identify line and rotational symmetries (ACMMG114) | Introduce the Cartesian coordinate system using all four quadrants (ACMMG143) |
| Proposed | identify line symmetry in the environment, using | recognise rotational symmetry of shapes and create | describe and perform translations, reflections and | use the four quadrants of a Cartesian coordinate system to |

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| | terms such as vertical, horizontal and diagonal to describe the lines (AC9M3SP03) | symmetrical patterns, and pictures using dynamic geometric software where appropriate (AC9M4SP03) | rotations of shapes, using dynamic geometric software where appropriate. Recognise and describe what changes and what remains the same under the transformation and identify any rotational symmetries (AC9M5SP03) | locate points in the plane. Investigate and describe changes to the coordinates when a point is moved to a different position in the plane (AC9M6SP02) |
| Original | | | Apply the enlargement transformation to familiar two-dimensional shapes and explore the properties of the resulting image compared with the original (ACMMG115) | |
| Proposed | | | <i>Removed</i> | |

| Strand | | | | |
|---|--|---|--|--|
| Original | <i>Measurement and Geometry</i> | | | |
| Proposed | <i>Measurement Space</i> | | | |
| Sub-strand (original): Geometric Reasoning | Year 3 <i>Students learn to:</i> | Year 4 <i>Students learn to:</i> | Year 5 <i>Students learn to:</i> | Year 6 <i>Students learn to:</i> |
| Original | Identify angles as measures of turn and compare angle sizes in everyday situations | Compare angles and classify them as equal to, greater than, or less than, a right angle | Estimate, measure and compare angles using degrees. Construct angles | Investigate, with and without digital technologies, angles on a straight line, angles at a point and |

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| | (ACMMG064) | (ACMMG089) | using a protractor (ACMMG112) | vertically opposite angles. Use results to find unknown angles (ACMMG141) |
| Proposed | identify angles as measures of turn such as a right angle (quarter turn) and compare angle sizes in everyday situations (AC9M3M04) | estimate, compare and describe angles using angle names where appropriate (including acute, obtuse, straight angle, reflex and revolution) and their relationships to a right angle (AC9M4M05) | estimate, construct, measure and compare angles in degrees, using appropriate tools (including a protractor) using conventional language to describe angles (AC9M5M04) | recognise the relationships between angles on a straight line, angles at a point and vertically opposite angles. Use the results to find unknown angles and solve practical problems communicating reasoning (AC9M6M04) |
| Original | | | | |
| Proposed | | | use computational thinking to create algorithms involving decisions to sort and classify shapes and objects. Experiment with different shapes and objects, sorting into categories and recognising any emerging patterns (AC9M5SP04) | use computational thinking and reasoning to make conjectures about and experiment with transformations of shapes within the plane (AC9M6SP04) |

| Strand | | | | |
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| Original | Statistics and Probability | | | |
| Proposed | Probability | | | |
| Sub-strand (original): Chance | Year 3 <i>Students learn to:</i> | Year 4 <i>Students learn to:</i> | Year 5 <i>Students learn to:</i> | Year 6 <i>Students learn to:</i> |
| Original | Conduct chance experiments, identify and describe possible outcomes and recognise variation in results (ACMSP067) | Describe possible everyday events and order their chances of occurring (ACMSP092) | List outcomes of chance experiments involving equally likely outcomes and represent probabilities of those outcomes using fractions (ACMSP116) | Describe probabilities using fractions, decimals and percentages (ACMSP144) |
| Proposed | conduct chance experiments, involving repetitions of an activity, experiment or game. List and describe the set of all possible outcomes, recognising and recording variation in results using digital tools as appropriate (AC9M3P01) | use experience and experiments to order chance events based on their likelihoods of occurring (AC9M4P01) | list the possible outcomes of chance experiments involving equally likely outcomes and compare to those which are not equally likely (AC9M5P01) | recognise that probabilities lie on numerical scales (0 – 1, 0% – 100%) and use observation and experience to assign probabilities that events occur in a given context, using fractions, percentages and decimals to indicate their estimated likelihood (AC9M6P01) |
| Original | | Identify everyday events where one cannot happen if the other happens (ACMSP093) | Recognise that probabilities range from 0 to 1 (ACMSP117) | Conduct chance experiments with both small and large numbers of trials using appropriate digital technologies (ACMSP145) |
| Proposed | | explore the relationships between outcomes in games and other chance situations and | <i>Removed</i> | conduct repeated chance experiments and run simulations with a large number of trials using |

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| | | identify whether the chance of one outcome occurring will or will not be affected by the occurrence of other outcome(s) (AC9M4P02) | | digital tools. Use computational thinking to compare observed frequencies across experiments with expected frequencies and explain emerging patterns (AC9M6P02) |
| Original | | Identify events where the chance of one will not be affected by the occurrence of the other (ACMSP094) | | Compare observed frequencies across experiments with expected frequencies (ACMSP146) |
| Proposed | | See above (AC9M4P02) | use experiments to observe and record the outcomes of repeated trials of chance events including those with and without equally likely outcomes. Use frequency to compare outcomes and estimate their likelihoods (AC9M5P02) | See above (AC9M6P02) |

| Strand | | | | |
|--|---|--|---|--|
| Original | Statistics and Probability | | | |
| Proposed | Statistics | | | |
| Sub-strand (original): Interpreting and representing data | Year 3 <i>Students learn to:</i> | Year 4 <i>Students learn to:</i> | Year 5 <i>Students learn to:</i> | Year 6 <i>Students learn to:</i> |
| Original | Identify questions or issues for categorical variables. Identify data sources and plan methods of data collection and recording (ACMSP068) | Select and trial methods for data collection, including survey questions and recording sheets (ACMSP095) | Pose questions and collect categorical or numerical data by observation or survey (ACMSP118) | Interpret and compare a range of data displays, including side-by-side column graphs for two categorical variables (ACMSP147) |
| Proposed | use the statistical investigation process to conduct guided statistical investigations involving the collection of categorical or discrete numerical data with respect to contexts and problems of interest (AC9M3ST03) | plan and conduct statistical investigations, collecting and recording categorical data through survey responses and other means using digital tools (including spreadsheets) as appropriate. Interpret, compare and communicate findings within the context of the investigation (AC9M4ST03) | plan and conduct statistical investigations by posing investigative questions or identifying a problem and collecting data relevant to the question or problem using surveys and digital tools. Select and use appropriate displays or visualisations, interpret and communicate findings or solutions within the context (AC9M5ST03) | interpret and compare a range of displays or visualisations (including side-by-side column graphs) for two categorical variables (AC9M6ST01) |

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| Original | Collect data, organise into categories and create displays using lists, tables, picture graphs and simple column graphs, with and without the use of digital technologies (ACMSP069) | Construct suitable data displays, with and without the use of digital technologies, from given or collected data. Include tables, column graphs and picture graphs where one picture can represent many data values (ACMSP096) | Construct displays, including column graphs, dot plots and tables, appropriate for data type, with and without the use of digital technologies (ACMSP119) | Interpret secondary data presented in digital media and elsewhere (ACMSP148) |
| Proposed | acquire categorical or discrete numerical data by observing, collecting and accessing existing data sets. Record and represent it using appropriate methods (including frequency tables and spreadsheets) and use total frequencies to compare data (AC9M3ST01) | construct, interpret and compare many-to-one pictographs, column graphs and other displays or visualisations suited to the data set(s) using software to construct graphs where appropriate and identify and discuss the information that has been created (AC9M4ST01) | acquire, validate and represent ordinal and discrete numerical data in different ways, using software (including spreadsheets and graphs). Discuss and report on data distributions in terms of highest frequency (mode) and shape, in the context of the data (AC9M5ST01) | identify statistically informed arguments presented in traditional and digital media, discuss and critique methods, data representations and conclusions (AC9M6ST02) |
| Original | Interpret and compare data displays (ACMSP070) | Evaluate the effectiveness of different displays in illustrating data features including variability (ACMSP097) | Describe and interpret different data sets in context (ACMSP120) | |
| Proposed | interpret and compare various displays using software to construct graphs where appropriate. Interpret, describe and explain them in the context they represent | evaluate the effectiveness of different displays or visualisations in illustrating and comparing features of data distributions. Discuss and communicate the shape of the distribution and variation in the | construct, interpret and compare data represented as line graphs, using software to construct graphs and create information where appropriate. Discuss the relationships that are | plan and conduct statistical investigations by posing and refining investigative questions, collecting and recording sample sets of categorical or discrete numerical data using digital tools (including spreadsheets). Interpret |

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| | (AC9M3ST02) | data (AC9M4ST02) | represented (AC9M5ST02) | and analyse the data and communicate findings within the context (AC9M6ST03) |
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Achievement standard Year 3 to Year 6

| | Year 3 | Year 4 | Year 5 | Year 6 |
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| Original | <p>By the end of Year 3, students recognise the connection between addition and subtraction and solve problems using efficient strategies for multiplication. They model and represent unit fractions. They represent money values in various ways. Students identify symmetry in the environment. They match positions on maps with given information. Students recognise angles in real situations. They interpret and compare data displays.</p> <p>Students count to and from 10 000. They classify numbers as either odd or even. They recall addition and multiplication facts for single-digit numbers.</p> | <p>By the end of Year 4, students choose appropriate strategies for calculations involving multiplication and division. They recognise common equivalent fractions in familiar contexts and make connections between fraction and decimal notations up to two decimal places. Students solve simple purchasing problems. They identify and explain strategies for finding unknown quantities in number sentences. They describe number patterns resulting from multiplication. Students compare areas of regular and irregular shapes using informal units. They solve problems involving time duration. They interpret information contained in maps. Students identify dependent and independent events. They</p> | <p>By the end of Year 5, students solve simple problems involving the four operations using a range of strategies. They check the reasonableness of answers using estimation and rounding. Students identify and describe factors and multiples. They identify and explain strategies for finding unknown quantities in number sentences involving the four operations. They explain plans for simple budgets. Students connect three-dimensional objects with their two-dimensional representations. They describe transformations of two-dimensional shapes and identify line and rotational symmetry. Students interpret different data sets. Students order decimals and unit</p> | <p>By the end of Year 6, students recognise the properties of prime, composite, square and triangular numbers. They describe the use of integers in everyday contexts. They solve problems involving all four operations with whole numbers. Students connect fractions, decimals and percentages as different representations of the same number. They solve problems involving the addition and subtraction of related fractions. Students make connections between the powers of 10 and the multiplication and division of decimals. They describe rules used in sequences involving whole numbers, fractions and decimals. Students connect decimal representations to the metric system and choose appropriate units of measurement to perform a calculation. They make connections between capacity and volume.</p> |

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| | <p>Students correctly count out change from financial transactions. They continue number patterns involving addition and subtraction. Students use metric units for length, mass and capacity. They tell time to the nearest minute. Students make models of three-dimensional objects. Students conduct chance experiments and list possible outcomes. They conduct simple data investigations for categorical variables.</p> | <p>describe different methods for data collection and representation and evaluate their effectiveness.</p> <p>Students use the properties of odd and even numbers. They recall multiplication facts to 10×10 and related division facts. Students locate familiar fractions on a number line. They continue number sequences involving multiples of single-digit numbers. Students use scaled instruments to measure temperatures, lengths, shapes and objects. They convert between units of time. Students create symmetrical shapes and patterns. They classify angles in relation to a right angle. Students list the probabilities of everyday events. They construct data displays from given or collected data.</p> | <p>fractions and locate them on number lines. They add and subtract fractions with the same denominator.</p> <p>Students continue patterns by adding and subtracting fractions and decimals. They use appropriate units of measurement for length, area, volume, capacity and mass, and calculate perimeter and area of rectangles. They convert between 12- and 24-hour time. Students use a grid reference system to locate landmarks. They measure and construct different angles. Students list outcomes of chance experiments with equally likely outcomes and assign probabilities between 0 and 1. Students pose questions to gather data, and construct data displays appropriate for the data.</p> | <p>They solve problems involving length and area. They interpret timetables. Students describe combinations of transformations. They solve problems using the properties of angles. Students compare observed and expected frequencies. They interpret and compare a variety of data displays including those displays for two categorical variables. They interpret secondary data displayed in the media. Students locate fractions and integers on a number line. They calculate a simple fraction of a quantity. They add, subtract and multiply decimals and divide decimals where the result is rational. Students calculate common percentage discounts on sale items. They write correct number sentences using brackets and order of operations. Students locate an ordered pair in any one of the four quadrants on the Cartesian plane. They construct simple prisms and pyramids. Students describe probabilities using simple fractions, decimals and percentages.</p> |
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| <p>Proposed</p> | <p>By the end of Year 3 students apply an understanding of place value and the structure of numbers when partitioning, rearranging, regrouping and renaming numbers to at least 10 000 in different ways. They use addition and subtraction as inverse operations. Students establish and use single-digit addition and related subtraction facts to construct equivalent number sentences and to develop additive strategies for modelling and solving problems involving two-digit and three-digit numbers. They round numbers to make estimates for financial and other calculations. Students model situations and solve problems involving single-digit multiplication and division using diagrams, equal groups and arrays. They apply part-whole understanding to represent unit fractions and their</p> | <p>By the end of Year 4, students use their understanding of the structure of place value to efficiently multiply natural numbers by multiples of 10, and to represent tenths and hundredths in decimal form. They model situations, including financial contexts, and use addition and multiplication facts to add and subtract four-digit numbers and multiply and divide numbers efficiently. Students develop and use rounding and estimation strategies to reason and determine whether results are reasonable. They identify patterns in the multiplication facts and use their knowledge of these patterns in efficient strategies for mental calculations. Students solve problems using the properties of odd and even numbers. They locate common fractions on a number line and use fraction notation and other representations to demonstrate equivalence within families of fractions. Students identify and explain emerging patterns in</p> | <p>By the end of Year 5, students use natural numbers and arithmetic operations in expressions that model financial and other practical situations. They write natural numbers as products of factors and use to identify multiples and related rules for division. Students use place value to write, rename, compare and order decimals including decimals greater than one. They compare, order and represent fractions with the same or related denominators. Students connect common percentages to their fraction and decimal equivalents and use percentages to represent, describe and compare relative size. They apply knowledge of multiplication facts and efficient strategies to multiply large numbers by one-digit and two-digit numbers and divide by single-digit numbers, interpreting any remainder in the context of the problem. Students add and subtract fractions with the same denominator. They check the</p> | <p>By the end of Year 6, students use integers in practical situations and to represent points on a number line and in the Cartesian plane. They use their knowledge of the properties of prime and composite numbers to solve problems and simplify calculations. Students connect fractions, decimals and percentages as different representations of the same rational number and order common fractions giving reasons. They use different representations of rational numbers when solving problems. Students apply knowledge of place value, multiplication and addition facts to operate with decimals. They use equivalence to solve problems involving the addition and subtraction of fractions with related denominators. Students use estimation and substitution strategies when appropriate to find approximate solutions to problems involving rational numbers and percentages. They model situations, including financial contexts, using number sentences that involve all four operations and the use of brackets with natural numbers and interpret them in</p> |
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| | <p>multiples in different ways. Students identify, create and continue patterns formed by multiplying or dividing by two. They create and use algorithms to investigate the properties of odd and even numbers and to identify patterns and develop facts for single-digit multiplication of two, three, five and ten.</p> <p>Students use known measurements of familiar items to compare and make estimates and use familiar metric units when measuring attributes of objects and events. They identify angles as measures of turn. Students communicate estimates and measures of duration using formal units of time. They identify key features of objects and connect them to how the objects are used and classified. Students create two-dimensional representations of</p> | <p>sequences involving multiples and generated by algorithms using computational approaches and digital tools. They use the properties of operations and the structure of numbers to find unknown values in equivalent number sentences involving addition and subtraction.</p> <p>Students use common scaled instruments to measure length, mass, capacity and temperature, using units that are appropriate for purpose. They measure and approximate the perimeter of shapes and enclosed boundaries and use square units to measure and approximate area. Students convert between units of time when solving problems involving duration. They compare angles relative to a right or straight angle and use formal angle names to communicate their results. Students apply spatial reasoning to model more complex shapes and objects</p> | <p>reasonableness of their results using estimation and interpret their findings in relation to the situation being modelled. Students identify, extend and create patterns that involve natural numbers, fractions and decimals. They apply properties to manipulate and identify equivalent number sentences and solve numerical equations. Students use a computational thinking approach to identify and explain patterns in the factors and multiples of numbers.</p> <p>They consider the accuracy required when choosing metric units to solve practical problems involving perimeter and area and convert between 12-hour and 24-hour time. Students use appropriate spatial terms when constructing, measuring and comparing angles in degrees. They use grid coordinates to locate and move positions and create two-dimensional nets for objects. Students use their knowledge of the properties of,</p> | <p>context. Student use equivalent number sentences to find unknown values. They identify patterns of the same form in different contexts and distinguish between patterns growing additively and multiplicatively. Students identify and explain rules used to create and continue number sequences and apply computational thinking to identify and explain patterns.</p> <p>They interpret and use timetables in practical applications. Students connect decimal representations to the metric system and convert between common units of length mass and capacity. They use the formula of a rectangle and the properties of angles formed when two lines intersect in the plane to solve practical problems. Students connect prisms to their parallel cross sections and use computational thinking to conjecture about the effects of combinations of transformations, creating tessellating patterns.</p> <p>They compare, analyse and report on the variation between data sets collected and represented as part of their statistical investigations and</p> |
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| | <p>environments that show the positions of objects relative to each other. They identify and describe line symmetry in the environment.</p> <p>Students communicate with reasons, results and conclusions from guided statistical investigations involving categorical and discrete numerical data. Students record, represent and compare collected data using appropriate methods. Students identify all possible outcomes of chance events and report on variation observed when chance events are repeated.</p> | <p>with simpler ones. They create, use and interpret grid reference maps as two-dimensional representations of objects and spaces. Students identify rotational symmetry in plane shapes and create symmetrical patterns.</p> <p>They use surveys and other means to generate categorical data in statistical investigations and communicate their findings in the context of the data. Students create displays, including column graphs and many-to-one pictographs, to represent and show the spread and variability of a data set. They assess the suitability of displays for representing data and discuss the shape of data distributions and the variation in data. Students use experience and the results of experiments to order the likelihood of the outcomes of chance events and identify whether events are independent or dependent.</p> | <p>and the relationships between shapes and objects to develop and use algorithms to categorise them. They identify and describe differences and similarities between a shape and the image produced when transformations are applied and any rotational symmetries.</p> <p>Students plan and conduct statistical investigations that collect ordinal categorical and discrete numerical data and use dot plots and the mode, to discuss the distribution of data. They construct and interpret line graphs and identify and discuss the relationships represented. Students list the outcomes of chance events, estimate likelihoods and make comparisons between those with equally likely outcomes and those without.</p> | <p>explain their choice of representation(s) in terms of context and purpose. Students critique arguments presented in the media based on statistics. They describe probabilities using familiar fractions, decimals and percentages. They apply computational thinking to conduct simulations that generate and record the outcomes from many trials of a chance experiment. Students use observed frequencies to determine the expected probabilities of the outcomes of chance events.</p> |
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