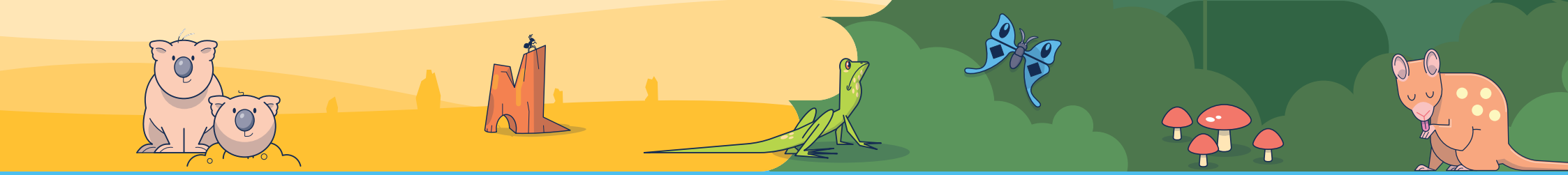


Maths Trek

NSW Syllabus Alignment Guide

Early Stage 1 – Stage 3

03/24

Maths Trek is written for the Australian Curriculum V9. Refer to the tables to see how the Maths Trek topics and investigations align with the NSW Mathematics Syllabus for Early Stage 1 to Stage 3B.

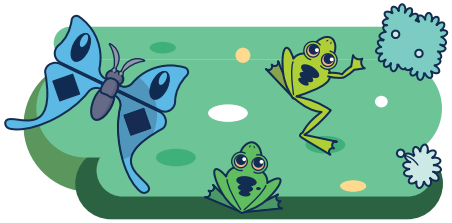
Early Stage 1 Syllabus Alignment Guide — Maths Trek F

Working mathematically

Outcome MAO-WM-01 is comprehensively covered in the Maths Trek program. Students develop mathematical understanding, fluency, reasoning and problem-solving skills as they work through the sequence of topics, revision, investigations, problem-solving strategies and practice problems.

A student:

- develops understanding and fluency in mathematics through exploring and connecting mathematical concepts, choosing and applying mathematical techniques to solve problems, and communicating their thinking and reasoning coherently and clearly MAO-WM-01



Strand	Mathematical concept	Outcomes	Content	Topics and investigations
Number and algebra	Representing whole numbers	• demonstrates an understanding of how whole numbers indicate quantity MAE-RWN-01 • reads numerals and represents whole numbers to at least 20 MAE-RWN-02	• Instantly name the number of objects within small collections • Use the counting sequence of ones flexibly • Recognise number patterns • Connect counting and numerals to quantities	**1.1** One **1.2** Two **2.1** Three **2.2** Count to three **3.2** Four **3.3** Five **3.4** Equal groups **4.1** Count and match one-to-one **4.3** Six **4.4** Seven **7.1** Eight **7.2** Nine **7.3** Ten **8.1** Zero **8.2** Compare collections to 10 **8.3** Represent numbers to 10 **9.1** Dot patterns **10.1** Count to 10 **12.1** One more than **13.1** One less than **13.2** Count backwards from 10 **14.1** Numbers before, after, in between **16.2** Numbers 11 to 15 **16.3** Count collections **17.2** Numbers 16 to 20 **17.3** Count collections **19.2** Represent numbers 11 to 15 **20.2** Represent numbers 16 to 20 **22.2** Compare collections to 20 **25.2** Order numbers to 20 **26.2** Missing numbers to 20 **28.2** Count forwards and backwards **29.2** Count to 30 **30.2** Use ten frames to represent numbers to 20 **31.2** Missing numbers to 30 **33.2** Order numbers to 30 **33.3** Money

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Early Stage 1 Syllabus Alignment Guide — Maths Trek F

Strand	Mathematical concept	Outcomes	Content	Topics and investigations
Number and algebra	Combining and separating quantities	A student: • reasons about number relations to model addition and subtraction by combining and separating, and comparing collections MAE-CSQ-01 • represents the relations between the parts that form the whole, with numbers up to 10 MAE-CSQ-02	• Model additive relations and compare quantities • Identify part–whole relationships in numbers up to 10	**4.2** Make five **10.3** Partition 6 and 7 **11.1** Use ten frames to represent numbers to 10 **12.3** Partition 8 and 9 **13.3** Partition 10 **16.1** Combine two groups **17.1** Combine two groups **19.1** Model addition **20.1** Addition: How many altogether? **21.1** Use beads to show addition **21.2** Make 10 **22.1** Addition stories **22.4** Use ten frames to show addition **23.1** Model subtraction **23.2** Subtraction stories **25.1** Find the difference **27.1** Draw pictures to show subtraction **28.1** Count on 1 and 2 **29.1** Take away **29.3** Add more to make 10 **30.3** Take-away stories **33.1** Add more to find the missing addend **33.4** Find the missing group **34.3** Shopping **34.4** Compare two groups to find the difference **35.1** Addition and subtraction
	Forming groups	A student: • recognises, describes and continues repeating patterns MAE-FG-01 • forms equal groups by sharing and counting collections of objects MAE-FG-02	• Copy, continue and create patterns • Investigate and form equal groups by sharing • Record grouping and sharing	**19.3** Copy a pattern **21.3** Identify the next item in a pattern **22.3** Describe and continue patterns **23.3** Continue and create patterns **25.3** Identify missing elements in patterns **30.1** Share equally **31.1** Share equally **34.1** Make equal groups **Inv:** Hungry billy goats
Measurement and space	Geometric measure	A student: • describes position and gives and follows simple directions MAE-GM-01 • describes and compares lengths MAE-GM-02 • identifies half the length and the halfway point MAE-GM-03	• Position: Describe position and movement of oneself • Length: Use direct and indirect comparisons to decide which is longer • Length: Create half a length	**1.3** Short and tall **1.4** Long/short, wide/narrow, thick/thin **2.3** Short and long **3.1** In front of, behind, between, next to **5.1** Ordinal numbers to 5th **5.3** High and low, near and far **9.3** Position **16.4** Compare length **17.4** Longer than, shorter than **18.3** Compare length **26.3** Position **28.3** Ordinal numbers to 10th **Inv:** Zoo escape

ISBN 978 1 74135 328 0

Early Stage 1 Syllabus Alignment Guide — Maths Trek F

Strand	Mathematical concept	Outcomes	Content	Topics and investigations
Measurement and space	Two-dimensional spatial structure	A student: • sorts, describes, names and makes two-dimensional shapes, including triangles, circles, squares and rectangles MAE-2DS-01 • describes and compares areas of similar shapes MAE-2DS-02	• 2D shapes: Sort, describe and name familiar shapes • 2D shapes: Represent shapes • Area: Identify and compare area	**10.2** Lines and shapes **10.4** Circles **11.2** Triangles **11.3** Squares **12.4** Rectangles **13.4** Sort shapes **14.2** Name and sort shapes **35.2** Sort objects **Inv:** Hopscotch
	Three-dimensional spatial structure	A student: • manipulates, describes and sorts three-dimensional objects MAE-3DS-01 • describes and compares volumes MAE-3DS-02	• 3D objects: Explore familiar three-dimensional objects • Volume: Compare internal volume by filling and packing • Volume: Compare volume by building	**25.4** Full and empty **26.4** Holds more, holds less **27.3** Compare capacity
	Non-spatial measure	A student: • describes and compares the masses of objects MAE-NSM-01 • sequences events and reads hour time on clocks MAE-NSM-02	• Mass: Identify and compare mass using weight • Time: Compare and order the duration of events using the language of time • Time: Connect days of the week to familiar events and actions • Time: Tell time on the hour on analog and digital clocks	**7.4** Day and night **8.4** Days of the week: The Hungry Caterpillar **9.2** Days of the week **12.2** Yesterday, today, tomorrow **18.1** Duration of events **18.2** Events in my day **19.4** Heavy and light **20.3** Compare mass by hefting **21.4** Heavier, lighter, the same as **28.4** Before and after **30.4** Sequence events
Statistics and probability	Data	A student: • contributes to collecting data and interprets data displays made from objects MAE-DATA-01	• Respond to questions, collect information and discuss possible outcomes of activities • Organise objects into simple data displays and interpret the displays	**5.2** Sort data **14.3** Collect data **26.1** Collect data **27.2** Data displays **31.3** Collect data **34.2** Use tally marks to show data **35.3** Interpret data displays

ISBN 978 1 74135 328 0

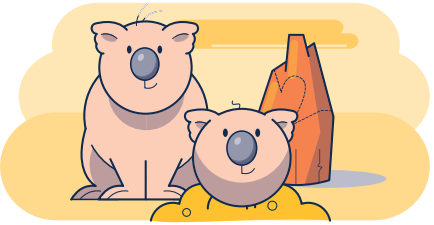
Stage 1A Syllabus Alignment Guide — Maths Trek 1

Working mathematically

Outcome MAO-WM-01 is comprehensively covered in the Maths Trek program. Students develop mathematical understanding, fluency, reasoning and problem-solving skills as they work through the sequence of topics, revision, investigations, problem-solving strategies and practice problems.

A student:

- develops understanding and fluency in mathematics through exploring and connecting mathematical concepts, choosing and applying mathematical techniques to solve problems, and communicating their thinking and reasoning coherently and clearly MAO-WM-01



Strand	Mathematical concept	Outcomes	Content	Topics and investigations
Number and algebra	Representing whole numbers A	A student: • applies an understanding of place value and the role of zero to read, write and order two- and three-digit numbers MA1-RWN-01 • reasons about representations of whole numbers to 1000, partitioning numbers to use and record quantity values MA1-RWN-02	• Use counting sequences of ones with two-digit numbers and beyond • Continue and create number patterns • Represent numbers on a line • Represent the structure of groups of ten in whole numbers	**1.2** Counting in ones **1.3** Reading and writing numbers to 20 **2.1** Counting in ones to 100 **2.2** Identifying Australian coins and notes **2.3** Skip counting by twos to 20 **3.2** Representing two-digit numbers to 30 **3.3** Reading and writing two-digit numbers **8.2** Skip counting by tens **9.1** Ordering numbers to 100 **9.2** Counting collections to 100 **10.1** Counting groups of 10 **11.1** Representing two-digit numbers **14.1** Partitioning to 20 **17.1** Representing tens and ones **17.3** One more, one less, ten more, ten less **18.1** Writing tens and ones **19.1** Count and order numbers to 150 **23.1** Partitioning tens and ones **23.3** Counting collections to 150 **25.2** Partitioning tens and ones **27.3** Sharing and grouping **30.1** Partitioning two-digit numbers

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Stage 1A Syllabus Alignment Guide — Maths Trek 1

Strand	Mathematical concept	Outcomes	Content	Topics and investigations
Number and algebra	Combining and separating quantities A	A student: • uses number bonds and the relationship between addition and subtraction to solve problems involving partitioning MA1-CSQ-01	• Use advanced count-by-one strategies to solve addition and subtraction problems • Recognise and recall number bonds up to ten • Use flexible strategies to solve addition and subtraction problems • Represent equality	**4.1** Partitioning to 10 **5.1** Addition to 10 – draw and write **7.1** Addition number sentences **8.1** Addition using number lines **9.3** Counting on 1 or 2 **10.2** Friends of 10 **11.2** Turnarounds **12.1** Addition using think boards **12.2** Doubles and near doubles **15.1** Subtraction **16.1** Subtraction number sentences **16.2** Subtraction using think boards **17.2** Counting back 1 or 2 **17.3** One more, one less, ten more, ten less **18.2** Subtraction – find the difference **18.3** Addition using ten frames and number lines **19.2** Think addition to subtract **20.1** Addition and subtraction are related **22.1** Addition facts **23.2** Subtraction facts **25.3** Addition – split and add **27.1** Working with coins and notes **28.2** Addition and subtraction money problems **31.1** Addition to two digits using 100s charts **31.3** Subtraction to two digits using 100s charts **Inv:** Numbers up **Inv:** Let's roll **Inv:** Breakfast cafe **Inv:** Win or lose
	Forming groups A	A student: • uses the structure of equal groups to solve multiplication problems, and shares or groups to solve division problems MA1-FG-01	• Count in multiples using rhythmic and skip counting • Use skip counting patterns • Model and use equal groups of objects to represent multiplication • Recognise and represent division	**2.3** Skip counting by twos to 20 **7.2** Skip counting by fives **8.2** Skip counting by tens **14.2** Skip counting by twos to 100 **20.3** Describing number patterns **22.2** Keeping the pattern going **24.1** Writing number patterns and rules **25.1** Equal groups **26.2** Equal groups **26.3** Sharing equally **27.2** How many groups? **27.3** Sharing and grouping **Inv:** Plenty of popsticks

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Stage 1A Syllabus Alignment Guide — Maths Trek 1

Strand	Mathematical concept	Outcomes	Content	Topics and investigations
Measurement and space	Geometric measure A	A student: • represents and describes the positions of objects in familiar locations MA1-GM-01 • measures, records, compares and estimates lengths and distances using uniform informal units, as well as metres and centimetres MA1-GM-02 • creates and recognises halves, quarters and eighths as part measures of a whole length MA1-GM-03	• Position: Follow directions to familiar locations • Length: Measure the lengths of objects using uniform informal units • Length: Compare lengths using uniform informal units • Length: Subdivide lengths to find halves and quarters	**4.3** Comparing length – shorter, longer, taller **5.3** Measuring length using informal units **11.3** Describing position **12.3** Following directions **19.3** Informal units to measure length **20.2** Using ordinal and positional language **26.1** Following and writing directions **30.2** Comparing heights **Inv:** Ramp champ
	Two-dimensional spatial structure A	A student: • recognises, describes and represents shapes including quadrilaterals and other common polygons MA1-2DS-01 • measures and compares areas using uniform informal units in rows and columns MA1-2DS-02	• 2D shapes: Recognise and classify shapes using obvious features • 2D shapes: Transform shapes with slides and reflections • Area: Indirectly compare area • Area: Measure areas using uniform informal units	**7.3** Which shape is that? **8.3** Classifying shapes **15.2** Repeating patterns **28.1** Triangles and quadrilaterals

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Stage 1A Syllabus Alignment Guide — Maths Trek 1

Strand	Mathematical concept	Outcomes	Content	Topics and investigations
Measurement and space	Three-dimensional spatial structure A	A student: • recognises, describes and represents familiar three-dimensional objects MA1-3DS-01 • measures, records, compares and estimates internal volumes (capacities) and volumes using uniform informal units MA1-3DS-02	• 3D objects: Recognise familiar three-dimensional objects • 3D objects: Sort and describe three-dimensional objects • Volume: Measure and compare the internal volumes (capacities) of containers by filling • Volume: Measure the internal volume (capacity) of containers by packing • Volume: Construct volumes using cubes	**24.2** Building objects with blocks **31.2** How much does it hold?
	Non-spatial measure A	A student: • measures, records, compares and estimates the masses of objects using uniform informal units MA1-NSM-01 • describes, compares and orders durations of events, and reads half- and quarter-hour time MA1-NSM-02	• Mass: Investigate mass using an equal-arm balance • Time: Name and order the cycle of months • Time: Tell time to the half-hour	**3.1** Days, weeks, months, years **4.2** Comparing mass – heavier, lighter **10.3** Calendars and months **15.3** How long does it take? **28.3** Months and seasons
Statistics and probability	Data A	A student: • gathers and organises data, displays data in lists, tables and picture graphs MA1-DATA-01 • reasons about representations of data to describe and interpret the results MA1-DATA-02	• Ask questions and gather data • Represent data with objects and drawings and describe the displays	**5.2** Collecting data using tally marks **14.3** Object graphs **22.3** Collecting data **24.3** Picture graphs **30.3** Collecting data
	Chance A	A student: • recognises and describes the element of chance in everyday events MA1-CHAN-01	• Identify and describe possible outcomes	

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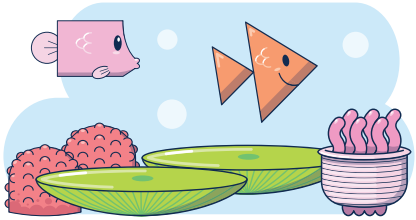
Stage 1B Syllabus Alignment Guide — Maths Trek 2

Working mathematically

Outcome MAO-WM-01 is comprehensively covered in the Maths Trek program. Students develop mathematical understanding, fluency, reasoning and problem-solving skills as they work through the sequence of topics, revision, investigations, problem-solving strategies and practice problems.

A student:

- develops understanding and fluency in mathematics through exploring and connecting mathematical concepts, choosing and applying mathematical techniques to solve problems, and communicating their thinking and reasoning coherently and clearly MAO-WM-01



Strand	Mathematical concept	Outcomes	Content	Topics and investigations
Number and algebra	Representing whole numbers B	A student: • applies an understanding of place value and the role of zero to read, write and order two- and three-digit numbers MA1-RWN-01 • reasons about representations of whole numbers to 1000, partitioning numbers to use and record quantity values MA1-RWN-02	• Use counting sequences of ones and tens flexibly • Form, regroup and rename three-digit numbers	**1.2** Tens and ones with blocks **1.3** Read, write and represent numbers to 150 **2.1** Number patterns beyond 100 **2.3** Grouping to count collections **3.2** Place value to hundreds **5.1** Number lines to 500 **7.1** Ordering numbers to 500 **9.1** Read, write and represent numbers to 500 **10.1** Ordering numbers to 1000 **11.1** Place value to hundreds **12.1** The role of a zero **14.1** Number expanders **14.2** Expanded notation **17.1** Place value problems **18.1** Expanded notation **20.2** Number lines to 1000 **22.2** Regrouping and renaming numbers **23.1** Place value to thousands **24.1** Numbers beyond 1000 **30.1** Regrouping and renaming numbers
	Combining and separating quantities B	A student: • uses number bonds and the relationship between addition and subtraction to solve problems involving partitioning MA1-CSQ-01	• Represent and reason about additive relations • Form multiples of ten when adding and subtracting two-digit numbers • Use knowledge of equality to solve related problems	**2.2** Addition using ten frames **4.1** Partitioning to 20 **4.2** Addition facts **5.2** Addition using friendly jumps **7.2** Addition using friendly pairs **8.1** Subtraction facts **8.2** Subtraction using friendly jumps **9.2** Extending addition facts **10.2** Addition using split strategy **10.3** Subtraction using split strategy **11.2** Addition with modelling **14.3** Extending subtraction facts **15.1** Subtraction with modelling **16.1** Addition and subtraction facts are related **17.2** Addition using jump strategy **18.2** Do I have enough money? **19.1** Subtraction using jump strategy **19.2** Coins and notes **20.3** Problem-solving with money **25.1** Addition and subtraction problems **Inv:** Showtime **Inv:** Paint it

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Stage 1B Syllabus Alignment Guide — Maths Trek 2

Strand	Mathematical concept	Outcomes	Content	Topics and investigations
Number and algebra	Forming groups B	A student: • uses the structure of equal groups to solve multiplication problems, and shares or groups to solve division problems MA1-FG-01	• Represent and explain multiplication as the combining of equal groups • Model doubling and halving with fractions • Represent multiplication and division problems	**20.1** Multiplication **22.1** Groups and arrays **23.2** Multiplication facts for 2 **24.3** Multiplication problem-solving **26.1** Division – How many in each group? **26.3** Doubling and halving numbers **27.1** Fractions as part of a group **27.2** Division – How many groups? **28.3** Multiplication and division facts are related **30.2** Multiplication and division problems **Inv:** Paint it
Measurement and space	Geometric measure B	A student: • represents and describes the positions of objects in familiar locations MA1-GM-01 • measures, records, compares and estimates lengths and distances using uniform informal units, as well as metres and centimetres MA1-GM-02 • creates and recognises halves, quarters and eighths as part measures of a whole length MA1-GM-03	• Position: Explore simple maps of familiar locations • Length: Compare and order lengths, using appropriate uniform informal units • Length: Recognise and use formal units to measure the lengths of objects • Length: Repeatedly halve lengths to form eighths	**9.3** Identifying position **12.2** Measuring length **15.2** Maps, pathways, directions **23.3** Measuring length **25.2** Fractions **26.2** Fractions as part of a whole **30.3** Representing halves, quarters, eighths **Inv:** Marble ramp **Inv:** Up, up and away
	Two-dimensional spatial structure B	A student: • recognises, describes and represents shapes including quadrilaterals and other common polygons MA1-2DS-01 • measures and compares areas using uniform informal units in rows and columns MA1-2DS-02	• 2D shapes: Represent, combine and separate two-dimensional shapes • 2D shapes: Identify and describe the orientation of shapes using quarter turns • Area: Compare rectangular areas using uniform square units of an appropriate size in rows and columns	**7.3** Parallel lines **8.3** Classifying shapes **11.3** Features of shapes **12.3** Recognise and draw shapes **31.3** Turns **Inv:** Marble ramp

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Stage 1B Syllabus Alignment Guide — Maths Trek 2

Strand	Mathematical concept	Outcomes	Content	Topics and investigations
Measurement and space	Three-dimensional spatial structure B	A student: • recognises, describes and represents familiar three-dimensional objects MA1-3DS-01 • measures, records, compares and estimates internal volumes (capacities) and volumes using uniform informal units MA1-3DS-02	• 3D objects: Describe the features of three-dimensional objects • Volume: Compare containers based on internal volume (capacity) by filling and packing • Volume: Compare volumes using uniform informal units	**24.2** Measuring capacity
	Non-spatial measure B	A student: • measures, records, compares and estimates the masses of objects using uniform informal units MA1-NSM-01 • describes, compares and orders durations of events, and reads half- and quarter-hour time MA1-NSM-02	• Mass: Compare the masses of objects using an equal-arm balance • Time: Describe duration using units of time • Time: Tell time to the quarter-hour using the language of 'past' and 'to'	**3.1** Months of the year **5.3** Calendars **15.3** Comparing mass **16.3** Measuring mass **17.3** Time – o'clock **18.3** Time – o'clock, half past **19.3** Time – quarter past, half past **22.3** Time – quarter past, quarter to **31.2** Reading calendars **Inv:** All about birthdays **Inv:** Paint it
Statistics and probability	Data B	A student: • gathers and organises data, displays data in lists, tables and picture graphs MA1-DATA-01 • reasons about representations of data to describe and interpret the results MA1-DATA-02	• Identify a question of interest and gather relevant data • Create displays of data and interpret them	**3.3** Picture graphs **4.3** Collecting data using tally marks **16.2** Column graphs **31.1** Interpreting graphs **Inv:** All about birthdays **Inv:** Up, up and away
	Chance B	A student: • recognises and describes the element of chance in everyday events MA1-CHAN-01	• Identify and describe activities that involve chance	

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Stage 2A Syllabus Alignment Guide — Maths Trek 3

Working mathematically

Outcome MAO-WM-01 is comprehensively covered in the Maths Trek program. Students develop mathematical understanding, fluency, reasoning and problem-solving skills as they work through the sequence of topics, revision, investigations, problem-solving strategies and practice problems.

A student:

- develops understanding and fluency in mathematics through exploring and connecting mathematical concepts, choosing and applying mathematical techniques to solve problems, and communicating their thinking and reasoning coherently and clearly MAO-WM-01

Strand	Mathematical concept	Outcomes	Content	Topics and investigations
Number and algebra	Representing numbers using place value A	A student: • applies an understanding of place value and the role of zero to represent numbers to at least tens of thousands MA2-RN-01 • represents and compares decimals up to 2 decimal places using place value MA2-RN-02	• Whole numbers: Read, represent and order numbers to thousands • Whole numbers: Apply place value to partition and regroup numbers up to 4 digits	**1.3** Regrouping numbers **2.3** Place value to thousands **3.1** Expanded notation **3.2** Counting on and back by 1, 10, 100 **3.3** Comparing numbers to 10 000 **4.1** Ordering numbers to 10 000 **10.2** Place value to ten thousands **28.1** Japanese numeral system **32.1** Comparing and ordering numbers to 10 000 **Inv:** What's in a thousand words?
	Additive relations A	A student: • selects and uses mental and written strategies for addition and subtraction involving 2- and 3-digit numbers MA2-AR-01 • completes number sentences involving addition and subtraction by finding missing values MA2-AR-02	• Use the principle of equality • Recognise and explain the connection between addition and subtraction • Select strategies flexibly to solve addition and subtraction problems of up to 3 digits • Represent money values in multiple ways	**1.2** Fact families for addition and subtraction **2.1** Addition with partitioning **2.2** Subtraction with partitioning **10.3** Addition with modelling **11.1** Subtraction with modelling **11.3** Equivalent number sentences **14.1** Addition **14.2** Subtraction **14.3** Modelling to solve problems **19.2** Addition to three digits **20.1** Rounding to tens and hundreds **20.2** Subtraction to three digits **21.1** Equivalent values of money **21.2** Dollars and cents **21.3** Inverse operations **23.1** Estimation strategies **28.2** Addition and subtraction **Inv:** What's in a thousand words? **Inv:** Big spender **Inv:** Trash or treasure

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Stage 2A Syllabus Alignment Guide — Maths Trek 3

Strand	Mathematical concept	Outcomes	Content	Topics and investigations
Number and algebra	Multiplicative relations A	A student: • represents and uses the structure of multiplicative relations to 10 × 10 to solve problems MA2-MR-01 • completes number sentences involving multiplication and division by finding missing values MA2-MR-02	• Generate and describe patterns • Use arrays to establish multiplication facts from multiples of 2 and 4, 5 and 10 • Recall multiplication facts of 2 and 4, 5 and 10 and related division facts • Represent and solve problems involving multiplication fact families	**16.1** Number patterns **16.2** Multiples 2, 3, 4, 5, 10 **16.3** Multiples and repeated addition **17.1** Multiplication facts 3, 4 **17.2** Multiplication facts 5, 10 **20.3** Multiplication problem-solving **24.1** Division facts 3, 4 **24.2** Division facts 5, 10 **24.3** Division problem-solving **Inv:** Picture perfect patterns
	Partitioned fractions A	A student: • represents and compares halves, quarters, thirds and fifths as lengths on a number line and their related fractions formed by halving (eighths, sixths and tenths) MA2-PF-01	• Create fractional parts of a length using techniques other than repeated halving • Model and represent unit fractions, and their multiples, to a complete whole on a number line	**29.3** Fractions as part of a whole **30.2** Fractions on a number line **30.3** Fractions as division **Inv:** Fraction action
Measurement and space	Geometric measure A	A student: • uses grid maps and directional language to locate positions and follow routes MA2-GM-01 • measures and estimates lengths in metres, centimetres and millimetres MA2-GM-02 • identifies angles and classifies them by comparing to a right angle MA2-GM-03	• Position: Interpret movement on a map • Position: Locate positions on grid maps • Length: Measure and compare objects using metres, centimetres and millimetres • Angles: Identify angles as measures of turn	**8.1** Measuring with metres **8.2** Measuring with centimetres **8.3** Measuring with metres and centimetres **25.2** Angles **32.2** Right angles **32.3** Maps and plans **Inv:** How do I measure up? **Inv:** Kakadu crossing **Inv:** Top team

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Stage 2A Syllabus Alignment Guide — Maths Trek 3

Strand	Mathematical concept	Outcomes	Content	Topics and investigations
Measurement and space	Two-dimensional spatial structure A	A student: • compares two-dimensional shapes and describes their features MA2-2DS-01 • performs transformations by combining and splitting two-dimensional shapes MA2-2DS-02 • estimates, measures and compares areas using square centimetres and square metres MA2-2DS-03	• 2D shapes: Compare and describe features of two-dimensional shapes • 2D shapes: Transform shapes by reflecting, translating and rotating • Area: Use square centimetres to measure and estimate the areas of rectangles • Area: Use square metres to measure and estimate the areas of rectangles	
	Three-dimensional spatial structure A	A student: • makes and sketches models and nets of three-dimensional objects including prisms and pyramids MA2-3DS-01 • estimates, measures and compares capacities (internal volumes) using litres, millilitres and volumes using cubic centimetres MA2-3DS-02	• 3D objects: Make models of three-dimensional objects to compare and describe key features • Volume: Measure and order containers using litres • Volume: Compare objects using familiar metric units of volume	**15.2** Measuring with litres **26.2** Pyramids and prisms **26.3** Cylinders, cones, spheres **Inv:** Cube conundrum
	Non-spatial measure A	A student: • estimates, measures and compares the masses of objects using kilograms and grams MA2-NSM-01 • represents and interprets analog and digital time in hours, minutes and seconds MA2-NSM-02	• Mass: Compare objects using the kilogram • Time: Represent and read analog time	**7.1** Time past the hour **12.1** Measuring with kilograms **12.2** Measuring with grams **12.3** Measuring with kilograms and grams **15.1** Time to the hour **19.3** Time to and past the hour **23.3** Time to the nearest minute **29.1** Seconds, minutes, hours, days **29.2** Duration of time **Inv:** Kilogram quest **Inv:** It's on the cards **Inv:** Top team **Inv:** Sprouting surprises

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Stage 2A Syllabus Alignment Guide — Maths Trek 3

Strand	Mathematical concept	Outcomes	Content	Topics and investigations
Statistics and probability	Data A	A student: • collects discrete data and constructs graphs using a given scale MA2-DATA-01 • interprets data in tables, dot plots and column graphs MA2-DATA-02	• Collect discrete data • Organise and display data using tables and graphs • Interpret and compare data	**6.1** Collecting and organising data **7.2** Column graphs **7.3** Interpreting graphs **10.1** Picture graphs **11.2** Comparing tables and graphs **28.3** Column graphs **Inv:** How do I measure up?
	Chance A	A student: • records and compares the results of chance experiments MA2-CHAN-01	• Identify possible outcomes from chance experiments	**6.2** Predicting possible outcomes **6.3** Predicting possible outcomes with spinners

ISBN 978 1 74135 328 0

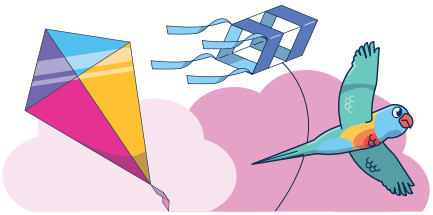
Stage 2B Syllabus Alignment Guide — Maths Trek 4

Working mathematically

Outcome MAO-WM-01 is comprehensively covered in the Maths Trek program. Students develop mathematical understanding, fluency, reasoning and problem-solving skills as they work through the sequence of topics, revision, investigations, problem-solving strategies and practice problems.

A student:

- develops understanding and fluency in mathematics through exploring and connecting mathematical concepts, choosing and applying mathematical techniques to solve problems, and communicating their thinking and reasoning coherently and clearly MAO-WM-01



Strand	Mathematical concept	Outcomes	Content	Topics and investigations
Number and algebra	Representing numbers using place value B	A student: • applies an understanding of place value and the role of zero to represent numbers to at least tens of thousands MA2-RN-01 • represents and compares decimals up to 2 decimal places using place value MA2-RN-02	• Whole numbers: Order numbers in the thousands • Whole numbers: Apply place value to partition, regroup and rename numbers up to 6 digits • Whole numbers: Recognise and represent numbers that are 10, 100 or 1000 times as large • Decimals: Extend the application of the place value system from whole numbers to tenths and hundredths • Decimals: Make connections between fractions and decimal notation	**1.2** Place value to hundred thousands **3.1** Place value and expanded notation **8.2** Rounding to ten thousands **11.1** Place value to tenths **11.2** Tenths on a number line **16.2** Multiplying and dividing by 10, 100, 1000 **16.3** Rounding using a target digit strategy **24.2** Place value to hundredths **24.3** Hundredths on a number line **26.1** Place value and expanded notation **Inv:** Lengthy leaps
	Additive relations B	A student: • selects and uses mental and written strategies for addition and subtraction involving 2- and 3-digit numbers MA2-AR-01 • completes number sentences involving addition and subtraction by finding missing values MA2-AR-02	• Partition, rearrange and regroup numbers to at least 1000 to solve additive problems • Apply addition and subtraction to familiar contexts, including money and budgeting • Complete number sentences involving additive relations to find unknown quantities	**1.3** Addition **2.1** Subtraction **6.1** Modelling to solve problems **6.2** Calculating with money **6.3** Budgets **15.1** Equivalent number sentences **15.2** Addition **15.3** Subtraction **17.1** Estimation strategies **19.1** Addition **19.2** Subtraction **23.1** Turnarounds and friendly pairs **26.3** Inverse operations **28.1** Addition and subtraction **Inv:** Time of my life **Inv:** Puzzling perimeters

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Stage 2B Syllabus Alignment Guide — Maths Trek 4

Strand	Mathematical concept	Outcomes	Content	Topics and investigations
Number and algebra	Multiplicative relations B	A student: • represents and uses the structure of multiplicative relations to 10 × 10 to solve problems MA2-MR-01 • completes number sentences involving multiplication and division by finding missing values MA2-MR-02	• Investigate number sequences involving related multiples • Use known number facts and strategies • Use the structure of the area model to represent multiplication and division • Use number properties to find related multiplication facts • Operate with multiples of 10 • Represent and solve word problems with number sentences involving multiplication or division	**3.2** Multiplication facts 2, 3, 5, 10 **3.3** Multiplication facts 4, 6, 8, 9 **4.1** Multiples using algorithms **4.3** Multiplication using the area model **8.3** Multiplication using the area model **10.1** Factors **15.1** Equivalent number sentences **25.1** Division facts 2, 3, 5, 10 **25.2** Division facts 4, 6, 8, 9 **25.3** Division **26.2** Multiplication **26.3** Inverse operations **28.2** Division **Inv:** Time of my life **Inv:** Super sports stadium
	Partitioned fractions B	A student: • represents and compares halves, quarters, thirds and fifths as lengths on a number line and their related fractions formed by halving (eighths, sixths and tenths) MA2-PF-01	• Model equivalent fractions as lengths • Represent fractional quantities equal to and greater than one	**20.3** Fractions on a number line **21.1** Equivalent fractions **23.3** Fractions as division **28.3** Mixed numerals **29.1** Mixed numerals and improper fractions **Inv:** Ripper rides **Inv:** Fraction fun
Measurement and space	Geometric measure B	A student: • uses grid maps and directional language to locate positions and follow routes MA2-GM-01 • measures and estimates lengths in metres, centimetres and millimetres MA2-GM-02 • identifies angles and classifies them by comparing to a right angle MA2-GM-03	• Position: Create and interpret grid maps • Position: Use directional language and describe routes with grid maps • Length: Use scaled instruments to measure and compare lengths • Angles: Compare angles to a right angle	**11.3** Measuring perimeter **12.1** Calculating perimeter **17.2** Grid references **17.3** Maps, pathways and directions **21.2** Angles **29.2** Measuring with millimetres **29.3** Millimetres, centimetres and metres **Inv:** It's only natural **Inv:** Heritage hunt **Inv:** Lengthy leaps **Inv:** Puzzling perimeters **Inv:** Angle art

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Stage 2B Syllabus Alignment Guide — Maths Trek 4

Strand	Mathematical concept	Outcomes	Content	Topics and investigations
Measurement and space	Two-dimensional spatial structure B	A student: • compares two-dimensional shapes and describes their features MA2-2DS-01 • performs transformations by combining and splitting two-dimensional shapes MA2-2DS-02 • estimates, measures and compares areas using square centimetres and square metres MA2-2DS-03	• 2D shapes: Create two-dimensional shapes that result from combining and splitting common shapes • 2D shapes: Create symmetrical patterns and shapes • Area: Measure the areas of shapes using the grid structure • Area: Compare surfaces using familiar metric units of area	**10.2** Line symmetry **10.3** Symmetrical patterns **12.2** Area **12.3** Area of irregular shapes **21.3** Tessellation **30.1** Quadrilaterals **30.2** Combining shapes **Inv:** It's only natural **Inv:** Ripper rides **Inv:** Angle art
	Three-dimensional spatial structure B	A student: • makes and sketches models and nets of three-dimensional objects including prisms and pyramids MA2-3DS-01 • estimates, measures and compares capacities (internal volumes) using litres, millilitres and volumes using cubic centimetres MA2-3DS-02	• 3D objects: Connect three-dimensional objects and two-dimensional representations • Volume: Use scaled instruments to measure and compare capacities (internal volumes)	**7.2** Measuring with litres and millilitres **7.3** Converting litres and millilitres **14.3** Combining objects **Inv:** Plenty of pikelets
	Non-spatial measure B	A student: • estimates, measures and compares the masses of objects using kilograms and grams MA2-NSM-01 • represents and interprets analog and digital time in hours, minutes and seconds MA2-NSM-02	• Mass: Use scaled instruments to measure and compare masses • Time: Represent and interpret digital time displays • Time: Use am and pm notation	**7.1** Reading graduated scales **8.1** Measuring with kilograms and grams **30.3** Converting units of time **32.1** Time (am and pm) **32.2** Reading and interpreting timetables **32.3** Time to the nearest minute **Inv:** Plenty of pikelets **Inv:** Movie marathon

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Stage 2B Syllabus Alignment Guide — Maths Trek 4

Strand	Mathematical concept	Outcomes	Content	Topics and investigations
Statistics and probability	Data B	A student: • collects discrete data and constructs graphs using a given scale MA2-DATA-01 • interprets data in tables, dot plots and column graphs MA2-DATA-02	• Select and trial methods for data collection • Construct and interpret data displays with many-to-one scales	**4.2** Collecting and organising data **16.1** Picture graphs **19.3** Column graphs **20.2** Comparing graphs **Inv:** Movie marathon **Inv:** Lengthy leaps
	Chance B	A student: • records and compares the results of chance experiments MA2-CHAN-01	• Describe the likelihood of outcomes of chance events • Identify when events are affected by previous events	**14.1** Describing possible outcomes **14.2** Dependent and independent events **24.1** Predicting possible outcomes

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Stage 3A Syllabus Alignment Guide

Maths Trek 5

Working mathematically

Outcome MAO-WM-01 is comprehensively covered in the Maths Trek program. Students develop mathematical understanding, fluency, reasoning and problem-solving skills as they work through the sequence of topics, revision, investigations, problem-solving strategies and practice problems.

A student:

- develops understanding and fluency in mathematics through exploring and connecting mathematical concepts, choosing and applying mathematical techniques to solve problems, and communicating their thinking and reasoning coherently and clearly MAO-WM-01

Strand	Mathematical concept	Outcomes	Content	Topics and investigations
Number and algebra	Represents numbers A	A student: • applies an understanding of place value and the role of zero to represent the properties of numbers MA3-RN-01 • compares and orders decimals up to 3 decimal places MA3-RN-02 • determines percentages of quantities, and finds equivalent fractions and decimals for benchmark percentage values MA3-RN-03	• Whole numbers: Recognise, represent and order numbers in the millions • Whole numbers: Apply place value to partition, regroup and rename numbers to 1 billion • Decimals and percentages: Recognise that the place value system can be extended beyond hundredths • Decimals and percentages: Compare, order and represent decimals	**1.2** Place value to millions **2.3** Rounding to ten thousands **7.2** Place value to thousandths **7.3** Percentages **10.1** Place value beyond millions **21.2** Comparing decimals **21.3** Percentages **25.3** Choosing units of measurement **28.1** Place value and expanded notation **28.2** Rounding using a target digit strategy
	Additive relations A	A student: • selects and applies appropriate strategies to solve addition and subtraction problems MA3-AR-01	• Apply efficient mental and written strategies to solve addition and subtraction problems • Use estimation and place value understanding to determine the reasonableness of solutions	**2.1** Addition **2.2** Subtraction **3.1** Estimation strategies **14.2** Addition **14.3** Turnarounds and friendly pairs **15.1** Subtraction with zeros **28.3** Estimation strategies

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Stage 3A Syllabus Alignment Guide — Maths Trek 5

Strand	Mathematical concept	Outcomes	Content	Topics and investigations
Number and algebra	Multiplicative relations A	A student: • selects and applies appropriate strategies to solve multiplication and division problems MA3-MR-01 • constructs and completes number sentences involving multiplicative relations, applying the order of operations to calculations MA3-MR-02	• Determine products and factors • Use partitioning and place value to multiply 2-, 3- and 4-digit numbers by one-digit numbers • Select and apply mental and written strategies to multiply 2- and 3-digit numbers by 2-digit numbers • Represent and solve division problems with whole number remainders • Select and apply strategies to divide a number with 3 or more digits by a one-digit divisor • Use estimation and rounding to check the reasonableness of answers to calculations	**1.3** Fact families for multiplication and division **3.1** Estimation strategies **6.3** Multiplication using the area model **7.1** Multiplication using split and multiply **10.2** Multiplication – 3 digits × 1 digit **15.2** Inverse operations **15.3** Division **16.3** Division **17.1** Factors **17.3** Division with remainders **24.1** Division with remainders **24.2** Multiplication – 4 digits × 1 digit **24.3** Multiplication by tens and hundreds **25.1** Multiplication using the area model **25.2** Multiplication – 3 digits × 2 digits **28.3** Estimation strategies **Inv:** Factor frenzy **Inv:** Down the drain **Inv:** Twinkle twinkle **Inv:** Never a cross word
	Representing quantity fractions A	A student: • compares and orders fractions with denominators of 2, 3, 4, 5, 6, 8 and 10 MA3-RQF-01 • determines $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$ and $\frac{1}{10}$ of measures and quantities MA3-RQF-02	• Recognise the role of the number 1 as representing the whole • Compare and order common unit fractions • Solve problems involving addition and subtraction of fractions with the same denominator	**19.3** Comparing and ordering fractions **20.1** Adding and subtracting fractions **20.2** Equivalent fractions **20.3** Adding and subtracting fractions **Inv:** Dynamic dominoes

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Stage 3A Syllabus Alignment Guide — Maths Trek 5

Strand	Mathematical concept	Outcomes	Content	Topics and investigations
Measurement and space	Geometric measure A	A student: • locates and describes points on a coordinate plane MA3-GM-01 • selects and uses the appropriate unit and device to measure lengths and distances including perimeters MA3-GM-02 • measures and constructs angles, and identifies the relationships between angles on a straight line and angles at a point MA3-GM-03	• Position: Explore the Cartesian coordinate system • Length: Use metres and kilometres for length and distances • Length: Measure lengths to find perimeters • Angles: Estimate, measure and compare angles using degrees • Angles: Use a protractor to measure and identify types of angles	**4.3** Coordinates and directions **10.3** Calculating perimeter **11.2** Perimeter of rectangles **14.1** Measuring with kilometres **19.1** Coordinates to locate position **23.1** Classifying angles **23.2** Measuring angles 0° to 180° **32.3** Measuring angles 0° to 360° **Inv:** Race around Australia **Inv:** Radical renovation **Inv:** Score a duck **Inv:** Twinkle twinkle
	Two-dimensional spatial structure A	A student: • investigates and classifies two-dimensional shapes, including triangles and quadrilaterals based on their properties MA3-2DS-01 • selects and uses the appropriate unit to calculate areas, including areas of rectangles MA3-2DS-02 • combines, splits and rearranges shapes to determine the area of parallelograms and triangles MA3-2DS-03	• 2D shapes: Classify two-dimensional shapes and describe their properties • Area: Use hectares and square kilometres as units of measurement for area • Area: Calculate the areas of rectangles using familiar metric units	**11.3** Area of rectangles **Inv:** Radical renovation

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Stage 3A Syllabus Alignment Guide — Maths Trek 5

Strand	Mathematical concept	Outcomes	Content	Topics and investigations
Measurement and space	Three-dimensional spatial structure A	A student: • visualises, sketches and constructs three-dimensional objects, including prisms and pyramids, making connections to two-dimensional representations MA3-3DS-01 • selects and uses the appropriate unit to estimate, measure and calculate volumes and capacities MA3-3DS-02	• 3D objects: Compare, describe and name prisms and pyramids • 3D objects: Connect three-dimensional objects with two-dimensional representations • Volume: Choose appropriate units of measurement for capacity • Volume: Use displacement to investigate volumes of irregular solids • Volume: Connect decimal representations to the metric system	**25.3** Choosing units of measurement **26.1** Measuring with litres and millilitres **32.2** Nets of objects **Inv:** Down the drain **Inv:** Baffling blocks
	Non-spatial measure A	A student: • selects and uses the appropriate unit and device to measure the masses of objects MA3-NSM-01 • measures and compares duration, using 12- and 24-hour time and am and pm notation MA3-NSM-02	• Mass: Choose appropriate units of measurement for mass • Mass: Connect decimal representations to the metric system • Time: Compare 12- and 24-hour time systems and convert between them	**3.2** 24-hour time **3.3** Reading timetables **4.1** Australian time zones **8.1** Measuring mass **25.3** Choosing units of measurement **Inv:** Race around Australia **Inv:** Breakfast club **Inv:** Finals fever
Statistics and probability	Data A	A student: • constructs graphs using many-to-one scales MA3-DATA-01 • interprets data displays, including timelines and line graphs MA3-DATA-02	• Collect categorical and discrete numerical data by observation or survey • Choose and use appropriate tables and graphs • Describe and interpret different datasets in context	**6.1** Line graphs **6.2** Categorical and numerical data **8.2** Dot plots **8.3** Column graphs **26.2** Ordinal data **26.3** The mode **Inv:** Breakfast club **Inv:** Down the drain
	Chance A	A student: • conducts chance experiments and quantifies the probability MA3-CHAN-01	• List outcomes of chance experiments involving equally likely outcomes and represent probabilities	**30.1** Measures of probability **30.2** Comparing probability **Inv:** Score a duck

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Stage 3B Syllabus Alignment Guide — Maths Trek 6

Working mathematically

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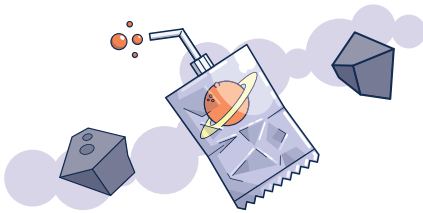

A student:

- develops understanding and fluency in mathematics through exploring and connecting mathematical concepts, choosing and applying mathematical techniques to solve problems, and communicating their thinking and reasoning coherently and clearly MAO-WM-01

Strand	Mathematical concept	Outcomes	Content	Topics and investigations
Number and algebra	Represents numbers B	A student: • applies an understanding of place value and the role of zero to represent the properties of numbers MA3-RN-01 • compares and orders decimals up to 3 decimal places MA3-RN-02 • determines percentages of quantities, and finds equivalent fractions and decimals for benchmark percentage values MA3-RN-03	• Whole numbers: Locate and represent integers on a number line • Decimals and percentages: Make connections between benchmark fractions, decimals and percentages • Decimals and percentages: Determine percentage discounts of 10%, 25% and 50%	**1.2** Positive and negative numbers **6.2** Renaming fractions as percentages **15.3** Rounding decimals **20.1** Renaming fractions as percentages **20.2** Discount **28.3** Percentages **32.1** Positive and negative numbers
	Additive relations B	A student: • selects and applies appropriate strategies to solve addition and subtraction problems MA3-AR-01	• Choose and use efficient strategies to solve addition and subtraction problems • Applies known strategies to add and subtract decimals	**6.3** Multi-step problems – add and subtract **7.1** Estimation strategies **16.1** Decimal addition to tenths **16.2** Decimal subtraction to tenths **16.3** Decimal addition to hundredths **17.1** Decimal subtraction to hundredths **20.3** Multi-step problems **25.1** Decimal addition to thousandths **25.2** Decimal subtraction to thousandths **Inv:** Record breaker

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Stage 3B Syllabus Alignment Guide — Maths Trek 6

Strand	Mathematical concept	Outcomes	Content	Topics and investigations
Number and algebra	Multiplicative relations B	A student: • selects and applies appropriate strategies to solve multiplication and division problems MA3-MR-01 • constructs and completes number sentences involving multiplicative relations, applying the order of operations to calculations MA3-MR-02	• Select and apply strategies to solve problems involving multiplication and division with whole numbers • Multiply and divide decimals by powers of 10 • Use equivalent number sentences involving multiplication and division to find unknown quantities • Represent and describe number patterns formed by multiples • Explore the use of brackets and the order of operations to write number sentences	**2.1** Fractions as division **3.2** Multiplication **3.3** Division **4.1** Investigating patterns **4.2** Patterns in a table of values **4.3** Inverse operations to check calculations **7.1** Estimation strategies **14.1** Function machines **14.2** Order of operations **14.3** Balancing equations **19.2** Decimal multiplication **23.3** Inverse operations to solve problems **25.3** Multiply decimals by 10, 100, 1000 **26.1** Decimal multiplication **28.2** Patterns and rules **Inv:** Lilja's locked level **Inv:** Clever containers
	Representing quantity fractions B	A student: • compares and orders fractions with denominators of 2, 3, 4, 5, 6, 8 and 10 MA3-RQF-01 • determines $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$ and $\frac{1}{10}$ of measures and quantities MA3-RQF-02	• Recognise that a fraction can represent a division • Compare common fractions with related denominators • Build up to the whole from a given fractional part • Use equivalence to add and subtract fractional quantities • Find fractional quantities of whole numbers (halves, quarters, fifths and tenths)	**1.3** Comparing and ordering fractions **2.1** Fractions as division **15.1** Equivalent fractions **15.2** Adding and subtracting fractions **24.1** Adding and subtracting fractions **Inv:** Educational entrepreneur

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Stage 3B Syllabus Alignment Guide — Maths Trek 6

Strand	Mathematical concept	Outcomes	Content	Topics and investigations
Measurement and space	Geometric measure B	A student: • locates and describes points on a coordinate plane MA3-GM-01 • selects and uses the appropriate unit and device to measure lengths and distances including perimeters MA3-GM-02 • measures and constructs angles, and identifies the relationships between angles on a straight line and angles at a point MA3-GM-03	• Position: Use the 4 quadrants of the coordinate plane • Length: Connect decimal representations to the metric system • Length: Convert between common metric units of length • Length: Solve problems involving the comparison of lengths using appropriate units • Angles: Investigate angles on a straight line and angles at a point • Angles: Investigate the relationships formed by the intersection of straight lines	**6.1** Properties of angles **7.2** Metric system of measurement **7.3** Perimeter of rectangles **8.3** Area and perimeter **19.1** Coordinates in one quadrant **24.2** Properties of shapes **32.2** Coordinates in four quadrants **32.3** Transformations with coordinates **Inv:** Happy hippos **Inv:** Curious coordinates **Inv:** Clever containers
	Two-dimensional spatial structure B	A student: • investigates and classifies two-dimensional shapes, including triangles and quadrilaterals based on their properties MA3-2DS-01 • selects and uses the appropriate unit to calculate areas, including areas of rectangles MA3-2DS-02 • combines, splits and rearranges shapes to determine the area of parallelograms and triangles MA3-2DS-03	• 2D shapes: Dissect two-dimensional shapes and rearrange them using translations, reflections and rotations • Area: Find the area of composite figures • Area: Calculate the area of a parallelogram using subdivision and rearrangement • Area: Determine the area of a triangle	**8.1** Area of rectangles **8.2** Area of composite rectangles **24.3** Tessellations **30.3** Transformations **Inv:** Happy hippos **Inv:** Octi-origami

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Stage 3B Syllabus Alignment Guide — Maths Trek 6

Strand	Mathematical concept	Outcomes	Content	Topics and investigations	
Measurement and space	Three-dimensional spatial structure B	A student: • visualises, sketches and constructs three-dimensional objects, including prisms and pyramids, making connections to two-dimensional representations MA3-3DS-01 • selects and uses the appropriate unit to estimate, measure and calculate volumes and capacities MA3-3DS-02	• 3D objects: Construct prisms and pyramids • Volume: Use cubic metres for measurement of volume • Volume: Recognise the multiplicative structure for finding volume • Volume: Find the volumes of rectangular prisms in cubic centimetres and cubic metres		
	Non-spatial measure B	A student: • selects and uses the appropriate unit and device to measure the masses of objects MA3-NSM-01 • measures and compares duration, using 12- and 24-hour time and am and pm notation MA3-NSM-02	• Mass: Convert between common metric units of mass • Time: Solve problems involving duration, using 12- and 24-hour time	**7.2** Metric system of measurement **10.1** Reading timetables **21.2** Reading and interpreting timetables **21.3** Calculating duration **23.2** Measuring with tonnes and kilograms	**Inv:** Fantasy flight
Statistics and probability	Data B	A student: • constructs graphs using many-to-one scales MA3-DATA-01 • interprets data displays, including timelines and line graphs MA3-DATA-02	• Interpret and compare a range of data displays • Interpret data presented in digital media and elsewhere	**11.1** Side-by-side column graphs **11.2** Line graphs **11.3** Stacked line graphs **12.1** Bar charts **12.2** Mode and range **12.3** Comparing graphs	**17.2** Misleading data and graphs **17.3** Causes of bias **Inv:** Unique you **Inv:** Record breaker **Inv:** Practice makes perfect **Inv:** Weird or wonderful weather

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Stage 3B Syllabus Alignment Guide — Maths Trek 6

Strand	Mathematical concept	Outcomes	Content	Topics and investigations
Statistics and probability	Chance B	A student: • conducts chance experiments and quantifies the probability MA3-CHAN-01	• Compare observed frequencies of outcomes with expected results • Create random generators and describe probabilities using fractions • Conduct chance experiments with both small and large numbers of trials	**29.1** Comparing probability **29.2** Expected probability **29.3** Observed probability **30.1** Repeated probability experiments **Inv:** Practice makes perfect

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