NSW Syllabus Match

Stage 1

NSW Syllabus Edition

09/25

Refer to the tables to see how the Maths Trek NSW Syllabus Edition topics match the NSW Mathematics Syllabus for Stage 1.

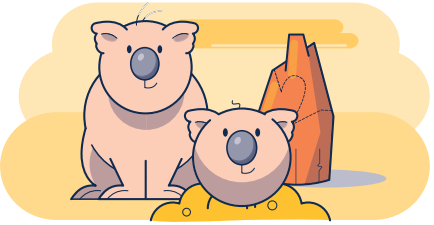
Stage 1A Syllabus Match — Maths Trek 1

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



Number and algebra

Mathematical concept	Outcomes	Content	Topics
Representing whole numbers A	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 • 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**	
		• Identify the number before and after a given two-digit number	1.2 Counting in ones 1.3 Reading and writing numbers to 20 2.1 Counting in ones to 100 17.3 One more, one less, ten more, ten less
		• Count forwards and backwards by ones from a given number to at least 120	1.2 Counting in ones 2.1 Counting in ones to 100
		Continue and create number patterns	
		• Model and describe 'odd' and 'even' numbers using items paired in two rows	2.2 Odd and even number patterns
		• Count forwards and backwards by twos from any starting point	2.3 Skip counting by twos to 20 14.2 Skip counting by twos to 100
		Represent numbers on a line	
		• Sequence numbers and arrange them on a line by considering the order and size of those numbers	2.1 Counting in ones to 100 2.3 Skip counting by twos to 20 9.1 Ordering numbers to 100 19.1 Count and order numbers to 150
		• Locate the approximate position of multiples of 10 on a model of a number line from 0 to 100	9.1 Ordering numbers to 100
		Represent the structure of groups of ten in whole numbers	
		• Recognise that ten ones is the same as one ten	30.1 Regrouping two-digit numbers
		• Use 10 as a reference in forming numbers from 11 to 20	1.3 Reading and writing numbers to 20

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Number and algebra

Mathematical concept	Outcomes	Content	Topics
Representing whole numbers A cont.		• Count large sets of objects by systematically grouping in tens	**3.2** Representing two-digit numbers to 30 **3.3** Reading and writing two-digit numbers **9.2** Counting collections to 100 **10.1** Counting groups of 10
		• Partition two-digit numbers to show quantity values	**11.1** Representing two-digit numbers **17.1** Representing tens and ones **18.1** Writing tens and ones **23.1** Partitioning tens and ones **30.1** Regrouping two-digit numbers
		• Use number lines and number charts to assist with locating the nearest ten to a number	**9.2** Counting collections to 100
		• Estimate, to the nearest ten, the number of objects in a collection and check by counting in groups of ten (Reasons about quantity)	**9.2** Counting collections to 100
Combining and separating quantities A	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 • 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**	
		• Apply the terms 'add', 'plus', 'equals', 'is equal to', 'is the same as', 'take away', 'minus' and 'the difference between' to describe combining and separating quantities	**7.1** Addition number sentences **15.1** Subtraction **18.2** Subtraction – find the difference **23.2** Subtraction facts
		• Recognise and use the symbols for plus (+), minus (–) and equals (=)	**7.1** Addition number sentences **16.1** Subtraction number sentences
		• Record number sentences in a variety of ways using drawings, words, numerals and symbols	**7.1** Addition number sentences **12.1** Addition using think boards **14.1** Partitioning to 20 **15.1** Subtraction **16.1** Subtraction number sentences **16.2** Subtraction using think boards **18.2** Subtraction – find the difference **23.2** Subtraction facts **28.2** Addition and subtraction money problems
		• Fluently use advanced count-by-one strategies including counting on and counting back to solve addition and subtraction problems involving one- and two-digit numbers (Reasons about relations)	**8.1** Addition using number lines **9.3** Counting on 1 or 2 **15.1** Subtraction **16.1** Subtraction number sentences **17.2** Counting back 1 or 2 **17.3** One more, one less, ten more, ten less **23.2** Subtraction facts

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Stage 1A Syllabus Match — Maths Trek 1

Number and algebra

Mathematical concept	Outcomes	Content	Topics	
Combining and separating quantities A cont.		**Recognise and recall number bonds up to ten**		
		• Recognise, recall and record combinations of two numbers that add up or bond to form 10	**7.1** Addition number sentences **10.2** Friends of 10	**28.2** Addition and subtraction money problems **INV** Numbers up*
		• Model and record patterns for individual numbers up to ten by making all possible whole-number combinations (Reasons about patterns)	**4.1** Partitioning to 10 **10.2** Friends of 10	**23.4** Problem-solving practice*
		• Create, recall and recognise combinations of two numbers that add up to numbers less than 10	**4.1** Partitioning to 10 **10.4** Guessing and checking *	**25.4** Finding smaller parts of a larger problem* **26.4** Problem-solving practice*
		• Describe combinations for numbers using words such as *more than*, *less than* and *double* (Reasons about relations)	**22.1** Addition facts	**23.2** Subtraction facts
		Use flexible strategies to solve addition and subtraction problems		
		• Use non-count-by-one strategies such as using doubles for near doubles and combining numbers that add to ten	**12.2** Doubles and near doubles **19.2** Think addition to subtract **22.1** Addition facts **23.2** Subtraction facts	**28.2** Addition and subtraction money problems **INV** Let's roll* **INV** Breakfast cafe*
		• Represent addition and subtraction using structured materials such as a bead string or similar model	**8.1** Addition using number lines **16.1** Subtraction number sentences	**18.3** Addition using ten frames and number lines **28.1** Working with coins and notes
		• Select and apply strategies using number bonds to solve addition and subtraction problems with one- and two-digit numbers by partitioning numbers using quantity value and bridging to 10 (Reasons about relations)	**22.1** Addition facts **25.3** Addition – split and add	**27.1** Bridging to tens **28.1** Working with coins and notes
		Represent equality		
		• Use the equals sign to record equivalent number sentences involving addition, and to mean 'is the same as', rather than as an indication to perform an operation (Reasons about relations)	**11.2** Turnarounds	**24.1** Equivalent number sentences
		• Model the commutative property for addition and apply it to aid the recall of addition facts (Reasons about relations)	**11.2** Turnarounds	**24.1** Equivalent number sentences
		• Recall related addition and subtraction facts for numbers to at least 10 (Reasons about relations)	**19.2** Think addition to subtract	**20.1** Addition and subtraction are related

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Stage 1A Syllabus Match — Maths Trek 1

Number and algebra

Mathematical concept	Outcomes	Content	Topics
Forming groups A	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 • 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**	
		• Count by twos, threes, fives and tens using rhythmic counting and skip counting	**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
		Use skip counting patterns	
		• Identify and describe patterns when skip counting forwards or backwards by twos, fives and tens	**3.4** Making a table or chart* **19.4** Working backwards* **20.3** Describing number patterns **23.4** Problem-solving practice*
		• Determine a missing number in a number pattern with a constant difference	**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
		• Describe how the missing number in a number pattern was determined (Reasons about relations)	**20.3** Describing number patterns **22.2** Keeping the pattern going
		Model and use equal groups of objects to represent multiplication	
		• Model and describe collections of objects as *groups of*	**25.1** Equal groups
		• Determine and distinguish between the *number of groups* and the *number in each group* when describing collections of objects (Reasons about relations)	**25.1** Equal groups **26.2** Equal groups
		• Find the total number of objects using skip counting of equal groups of a known size	**26.2** Equal groups
		Recognise and represent division	
		• Use concrete materials to model a half of a collection and show the relation between the half and the whole	**26.3** Sharing equally
		• Model sharing division by distributing a collection of objects equally into a given number of groups to determine how many in each group	**26.3** Sharing equally **27.3** Sharing and grouping
		• Model grouping division by determining the number of groups of a given size that can be formed	**27.2** How many groups? **27.3** Sharing and grouping
		• Describe the part left over when a collection cannot be distributed equally using the given group size	**26.3** Sharing equally

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Stage 1A Syllabus Match — Maths Trek 1

Measurement and space

Mathematical concept	Outcomes	Content	Topics	
Geometric measure A	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 • 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**		
		• Give and follow directions, including directions involving turns to the left and right, to move between familiar locations	**12.3** Following directions	**26.1** Following and writing directions
		• Give and follow instructions to position objects in models and drawings	**11.3** Describing position	
		• Describe the path from one location to another on drawings and diagrams	**26.1** Following and writing directions	
		Length: Measure the lengths of objects using uniform informal units		
		• Use uniform informal units to measure lengths and distances by placing the units end to end without gaps or overlaps	**5.3** Measuring length using informal units **19.3** Informal units to measure length	**INV** Ramp champ*
		• Select appropriate uniform informal units to measure lengths and distances	**19.3** Informal units to measure length	
		• Recognise and explain the relationship between the size of a unit and the number of units needed (Reasons about relations)	**5.3** Measuring length using informal units	**19.3** Informal units to measure length
		• Count informal units to measure lengths or distances and describe the part left over	**19.3** Informal units to measure length	
		• Record lengths and distances by referring to the number and type of unit used	**5.3** Measuring length using informal units **19.3** Informal units to measure length	**INV** Ramp champ*
		• Use a single informal unit repeatedly (iteratively) to measure length	**19.3** Informal units to measure length	
		Length: Compare lengths using uniform informal units		
		• Compare the lengths of two or more objects using appropriate uniform informal units and check by placing the objects side by side and aligning the ends	**19.3** Informal units to measure length	
		• Explain why the length of an object remains constant when rearranged (Reasons about relations)	**5.3** Measuring length using informal units	
		• Estimate lengths, indicating the number and type of unit used and check by measuring	**5.3** Measuring length using informal units	

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Stage 1A Syllabus Match — Maths Trek 1

Measurement and space

Mathematical concept	Outcomes	Content	Topics
Geometric measure A cont.		**Length: Subdivide lengths to find halves and quarters**	
		• Use concrete materials to model both half and quarters of a whole length, highlighting the length	**25.2** Halves and quarters of a length
		• Identify two equal parts and the relationship of the parts to the whole length, linking words and images	**25.2** Halves and quarters of a length
		• Recognise when lengths have or have not been divided into halves and quarters	**25.2** Halves and quarters of a length
Two-dimensional spatial structure A	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 • 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**	
		• Explore, manipulate and describe features of polygons	**7.3** Which 2D shape is that?
		• Use the terms 'side', 'vertex' and 'two-dimensional' to describe plane (flat) shapes	**8.3** Classifying 2D shapes
		• Create repeating linear patterns with shapes, including two-shape and three-shape patterns	**15.2** Repeating shape patterns
		• Compare, sort and classify polygons according to the number of sides or vertices	**8.3** Classifying 2D shapes **28.3** Triangles and quadrilaterals
		• Select and name a shape from a description of its features, identifying triangles, quadrilaterals, pentagons, hexagons and octagons (Reasons about spatial relations)	**28.3** Triangles and quadrilaterals
		• Recognise that shapes with the same name may have sides of equal or different lengths (Reasons about spatial relations)	**28.3** Triangles and quadrilaterals
		• Identify shapes presented in different orientations	**7.3** Which 2D shape is that?
		2D shapes: Transform shapes with slides and reflections	
		• Recognise that sliding or reflecting a shape does not change its size or features (Reasons about spatial relations)	**31.3** Reflect, slide, turn
		• Identify and create a slide (translation) or reflection of a single shape and use the terms 'slide' (translation) and 'reflection' to describe the movement of the shape	**31.3** Reflect, slide, turn
		• Make designs with symmetry from reflection using paper-folding, mirrors, drawings or paintings	**31.3** Reflect, slide, turn

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Stage 1A Syllabus Match — Maths Trek 1

Measurement and space			
Mathematical concept	Outcomes	Content	Topics
Two-dimensional spatial structure A cont.		Area: Indirectly compare area	
		• Indirectly compare the areas of two surfaces that cannot be moved or superimposed	**30.2** Compare area
		• Predict which of two similar shapes has the larger area and check by covering	**30.2** Compare area
		Area: Measure areas using uniform informal units	
		• Explore area using uniform informal units to cover the surface in rows or columns without gaps or overlaps	**31.1** Measure area
		• Measure area by selecting and using appropriate uniform informal units (Reasons about relations)	**31.1** Measure area
		• Explain the relationship between the size of a unit and the number of units needed to measure an area (Reasons about relations)	**31.1** Measure area
		• Explain why the area remains constant when units are rearranged (Reasons about relations)	**31.1** Measure area
		• Record areas by referring to the number and type of uniform informal unit used	**31.1** Measure area
		• Identify any parts of units left over when counting uniform informal units to measure area	**31.1** Measure area
		• Estimate areas by referring to the number and type of uniform informal unit used and check by measuring	**31.1** Measure area

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Stage 1A Syllabus Match — Maths Trek 1

Measurement and space

Mathematical concept	Outcomes	Content	Topics
Three-dimensional spatial structure A	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 • 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**	
		• Use the term 'three-dimensional' to describe a range of objects	**15.3** Identify 3D objects
		• Distinguish between objects, which are *three-dimensional (3D)* and shapes which are *two-dimensional (2D)*	**15.3** Identify 3D objects
		• Identify and name familiar three-dimensional objects, including cubes, cylinders, spheres and rectangular prisms	**15.3** Identify 3D objects
		3D objects: Sort and describe three-dimensional objects	
		• Manipulate and describe familiar three-dimensional objects	**16.3** Sort and describe 3D objects
		• Use the term 'surface' in describing familiar three-dimensional objects	**16.3** Sort and describe 3D objects
		• Sort familiar three-dimensional objects according to obvious features	**16.3** Sort and describe 3D objects
		• Use the term 'face' to describe the flat surfaces of three-dimensional objects with straight edges	**16.3** Sort and describe 3D objects
		• Select and name a familiar three-dimensional object from a description of its features	**16.3** Sort and describe 3D objects
		Volume: Measure and compare the internal volumes (capacities) of containers by filling	
		• Use uniform informal units to measure how much a container will hold by counting the number of times a smaller container can be filled and emptied into the container being measured	**23.3** Measuring capacity
		• Select appropriate informal units to measure the capacities of containers	**23.3** Measuring capacity
		• Recognise and explain the relationship between the size of a unit and the number of units needed (Reasons about relations)	**23.3** Measuring capacity
		• Compare the internal volumes of two or more containers using appropriate uniform informal units	**23.3** Measuring capacity
		• Recognise and explain why containers of different shapes may have the same internal volume (Reasons about relations)	**23.3** Measuring capacity
		• Estimate how much a container holds by referring to the number and type of uniform informal units used and check by measuring	**23.3** Measuring capacity

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Stage 1A Syllabus Match — Maths Trek 1

Measurement and space

Mathematical concept	Outcomes	Content	Topics
Three-dimensional spatial structure A cont.		**Volume: Measure the internal volume (capacity) of containers by packing**	
		• Pack cubic units (eg blocks) into rectangular containers so that there are no gaps	**20.2** Measure volume by packing
		• Recognise that cubes pack better than other objects in rectangular containers (Reasons about spatial structure)	**20.2** Measure volume by packing
		• Estimate and measure the internal volume of a container by filling the container with uniform informal units and counting the number of units used	**20.2** Measure volume by packing
		• Explain that if there are gaps when packing and stacking, this will affect the accuracy of measuring the internal volume	**20.2** Measure volume by packing
		Volume: Construct volumes using cubes	
		• Explore different rectangular prisms that can be made from a given number of cubes	**24.2** Building prisms with cubes
		• Devise and explain strategies for stacking and counting units to form a rectangular prism (Reasons about spatial structure)	**24.2** Building prisms with cubes
		• Record volumes, referring to the number and type of uniform informal unit used	**24.2** Building prisms with cubes

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Stage 1A Syllabus Match — Maths Trek 1

Measurement and space

Mathematical concept	Outcomes	Content	Topics
Non-spatial measure A	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 • 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**	
		• Place objects on either side of an equal-arm balance to obtain a level balance	4.2 Comparing mass – heavier, lighter
		• Use an equal-arm balance to compare the masses of two objects and record, which is heavier or lighter	4.2 Comparing mass – heavier, lighter
		• Predict the action of an equal-arm balance before placing particular objects in each pan (Reasons about relations)	4.2 Comparing mass – heavier, lighter
		• Use a balance to find two collections of objects that have the same mass	4.2 Comparing mass – heavier, lighter
		• Compare and order the masses of two or more objects by hefting, and check using an equal-arm balance	4.2 Comparing mass – heavier, lighter
		Time: Name and order the cycle of months	
		• Name and order the months of the year	3.1 Days, weeks, months, years; 10.3 Calendars and months
		• Recall the number of days in each month	10.3 Calendars and months
		• Identify a day and date using a Gregorian calendar	3.1 Days, weeks, months, years; 10.3 Calendars and months
		• Recognise monthly and annual cycles	10.3 Calendars and months; 31.2 Months and seasons
		Time: Tell time to the half-hour	
		• Read analog clocks to the half-hour using the terms 'o'clock' and 'half past'	4.3 Time – o'clock, half past
		• Describe the position of the hands on a clock for the half-hour	4.3 Time – o'clock, half past
		• Connect the use of half turns to the turn of the minute hand for the passing of the half-hour	4.3 Time – o'clock, half past
		• Explain why the hour hand on a clock is halfway between successive hour-markers when the minute hand shows the half-hour (Reasons about relations)	4.3 Time – o'clock, half past
		• Describe everyday events with particular hour and half-hour times	4.3 Time – o'clock, half past
		• Record hour and half-hour time, making connections between analog and digital clocks	4.3 Time – o'clock, half past

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Stage 1A Syllabus Match — Maths Trek 1

Statistics and probability

Mathematical concept	Outcomes	Content	Topics
Data A	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 • 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** • Investigate a topic of interest by choosing suitable questions to obtain appropriate data	**30.3** Collecting data
		• Gather data and track what has been counted by using concrete materials, tally marks, lists or symbols	**5.2** Collecting data using tally marks **14.3** Object graphs **22.3** Collecting data **30.3** Collecting data
		Represent data with objects and drawings and describe the displays • Use concrete materials or pictures of objects as symbols to create data displays where one object or picture represents one data value	**14.3** Object graphs **24.3** Picture graphs
		• Describe information presented in one-to-one data displays (Reasons about relations)	**14.3** Object graphs **24.3** Picture graphs
		• Use comparative language to describe information presented in a display, such as 'more than' and 'less than'	**14.3** Object graphs **22.3** Collecting data **24.3** Picture graphs **30.3** Collecting data
		• Interpret a data display and identify the biggest or smallest values	**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: • 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 • recognises and describes the element of chance in everyday events MA1-CHAN-01	**Identify and describe possible outcomes** • Identify possible outcomes of familiar activities and events	**5.1** Possible outcomes
		• Describe the chance of possible outcomes for familiar activities and events	**5.1** Possible outcomes

* Where required, investigations and problem-solving units are listed in addition to the topics to fully cover the Syllabus Content.

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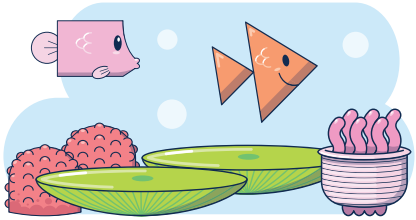
Stage 1B Syllabus Match — Maths Trek 2

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



Number and algebra

Mathematical concept	Outcomes	Content	Topics
Representing whole numbers B	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 • 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**	
		• Identify the number before and after a given three-digit number	**1.3** Read, write and represent numbers to 150 **9.1** Read, write and represent numbers to 500
		• Count forwards and backwards by tens, on and off the decade, with two- and three-digit numbers	**2.1** Number patterns beyond 100 **5.1** Number lines to 500 **20.2** Number lines to 1000
		• Identify how many more to the next multiple of ten within two- and three-digit numbers	**5.1** Number lines to 500 **20.2** Number lines to 1000
		Form, regroup and rename three-digit numbers	
		• Count and represent large sets of objects by systematically grouping in tens and hundreds	**1.2** Tens and ones with blocks **1.3** Read, write and represent numbers to 150 **2.3** Grouping to count collections **9.1** Read, write and represent numbers to 500 **18.4** Solving a simpler problem*
		• Use models such as base 10 material and interlocking cubes to represent and explain grouping	**1.2** Tens and ones with blocks **1.3** Read, write and represent numbers to 150 **3.2** Place value to hundreds **11.1** Place value to hundreds **14.1** Number expanders **23.1** Place value to 999
		• State the quantity value of digits in numbers of up to three digits (Reasons about quantity)	**3.2** Place value to hundreds **11.1** Place value to hundreds **12.1** The role of a zero **14.2** Expanded notation **17.1** Place value problems **18.1** Expanded notation
		• Identify the nearest hundred to a number	**5.1** Number lines to 500 **20.2** Number lines to 1000
		• Recognise units of 100	**11.1** Place value to hundreds **23.1** Place value to 999

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Stage 1B Syllabus Match — Maths Trek 2

Number and algebra

Mathematical concept	Outcomes	Content	Topics
Representing whole numbers B cont.		• Use place value to partition and rename three-digit numbers in different ways (Reasons about relations)	**3.2** Place value to hundreds **11.1** Place value to hundreds **12.1** The role of a zero **14.1** Number expanders **14.2** Expanded notation **18.1** Expanded notation **22.2** Regrouping and renaming numbers **30.1** Regrouping and renaming numbers
		• Estimate, to the nearest hundred, the number of objects in a collection and check by grouping and counting	**3.2** Place value to hundreds
Combining and separating quantities B	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 • uses number bonds and the relationship between addition and subtraction to solve problems involving partitioning MA1-CSQ-01	**Represent and reason about additive relations**	
		• Create, record and recognise combinations of two numbers that add to numbers from 11 up to and including 20	**2.2** Addition using ten frames **4.1** Partitioning to 20 **4.2** Addition facts **7.2** Addition using friendly pairs
		• Create, model and solve word problems, using number sentences	**7.2** Addition using friendly pairs **11.2** Addition with bar models **15.1** Subtraction with bar models **20.3** Problem-solving with money **24.3** Addition and subtraction with bar models **26.1** Addition and subtraction problems **INV** Showtime*
		• Represent the difference between two numbers using concrete materials and diagrams	**8.1** Subtraction facts
		• Represent a constant difference between pairs of numbers	**8.1** Subtraction facts
		• Model how addition and subtraction are inverse operations using concrete materials, drawings and diagrams	**10.3** Addition and subtraction facts are related
		• Recall and use related addition and subtraction number facts to at least 20	**10.3** Addition and subtraction facts are related
		Form multiples of ten when adding and subtracting two-digit numbers	
		• Add two-digit numbers by building to multiples of ten	**5.2** Addition using friendly jumps **7.2** Addition using friendly pairs
		• Add and subtract from a two-digit number and record on an empty number line	**5.2** Addition using friendly jumps **8.2** Subtraction using friendly jumps **16.1** Addition using jump strategy **17.2** Subtraction using jump strategy
		• Use quantity values to separate tens and ones for addition (only)	**10.2** Addition using split strategy **11.2** Addition with bar models
		• Use an inverse strategy to turn a subtraction into an addition (Reasons about relations)	**19.1** Inverse strategy of subtraction

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Stage 1B Syllabus Match — Maths Trek 2

Number and algebra

Mathematical concept	Outcomes	Content	Topics
Combining and separating quantities B cont.		**Use knowledge of equality to solve related problems**	
		• Use number bonds to determine a missing number	**25.1** Solve problems using number bonds
		• Use number knowledge to solve related problems (Reasons about relations)	**25.1** Solve problems using number bonds
		• Use a variety of ways of writing number sentences	**25.1** Solve problems using number bonds
		• Use number bonds to solve equality problems	**25.1** Solve problems using number bonds
Forming groups B	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 • 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**	
		• Use objects, diagrams, images or actions to model multiplication as accumulating equal *groups*	**20.1** Multiplication as repeated addition
		• Solve multiplication problems using repeated addition	**20.1** Multiplication as repeated addition
		• Form arrays of equal rows and equal columns	**22.1** Groups and arrays
		• Determine and distinguish between the *number of rows/columns* and the *number in each row/column* when describing collections of objects	**20.1** Multiplication as repeated addition; **22.1** Groups and arrays
		• Model the commutative property of multiplication, using an array (Reasons about relations)	**25.2** Multiplication using arrays
		• Model division by deconstructing an array equally into a given number of rows or columns	**26.2** Division – How many in each group?; **27.3** Division – How many groups?
		Model doubling and halving with fractions	
		• Model doubling and halving groups and the relation between the processes	**27.2** Doubling and halving
		• Re-create the whole given half	**27.1** Fractions as part of a group
		• Use concrete materials to model a half, a quarter or an eighth of a collection, and explain their thinking	**27.1** Fractions as part of a group

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Stage 1B Syllabus Match — Maths Trek 2

Number and algebra

Mathematical concept	Outcomes	Content	Topics
Forming groups B cont.		**Represent multiplication and division problems**	
		• Solve multiplication and division problems using objects, diagrams, images and actions	**26.2** Division – How many in each group? **27.3** Division – How many groups? **30.2** Multiplication and division problems
		• Record answers to multiplication and division problems (including those with remainders) using drawings, words and numerals	**26.2** Division – How many in each group? **27.3** Division – How many groups? **30.2** Multiplication and division problems

Measurement and space

Mathematical concept	Outcomes	Content	Topics
Geometric measure B	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 • 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**	
		• Make simple models from memory, photographs, drawings or descriptions	**9.3** Simple maps
		• Interpret simple maps by identifying objects in different locations	**9.3** Simple maps **15.2** Maps, pathways, directions
		• Create a path from one location to another	**15.2** Maps, pathways, directions
		Length: Compare and order lengths, using appropriate uniform informal units	
		• Make and use a tape measure calibrated in uniform informal units	**INV** Marble ramp*
		• Compare and order two or more shapes according to their lengths using an appropriate uniform informal unit	**12.2** Measuring length **23.3** Measuring length
		• Compare the lengths of two or more objects that cannot be moved or aligned (Reasons about relations)	**12.2** Measuring length **23.3** Measuring length
		• Record length comparisons using drawings, numerals and words, and by referring to the uniform informal unit used	**12.2** Measuring length **23.3** Measuring length **INV** Marble ramp*

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Stage 1B Syllabus Match — Maths Trek 2

Measurement and space

Mathematical concept	Outcomes	Content	Topics
Geometric measure B cont.		**Length: Recognise and use formal units to measure the lengths of objects**	
		• Recognise the need for formal units to measure lengths and distances	**25.3** Measuring with metres
		• Use the metre as a unit to measure lengths and distances to the nearest metre or half-metre	**25.3** Measuring with metres
		• Record lengths and distances using the abbreviation for metres (m)	**25.3** Measuring with metres
		• Estimate lengths and distances to the nearest metre and check by measuring	**25.3** Measuring with metres
		• Recognise the need for a formal unit smaller than the metre	**26.3** Measuring with centimetres
		• Recognise that there are 100 centimetres in one metre	**26.3** Measuring with centimetres
		• Measure lengths to the nearest centimetre, using a device with 1-cm markings	**26.3** Measuring with centimetres
		• Record lengths and distances using the abbreviation for centimetres (cm)	**26.3** Measuring with centimetres
		• Estimate lengths and distances to the nearest centimetre and check by measuring	**26.3** Measuring with centimetres
		Length: Repeatedly halve lengths to form eighths	
		• Use materials to model an eighth of a whole length, highlighting the length	**30.3** Representing halves, quarters, eighths
		• Recognise when a length is divided into eight equal parts	**30.3** Representing halves, quarters, eighths

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Stage 1B Syllabus Match — Maths Trek 2

Measurement and space

Mathematical concept	Outcomes	Content	Topics
Two-dimensional spatial structure B	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 • 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**	
		• Make representations of two-dimensional shapes and combinations of shapes in different orientations	**8.3** Classifying 2D shapes **11.3** Features of 2D shapes
		• Combine and split single shapes and arrangements of shapes to form new shapes (Reasons about spatial relations)	**8.3** Classifying 2D shapes
		2D shapes: Identify and describe the orientation of shapes using quarter turns	
		• Identify full, half and quarter turns of a single shape and describe the movement of the shape	**31.3** Turns
		• Identify and describe directions of turns as 'left turn', 'right turn', 'clockwise' or 'anti-clockwise'	**31.3** Turns
		• Connect the use of quarter and half turns to the turn of the minute hand on a clock for the passing of quarter and half-hours (Reasons about relations)	**31.3** Turns
		• Perform full, half and quarter turns with a single shape	**31.3** Turns
		• Describe the result of a turn of a shape	**31.3** Turns
		• Determine the repeating pattern formed by quarter turns	**31.3** Turns
		Area: Compare rectangular areas using uniform square units of an appropriate size in rows and columns	
		• Cover rectangular surfaces by creating repeated rows of square tiles	**7.3** Measuring area
		• Use a single square to create the array structure of area in rows and columns	**7.3** Measuring area
		• Use the structure of repeated units to find the area of a rectangle	**7.3** Measuring area
		• Explain how the grid structure of rows and columns helps to find the area (Reasons about spatial structure)	**28.2** Measuring and comparing area of rectangles

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Stage 1B Syllabus Match — Maths Trek 2

Measurement and space

Mathematical concept	Outcomes	Content	Topics
Two-dimensional spatial structure B cont.		• Compare the areas of two or more surfaces that cannot be moved, or superimposed, by measuring in uniform informal units	**28.2** Measuring and comparing area of rectangles
		• Record comparisons of area using drawings, numerals and words, and by referring to the uniform informal unit used	**28.2** Measuring and comparing area of rectangles
Three-dimensional spatial structure B	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 • 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**	
		• Describe three-dimensional objects (prisms) using the terms 'face', 'edge' and 'vertex'	**12.3** Classifying 3D objects **16.2** Faces, edges, vertices **17.3** 3D objects and their faces
		• Represent three-dimensional objects by making simple models	**16.2** Faces, edges, vertices **17.3** 3D objects and their faces
		• Recognise and name flat surfaces of three-dimensional objects as two-dimensional shapes	**17.3** 3D objects and their faces
		Volume: Compare containers based on internal volume (capacity) by filling and packing	
		• Make and use a device for measuring internal volume (capacity) calibrated in uniform informal units	**24.2** Measuring capacity
		• Compare, order and record the internal volumes (capacities) of two or more containers by measuring each container in uniform informal units	**24.2** Measuring capacity
		• Estimate internal volume (capacity) by referring to the number and type of uniform informal unit used	**24.2** Measuring capacity
		Volume: Compare volumes using uniform informal units	
		• Estimate the volumes of two or more models and check by counting the number of blocks used in each model	**23.2** Packing and stacking
		• Compare models with different appearances, recognising when they have the same volume (Reasons about spatial structure)	**23.2** Packing and stacking
		• Record the results of volume comparisons using drawings, numerals and words, referring to the units used	**23.2** Packing and stacking
		• Explain that models made of the same number of units may have different volumes depending on the size of the units used (Reasons about spatial relations)	**23.2** Packing and stacking

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Stage 1B Syllabus Match — Maths Trek 2

Measurement and space

Mathematical concept	Outcomes	Content	Topics	
Non-spatial measure B	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 • 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**		
		• Use uniform informal units to measure the mass of an object by counting the number of units needed to obtain a level balance on an equal-arm balance	**15.3** Measuring and comparing mass	**16.3** Measuring and comparing mass
		• Select an appropriate uniform informal unit to measure the mass of an object and justify the choice (Reasons about relations)	**15.3** Measuring and comparing mass	
		• Explain the relationship between the mass of a unit and the number of units needed (Reasons about relations)	**15.3** Measuring and comparing mass	**16.3** Measuring and comparing mass
		• Compare the masses of two or more objects using the same informal units	**15.3** Measuring and comparing mass	**16.3** Measuring and comparing mass
		• Estimate mass by referring to the number and type of uniform informal unit used and check by measuring	**15.3** Measuring and comparing mass	**16.3** Measuring and comparing mass
		• Recognise that mass is conserved	**15.3** Measuring and comparing mass	
		Time: Describe duration using units of time		
		• Use a calendar to calculate the number of months, weeks or days until an upcoming event	**3.1** Months of the year **5.3** Calendars	**31.2** Reading calendars **INV** All about birthdays*
		• Estimate and measure the duration of an event using a repeated informal unit	**28.1** Hours, minutes, seconds	
		• Compare and order the duration of events measured using a repeated informal unit	**28.1** Hours, minutes, seconds	
		• Use the terms 'hour', 'minute' and 'second'	**28.1** Hours, minutes, seconds	
		• Compare the duration of standard time units	**28.1** Hours, minutes, seconds	
		• Make predictions about the time remaining until a particular event starts or finishes (Reasons about relations)		

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Stage 1B Syllabus Match — Maths Trek 2

Measurement and space

Mathematical concept	Outcomes	Content	Topics	
Non-spatial measure B cont.		Time: Tell time to the quarter-hour using the language of 'past' and 'to'		
		• Read analog clocks to the quarter-hour using the terms 'past' and 'to'	**18.3** Time – o'clock, half past **19.3** Time – quarter past, half past	**22.3** Time – quarter past, quarter to
		• Describe the position of the hands on a clock for quarter past and quarter to and relate this to quarter turns	**19.3** Time – quarter past, half past	**22.3** Time – quarter past, quarter to
		• Identify which hour has just passed when the hour hand is not pointing to a numeral	**18.3** Time – o'clock, half past **19.3** Time – quarter past, half past	**22.3** Time – quarter past, quarter to
		• Record quarter-past and quarter-to time on analog and digital clocks	**19.3** Time – quarter past, half past	**22.3** Time – quarter past, quarter to
		• Associate the numerals 3, 6 and 9 with 15, 30 and 45 minutes and with the terms 'quarter past', 'half past' and 'quarter to', respectively	**19.3** Time – quarter past, half past	**22.3** Time – quarter past, quarter to

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Stage 1B Syllabus Match — Maths Trek 2

Statistics and probability

Mathematical concept	Outcomes	Content	Topics
Data B	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 • 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**	
		• Pose suitable questions where the answers form categories, and predict the likely responses	3.3 Picture graphs
		• Collect data on familiar topics	3.3 Picture graphs 4.3 Collecting data using tally marks
		• Sort data into relevant categories	3.3 Picture graphs 4.3 Collecting data using tally marks
		Create displays of data and interpret them	
		• Organise collected data into lists and tables to display information	4.3 Collecting data using tally marks
		• Represent data in a picture graph using a baseline, equal spacing and same-sized symbols	3.3 Picture graphs INV All about birthdays*
		• Give reasons why some representations of data are misleading (Reasons about relations)	3.3 Picture graphs
		• Interpret information presented in tables and picture graphs (Reasons about relations)	3.3 Picture graphs 4.3 Collecting data using tally marks 31.1 Interpreting graphs INV All about birthdays*
		• Record answers to questions using the information in tables and picture graphs	3.3 Picture graphs 4.3 Collecting data using tally marks 31.1 Interpreting graphs INV All about birthdays*
Chance B	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 • recognises and describes the element of chance in everyday events MA1-CHAN-01	**Identify and describe activities that involve chance**	
		• Describe possible outcomes in everyday activities and events as being *likely* or *unlikely* to happen	24.1 Chance – How likely?
		• Compare familiar activities and events and describe them as being *more* or *less* likely to happen (Reasoning about relations)	24.1 Chance – How likely?
		• Describe familiar events as being *possible*	28.3 Certain, possible, impossible

* Where required, investigations and problem-solving units are listed in addition to the topics to fully cover the Syllabus Content.

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