



Scope & Sequence Overview - Stage 2, Year 3



Whole Number 1

Outcomes

- uses appropriate terminology to describe, and symbols to represent, mathematical ideas - MA2-1WM
- selects and uses appropriate mental or written strategies, or technology, to solve problems - MA2-2WM
- checks the accuracy of a statement and explains the reasoning used - MA2-3WM
- applies place value to order, read and represent numbers of up to five digits - MA2-4NA

Vocabulary

number before, number after, more than, greater than, less than, largest number, smallest number, ascending order, descending order, digit, zero, ones, groups of ten, tens, groups of one hundred, hundreds, groups of one thousand, thousands, place value, round to, tens of thousands, expanded notation

	T1	T2	T3	T4
Recognise, model, represent and order numbers to at least 10 000				
represent numbers of up to four digits using objects, words, numerals and digital displays	MR			
identify the number before and after a given two-, three- or four-digit number	MR			
count forwards and backwards by tens and hundreds on and off the decade, e.g. 1220, 1230, 1240, ... (on the decade); 423, 323, 223, ... (off the decade)	MR	MR	MR	MR
arrange numbers of up to four digits in ascending and descending order				
use the terms and symbols for 'is less than' (<) and 'is greater than' (>) to show the relationship between two numbers				
Apply place value to partition, rearrange and regroup numbers to at least 10 000 to assist calculations and solve problems				
apply an understanding of place value and the role of zero to read, write and order numbers of up to four digits	MR			
use place value to partition numbers of up to four digits, e.g. 3265 as 3 groups of one thousand, 2 groups of one hundred, 6 groups of ten and 5 ones				
state the 'place value' of digits in numbers of up to four digits, e.g. 'In the number 3426, the place value of the "4" is 400 or 4 hundreds'				
record numbers of up to four digits using place value, e.g. $5429 = 5000 + 400 + 20 + 9$				
partition numbers of up to four digits in non-standard forms, e.g. 3265 as 32 hundreds and 65 ones				
round numbers to the nearest ten, hundred or thousand				MR

Addition & Subtraction 1

Outcomes

- uses appropriate terminology to describe, and symbols to represent, mathematical ideas - MA2-1WM
- selects and uses appropriate mental or written strategies, or technology, to solve problems - MA2-2WM
- checks the accuracy of a statement and explains the reasoning used - MA2-3WM
- uses mental and written strategies for addition and subtraction involving two-, three-, four- and five-digit numbers - MA2-5NA

Vocabulary

plus, add, addition, minus, the difference between, subtract, subtraction, equals, is equal to, is the same as, number sentence, empty number line, strategy, digit, estimate, round to, change (noun, in transactions of money).

	T1	T2	T3	T4
Recall addition facts for single-digit numbers and related subtraction facts to develop increasingly efficient mental strategies for computation				
add three or more single-digit numbers				
model and apply the associative property of addition to aid mental computation, e.g. $2 + 3 + 8 = 2 + 8 + 3 = 10 + 3 = 13$				
apply known single-digit addition and subtraction facts to mental strategies for addition and subtraction of two-, three- and four-digit numbers, including: <ul style="list-style-type: none"> the jump strategy on an empty number line the split strategy the compensation strategy using patterns to extend number facts bridging the decades changing the order of addends to form multiples of 10 using place value to partition numbers partitioning numbers in non-standard forms 				
use concrete materials to model the addition and subtraction of two or more numbers without trading and record the method used				
use concrete materials to model the addition and subtraction of two or more numbers with trading and record the method used				
select, use and record a variety of mental strategies to solve addition and subtraction problems, including word problems, with numbers of up to four digits				
use the equals sign to record equivalent number sentences involving addition and subtraction and so to mean 'is the same as', rather than to mean to perform an operation				
Represent money values in multiple ways and count the change required for simple transactions to the nearest five cents				
calculate equivalent amounts of money using different denominations, e.g. 70 cents can be made up of				

three 20-cent coins and a 10-cent coin, or two 20-cent coins and three 10-cent coins, etc.					
• perform simple calculations with money, including finding change, and round to the nearest five cents					

Multiplication & Division 1

Outcomes

- uses appropriate terminology to describe, and symbols to represent, mathematical ideas - MA2-1WM
- selects and uses appropriate mental or written strategies, or technology, to solve problems - MA2-2WM
- checks the accuracy of a statement and explains the reasoning used - MA2-3WM
- uses mental and informal written strategies for multiplication and division - MA2-6NA

Vocabulary

group, row, column, horizontal, vertical, array, multiply, multiplied by, multiplication, multiplication facts, double, shared between, divide, divided by, division, equals, strategy, digit, number chart, tens, ones, product, factor, multiple, halve, remainder

	TI	T2	T3	T4
Recall multiplication facts of two, three, five and ten and related division facts				
• count by twos, threes, fives or tens using skip counting	MR	MR		
• use mental strategies to recall multiplication facts for multiples of two, three, five and ten	MR	MR		
• recognise and use the symbols for multiplied by (\times), divided by (\div) and equals (=)				
• link multiplication and division facts using groups or arrays				
• model and apply the commutative property of multiplication, e.g. $5 \times 8 = 8 \times 5$				
Represent and solve problems involving multiplication using efficient mental and written strategies and appropriate digital technologies				
• use mental strategies to multiply a one-digit number by a multiple of 10, including: <ul style="list-style-type: none"> - repeated addition - using place value concepts - factorising the multiple of 10 				
• select, use and record a variety of mental strategies, and appropriate digital technologies, to solve simple multiplication problems				

Multiplication & Division 2

Outcomes

- uses appropriate terminology to describe, and symbols to represent, mathematical ideas - MA2-1WM
- selects and uses appropriate mental or written strategies, or technology, to solve problems - MA2-2WM
- checks the accuracy of a statement and explains the reasoning used - MA2-3WM
- uses mental and informal written strategies for multiplication and division - MA2-6NA

Vocabulary

group, row, column, horizontal, vertical, array, multiply, multiplied by, multiplication, multiplication facts, double, shared between, divide, divided by, division, equals, strategy, digit, number chart, tens, ones, product, factor, multiple, halve, remainder

	TI	T2	T3	T4
Recall multiplication facts up to 10×10 and related division facts				
• count by fours, sixes, sevens, eights and nines using skip counting		MR	MR	MR
• use the term 'product' to describe the result of multiplying two or more numbers, e.g. 'The product of 5 and 6 is 30'	MR	MR	MR	MR
• recall multiplication facts up to 10×10 , including zero facts, with automaticity	MR	MR	MR	MR
• find 'multiples' for a given whole number, e.g. the multiples of 4 are 4, 8, 12, 16, ...			MR	
• relate multiplication facts to their inverse division facts, e.g. $6 \times 4 = 24$, so $24 \div 6 = 4$ and $24 \div 4 = 6$				
• determine 'factors' for a given whole number, e.g. the factors of 12 are 1, 2, 3, 4, 6, 12				
Develop efficient mental and written strategies, and use appropriate digital technologies, for multiplication and for division where there is no remainder				
• record mental strategies used for multiplication and division				

Fractions & Decimals 1

Outcomes

- uses appropriate terminology to describe, and symbols to represent, mathematical ideas - MA2-1WM
- checks the accuracy of a statement and explains the reasoning used - MA2-3WM
- represents, models and compares commonly used fractions and decimals - MA2-7NA

Vocabulary

whole, part, equal parts, half, quarter, eighth, third, fifth, sixth, one-third, one-fifth, fraction, denominator, numerator, mixed numeral, whole number, fractional part, number line, is equal to, equivalent fractions, decimal, decimal point, digit, place value, round to, decimal places, dollars, cents, tenth, hundredth, one-sixth, one-tenth, one-hundredth

	TI	T2	T3	T4
Model and represent unit fractions, including $1/2$, $1/3$, $1/4$ and $1/5$ and their multiples, to a complete whole				
• model fractions with denominators of 2, 4 and 8 of whole objects, shapes and collections using concrete materials and diagrams				

• Using denominators 2, 4 and 8: name fractions up to one whole, e.g. $\frac{1}{5}, \frac{2}{5}, \frac{3}{5}, \frac{4}{5}, \frac{5}{5}$				
• interpret the denominator as the number of equal parts a whole has been divided into				
• interpret the numerator as the number of equal fractional parts, e.g. $\frac{3}{8}$ means 3 equal parts of 8				
• use the terms 'fraction', 'denominator' and 'numerator' appropriately when referring to fractions				
Count by quarters, halves and thirds, including with mixed numerals; locate and represent these fractions on a number line				
• Using denominators 2, 4 and 8: identify and describe 'mixed numerals' as having a whole-number part and a fractional part				
• rename $\frac{2}{2}, \frac{3}{3}, \frac{4}{4}, \frac{5}{5}$ and $\frac{8}{8}$ as 1				
• count by halves, thirds and quarters, e.g. 0, $\frac{1}{3}, \frac{2}{3}, 1, 1\frac{1}{3}, 1\frac{2}{3}, 2, 2\frac{1}{3}, \dots$		MR	MR	
• place halves, quarters, eighths on number lines between 0 and 1				
• place halves, quarters, eighths and thirds on number lines between 0 and 1				
• place halves, thirds and quarters on number lines that extend beyond 1				
• compare unit fractions using diagrams and number lines and by referring to the denominator, e.g. $\frac{1}{8}$ is less than $\frac{1}{2}$.				

Fractions & Decimals 2

Outcomes

- uses appropriate terminology to describe, and symbols to represent, mathematical ideas - MA2-1WM
- checks the accuracy of a statement and explains the reasoning used - MA2-3WM
- represents, models and compares commonly used fractions and decimals - MA2-7NA

Vocabulary

whole, part, equal parts, half, quarter, eighth, third, fifth, sixth, one-third, one-fifth, fraction, denominator, numerator, mixed numeral, whole number, fractional part, number line, is equal to, equivalent fractions, decimal, decimal point, digit, place value, round to, decimal places, dollars, cents, tenth, hundredth, one-sixth, one-tenth, one-hundredth

T1 T2 T3 T4

Investigate equivalent fractions used in contexts

- model, compare and represent fractions with denominators of 2, 4 and 8
- model, compare and represent fractions with denominators of 3 and 6; and 5, 10 and 100
- model, compare and represent the equivalence of fractions with related denominators by redividing the whole, using concrete materials, diagrams and number lines
- record equivalent fractions using diagrams and numerals, e.g. $\frac{3}{5} = \frac{6}{10}$

Recognise that the place value system can be extended to tenths and hundredths, and make connections between fractions and decimal notation

- state the place value of digits in decimal numbers of up to two decimal places

Patterns & Algebra 1

Outcomes

- uses appropriate terminology to describe, and symbols to represent, mathematical ideas - MA2-1WM
- selects and uses appropriate mental or written strategies, or technology, to solve problems - MA2-2WM
- checks the accuracy of a statement and explains the reasoning used - MA2-3WM
- generalises properties of odd and even numbers, generates number patterns, and completes simple number sentences by calculating missing values - MA2-8NA

Vocabulary

pattern, goes up by, goes down by, even, odd, rows, digit, multiplication facts, term, is the same as, equals.

T1 T2 T3 T4

Describe, continue and create number patterns resulting from performing addition or subtraction

- identify and describe patterns when counting forwards or backwards by threes, fours and sixes, from any starting point
- identify and describe patterns when counting forwards or backwards by threes, fours, sixes, sevens, eights and nines from any starting point
- model, describe and then record number patterns using diagrams, words or symbols
- create and continue a variety of number patterns that increase or decrease, and describe them in more than one way

Investigate the conditions required for a number to be even or odd and identify even and odd numbers

- model even and odd numbers of up to two digits using arrays with two rows
- describe and generalise the conditions for a number to be even or odd
- identify even or odd numbers of up to four digits

Patterns & Algebra 2

Outcomes

- uses appropriate terminology to describe, and symbols to represent, mathematical ideas - MA2-1WM
- selects and uses appropriate mental or written strategies, or technology, to solve problems - MA2-2WM
- checks the accuracy of a statement and explains the reasoning used - MA2-3WM
- generalises properties of odd and even numbers, generates number patterns, and completes simple number sentences by calculating missing values - MA2-8NA

Vocabulary

pattern, goes up by, goes down by, even, odd, rows, digit, multiplication facts, term, is the same as, equals.

T1 T2 T3 T4

Use equivalent number sentences involving addition and subtraction to find unknown quantities

- | | | | | |
|---|----|--|--|--|
| • complete number sentences involving addition and subtraction by calculating missing numbers | | | | |
| • find the missing number in a number sentence involving operations of addition or subtraction on both sides of the equals sign, e.g. $8 + \square = 6 + 7$ | | | | |
| • generate number patterns using multiples of 3, 4, 6, 7, 8 and 9, e.g. 3, 6, 9, 12 | MR | | | |

Length 1

Outcomes

- uses appropriate terminology to describe, and symbols to represent, mathematical ideas - MA2-1WM
- selects and uses appropriate mental or written strategies, or technology, to solve problems - MA2-2WM
- checks the accuracy of a statement and explains the reasoning used - MA2-3WM
- measures, records, compares and estimates lengths, distances and perimeters in metres, centimetres and millimetres, and measures, compares and records temperatures - MA2-9MG

Vocabulary

length, distance, metre, centimetre, millimetre, ruler, measure, estimate, handspan. tape measure, trundle wheel, measure, perimeter, height, width, temperature, cold, warm, hot, degree (Celsius), thermometer

T1 T2 T3 T4

Measure, order and compare objects using familiar metric units of length

- | | | | | |
|---|--|--|--|--|
| • measure lengths and distances using metres and centimetres | | | | |
| • record lengths and distances using metres and centimetres, e.g. 1 m 25 cm | | | | |
| • compare and order lengths and distances using metres and centimetres | | | | |
| • estimate lengths and distances using metres and centimetres and check by measuring | | | | |
| • recognise the need for a formal unit smaller than the centimetre to measure length | | | | |
| • recognise that there are 10 millimetres in one centimetre, i.e. 10 millimetres = 1 centimetre | | | | |
| • use the millimetre as a unit to measure lengths to the nearest millimetre, using a ruler | | | | |
| • record lengths using the abbreviation for millimetres (mm), e.g. 5 cm 3 mm or 53 mm | | | | |
| • estimate lengths to the nearest millimetre and check by measuring | | | | |

Length 2

Outcomes

- uses appropriate terminology to describe, and symbols to represent, mathematical ideas - MA2-1WM
- selects and uses appropriate mental or written strategies, or technology, to solve problems - MA2-2WM
- checks the accuracy of a statement and explains the reasoning used - MA2-3WM
- measures, records, compares and estimates lengths, distances and perimeters in metres, centimetres and millimetres, and measures, compares and records temperatures - MA2-9MG

Vocabulary

length, distance, metre, centimetre, millimetre, ruler, measure, estimate, handspan. tape measure, trundle wheel, measure, perimeter, height, width, temperature, cold, warm, hot, degree (Celsius), thermometer

T1 T2 T3 T4

Use scaled instruments to measure and compare temperatures

- | | | | | |
|---|--|--|----|----|
| • identify temperature as a measure of how hot or cold something is | | | MR | MR |
| • use everyday language to describe temperature, e.g. 'cold', 'warm', 'hot' | | | MR | MR |
| • recognise the need for formal units to measure temperature | | | MR | MR |

Area 1

Outcomes

- uses appropriate terminology to describe, and symbols to represent, mathematical ideas - MA2-1WM
- selects and uses appropriate mental or written strategies, or technology, to solve problems - MA2-2WM
- checks the accuracy of a statement and explains the reasoning used - MA2-3WM
- measures, records, compares and estimates areas using square centimetres and square metres - MA2-10MG

Vocabulary

area, surface, measure, grid, row, column, square centimetre, square metre, estimate, irregular area, parts of (units)
The abbreviation m^2 is read as 'square metre(s)' and not 'metre(s) squared' or 'metre(s) square'. Similarly, the abbreviation cm^2 is read as 'square centimetre(s)' and not 'centimetre(s) squared' or 'centimetre(s) square'.

	T1	T2	T3	T4
Recognise and use formal units to measure and estimate the areas of rectangles				
• recognise the need for the square centimetre as a formal unit to measure area				
• use a 10 cm × 10 cm tile (or grid) to find the areas of rectangles (including squares) that are less than, greater than or about the same as 100 square centimetres				
• measure the areas of rectangles (including squares) in square centimetres				
• record area in square centimetres using words and the abbreviation for square centimetres (cm^2), e.g. 55 square centimetres, 55 cm^2				
• estimate the areas of rectangles (including squares) in square centimetres				
• recognise the need for a formal unit larger than the square centimetre to measure area				
• construct a square metre and use it to measure the areas of large rectangles (including squares), e.g. the classroom floor or door				
• record areas in square metres using words and the abbreviation for square metres (m^2), e.g. 6 square metres, 6 m^2				
• estimate the areas of rectangles (including squares) in square metres				

Volume & Capacity 1

Outcomes

- uses appropriate terminology to describe, and symbols to represent, mathematical ideas - MA2-1WM
- checks the accuracy of a statement and explains the reasoning used - MA2-3WM
- measures, records, compares and estimates volumes and capacities using litres, millilitres and cubic centimetres - MA2-11MG

Vocabulary

capacity, container, litre, volumes, layers, cubic centimetre, measure, estimate, millilitre
The abbreviation cm^3 is read as 'cubic centimetre(s)' and not 'centimetres cubed'.

	T1	T2	T3	T4
Measure, order and compare objects using familiar metric units of capacity				
• recognise the need for formal units to measure volume and capacity				
• use the litre as a unit to measure volumes and capacities to the nearest litre				
• record volumes and capacities using the abbreviation for litres (L)				
• compare and order two or more containers by capacity measured in litres				
• estimate the capacity of a container in litres and check by measuring				
Compare objects using familiar metric units of volume				
• recognise the advantages of using a cube as a unit when packing and stacking				
• use the cubic centimetre as a unit to measure volumes				
• construct three-dimensional objects using cubic-centimetre blocks and count the blocks to determine the volumes of the objects				
• record volumes using the abbreviation for cubic centimetres (cm^3)				
• compare the volumes of two or more objects made from cubic-centimetre blocks by counting blocks				
• distinguish between mass and volume				

Mass 1

Outcomes

- uses appropriate terminology to describe, and symbols to represent, mathematical ideas - MA2-1WM
- checks the accuracy of a statement and explains the reasoning used - MA2-3WM
- measures, records, compares and estimates the masses of objects using kilograms and grams - MA2-12MG

Vocabulary

mass, more than, less than, about the same as, pan balance, (level) balance, measure, estimate, kilogram, measure, scales, gram

T1 T2 T3 T4

Measure, order and compare objects using familiar metric units of mass

• recognise the need for a formal unit to measure mass				
• use the kilogram as a unit to measure mass, using a pan balance				
• record masses using the abbreviation for kilograms (kg)				
• use hefting to identify objects that have a mass of 'more than', 'less than' and 'about the same as' one kilogram				
• compare and order two or more objects by mass measured to the nearest kilogram				
• estimate the number of similar objects that have a total mass of one kilogram and check by measuring				

Time 1

Outcomes

- uses appropriate terminology to describe, and symbols to represent, mathematical ideas - MA2-1WM
- reads and records time in one-minute intervals and converts between hours, minutes and seconds - MA2-13MG

Vocabulary

time, clock, analog, digital, hour hand, minute hand, second hand, revolution, numeral, hour, minute, second, o'clock, (minutes) past, (minutes) to, calendar, date, timetable, timeline, midday, noon, midnight, am (notation), pm (notation).

T1 T2 T3 T4

Tell time to the minute and investigate the relationship between units of time

• recognise the coordinated movements of the hands on an analog clock, including: <ul style="list-style-type: none"> – the number of minutes it takes for the minute hand to move from one numeral to the next – the number of minutes it takes for the minute hand to complete one revolution – the number of minutes it takes for the hour hand to move from one numeral to the next – the number of minutes it takes for the minute hand to move from the 12 to any other numeral – the number of seconds it takes for the second hand to complete one revolution 				
• read analog and digital clocks to the minute, including using the terms 'past' and 'to'				
• record in words various times shown on analog and digital clocks				

Time 2

Outcomes

- uses appropriate terminology to describe, and symbols to represent, mathematical ideas - MA2-1WM
- selects and uses appropriate mental or written strategies, or technology, to solve problems - MA2-2WM
- reads and records time in one-minute intervals and converts between hours, minutes and seconds - MA2-13MG

Vocabulary

time, clock, analog, digital, hour hand, minute hand, second hand, revolution, numeral, hour, minute, second, o'clock, (minutes) past, (minutes) to, calendar, date, timetable, timeline, midday, noon, midnight, am (notation), pm (notation).

T1 T2 T3 T4

Convert between units of time

• convert between units of time and recall time facts, e.g. 60 seconds = 1 minute, 60 minutes = 1 hour, 24 hours = 1 day				
• Use am and pm notation and solve simple time problems				
• record digital time using the correct notation, including am and pm, e.g. 9:15 am				
• Read and interpret simple timetables, timelines and calendars				
• read and interpret timetables and timelines				
• read and interpret calendars				

Three-Dimensional Space 1

Outcomes

- uses appropriate terminology to describe, and symbols to represent, mathematical ideas - MA2-1WM
- checks the accuracy of a statement and explains the reasoning used - MA2-3WM
- makes, compares, sketches and names three-dimensional objects, including prisms, pyramids, cylinders, cones and spheres, and describes their features - MA2-14MG

Vocabulary

object, two-dimensional shape (2D shape), three-dimensional object (3D object), cone, cube, cylinder, prism, pyramid, sphere, surface, flat surface, curved surface, face, edge, vertex (vertices), net, top view, front view, side view, isometric grid paper, isometric drawing, depth.

T1 T2 T3 T4

Make models of three-dimensional objects and describe key features

• identify and name three-dimensional objects as prisms (including cubes), pyramids, cylinders, cones and spheres				
• describe and compare curved surfaces and flat surfaces of cylinders, cones and spheres, and faces, edges and vertices of prisms (including cubes) and pyramids				
• use a variety of materials to make models of prisms (including cubes), pyramids, cylinders, cones and spheres, given a three-dimensional object, picture or photograph to view				
• deconstruct everyday packages that are prisms (including cubes) to create nets, e.g. cut up tissue boxes				

Three-Dimensional Space 2

Outcomes

- uses appropriate terminology to describe, and symbols to represent, mathematical ideas - MA2-1WM
- checks the accuracy of a statement and explains the reasoning used - MA2-3WM
- makes, compares, sketches and names three-dimensional objects, including prisms, pyramids, cylinders, cones and spheres, and describes their features - MA2-14MG

Vocabulary

object, two-dimensional shape (2D shape), three-dimensional object (3D object), cone, cube, cylinder, prism, pyramid, sphere, surface, flat surface, curved surface, face, edge, vertex (vertices), net, top view, front view, side view, isometric grid paper, isometric drawing, depth.

T1 T2 T3 T4

Investigate and represent three-dimensional objects using drawings

• identify prisms (including cubes), pyramids, cylinders, cones and spheres in the environment and from drawings, photographs and descriptions				
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Two-Dimensional Space 1

Outcomes

- uses appropriate terminology to describe, and symbols to represent, mathematical ideas - MA2-1WM
- checks the accuracy of a statement and explains the reasoning used - MA2-3WM
- makes, compares, sketches and names three-dimensional objects, including prisms, pyramids, cylinders, cones and spheres, and describes their features - MA2-14MG

Vocabulary

shape, two-dimensional shape (2D shape), circle, triangle, quadrilateral, parallelogram, rectangle, rhombus, square, trapezium, kite, pentagon, hexagon, octagon, regular shape, irregular shape, orientation, features, properties, side, parallel, pair of parallel sides, opposite, length, vertex (vertices), angle, right angle, symmetry, line (axis) of symmetry, rigid, reflect (flip), translate (slide), rotate (turn), tessellate, clockwise, anti-clockwise, half-turn, quarter-turn, three-quarter-turn.

In Stage 1, students referred to the transformations of shapes using the terms 'slide', 'flip' and 'turn'. In Stage 2, they are expected to progress to the use of the terms 'translate', 'reflect' and 'rotate', respectively.

T1 T2 T3 T4

Compare and describe features of two-dimensional shapes, including the special quadrilaterals

• manipulate, compare and describe features of two-dimensional shapes, including the special quadrilaterals: parallelograms, rectangles, rhombuses, squares, trapeziums and kites				
• use measurement to establish and describe side properties of the special quadrilaterals, e.g. the opposite sides of a parallelogram are the same length				
• identify and name the special quadrilaterals presented in different orientations	MR			
• recognise the vertices of two-dimensional shapes as the vertices of angles that have the sides of the shape as their arms				
• identify right angles in squares and rectangles				
• group parallelograms, rectangles, rhombuses, squares, trapeziums and kites using one or more attributes, e.g. quadrilaterals with parallel sides and right angles				
• identify and describe two-dimensional shapes as either 'regular' or 'irregular', e.g. 'This shape is a regular pentagon because it has five equal sides and five equal angles'		MR		
• draw representations of regular and irregular two-dimensional shapes in different orientations				

• construct regular and irregular two-dimensional shapes from a variety of materials, e.g. cardboard, straws, pattern blocks				
• compare the rigidity of two-dimensional frames of three sides with the rigidity of those of four or more sides				
Identify symmetry in the environment				
• identify lines of symmetry in pictures, artefacts, designs and the environment, e.g. Aboriginal rock carvings or Asian lotus designs				
• identify and draw lines of symmetry on given shapes, including the special quadrilaterals and other regular and irregular shapes				

Angles 1

Outcomes

- uses appropriate terminology to describe, and symbols to represent, mathematical ideas - MA2-1WM
- identifies, describes, compares and classifies angles - MA2-16MG

Vocabulary

angle, amount of turning, arm, vertex, perpendicular, right angle, acute angle, obtuse angle, straight angle, reflex angle, angle of revolution

T1 T2 T3 T4

Identify angles as measures of turn and compare angle sizes in everyday situations

• identify 'angles' with two arms in practical situations, e.g. the angle between the arms of a clock				
• identify the 'arms' and 'vertex' of an angle				
• describe informally an angle as the 'amount of turning' between two arms				
• compare angles directly by placing one angle on top of another and aligning one arm				
• identify 'perpendicular' lines in pictures, designs and the environment				
• use the term 'right angle' to describe the angle formed when perpendicular lines meet				

Angles 2

Outcomes

- uses appropriate terminology to describe, and symbols to represent, mathematical ideas - MA2-1WM
- checks the accuracy of a statement and explains the reasoning used - MA2-3WM
- identifies, describes, compares and classifies angles - MA2-16MG

Vocabulary

angle, amount of turning, arm, vertex, perpendicular, right angle, acute angle, obtuse angle, straight angle, reflex angle, angle of revolution

T1 T2 T3 T4

Compare angles and classify them as equal to, greater than or less than a right angle

• recognise and describe angles as 'less than', 'equal to', 'about the same as' or 'greater than' a right angle				
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Position 1

Outcomes

- uses appropriate terminology to describe, and symbols to represent, mathematical ideas - MA2-1WM
- uses simple maps and grids to represent position and follow routes, including using compass directions - MA2-17MG

Vocabulary

position, location, map, plan, path, route, grid, grid reference, aerial view, directions, legend, key, scale, directions, compass, compass rose, north, east, south, west, north-east, south-east, south-west, north-west.

T1 T2 T3 T4

Create and interpret simple grid maps to show position and pathways

• describe the location of an object using more than one descriptor, e.g. 'The book is on the third shelf and second from the left'				
• use given directions to follow routes on simple maps				
• use grid references on maps to describe position, e.g. 'The lion cage is at B3'				
• identify and mark particular locations on maps and plans, given their grid references				
• draw and label a grid on a given map				
• draw simple maps and plans from an aerial view, with and without labelling a grid, e.g. create a map of the classroom				
• draw and describe routes or paths on grid-referenced maps and plans				
• interpret and use simple maps found in factual texts and in the media				

Position 2

Outcomes

- uses appropriate terminology to describe, and symbols to represent, mathematical ideas - MA2-1WM

- uses simple maps and grids to represent position and follow routes, including using compass directions - MA2-17MG

Vocabulary

position, location, map, plan, path, route, grid, grid reference, aerial view, directions, legend, key, scale, directions, compass, compass rose, north, east, south, west, north-east, south-east, south-west, north-west.

T1 T2 T3 T4

Use simple scales, legends and directions to interpret information contained in basic maps

• use a legend (or key) to locate specific objects on a map			MR	MR
• use a compass to find north and then east, south and west			MR	MR
• use N, E, S and W to indicate north, east, south and west, respectively, on a compass rose			MR	MR
• use an arrow to represent north on a map			MR	MR
• determine the directions north, east, south and west when given one of the directions			MR	MR

Data 1

Outcomes

- uses appropriate terminology to describe, and symbols to represent, mathematical ideas - MA2-1WM
- selects and uses appropriate mental or written strategies, or technology, to solve problems - MA2-2WM
- checks the accuracy of a statement and explains the reasoning used - MA2-3WM
- selects appropriate methods to collect data, and constructs, compares, interprets and evaluates data displays, including tables, picture graphs and column graphs - MA2-18SP

Vocabulary

information, data, collect, category, display, symbol, list, table, column graph, picture graph, vertical columns, horizontal bars, equal spacing, title, key, vertical axis, horizontal axis, axes, spreadsheet, data, collect, survey, recording sheet, rating scale, category, display, symbol, tally mark, scale, misleading.

T1 T2 T3 T4

Identify questions or issues for categorical variables; identify data sources and plan methods of data collection and recording

• recognise that data can be collected either by the user or by others				
• identify possible sources of data collected by others, e.g. newspapers, government data-collection agencies, sporting agencies, environmental groups				
• pose questions about a matter of interest to obtain information that can be recorded in categories				
• predict and create a list of categories for efficient data collection in relation to a matter of interest, e.g. 'Which breakfast cereal is the most popular with members of our class?'				

Collect data, organise it into categories, and create displays using lists, tables, picture graphs and simple column graphs, with and without the use of digital technologies

• collect data and create a list or table to organise the data, e.g. collect data on the number of each colour of lollies in a packet				
• construct vertical and horizontal column graphs and picture graphs that represent data using one-to-one correspondence				

Interpret and compare data displays

• describe and interpret information presented in simple tables, column graphs and picture graphs				
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Chance 1

Outcomes

- uses appropriate terminology to describe, and symbols to represent, mathematical ideas - MA2-1WM
- checks the accuracy of a statement and explains the reasoning used - MA2-3WM
- describes and compares chance events in social and experimental contexts - MA2-19SP

Vocabulary

chance, experiment, outcome, random, trials, tally, expected results, actual results, event, less likely, more likely, most likely, least likely, equally likely

T1 T2 T3 T4

Conduct chance experiments, identify and describe possible outcomes, and recognise variation in results

• predict and list all possible outcomes in a chance experiment, e.g. list the outcomes when three pegs are randomly selected from a bag containing an equal number of pegs of two colours				
• predict the number of times each outcome should occur in a chance experiment involving a set number of trials, carry out the experiment, and compare the predicted and actual results				

Chance 2

Outcomes

- uses appropriate terminology to describe, and symbols to represent, mathematical ideas - MA2-1WM
- describes and compares chance events in social and experimental contexts - MA2-19SP

Vocabulary

chance, experiment, outcome, random, trials, tally, expected results, actual results, event, less likely, more likely, most likely, least likely, equally likely

	T1	T2	T3	T4
• use the terms 'equally likely', 'likely' and 'unlikely' to describe the chance of everyday events occurring, e.g. 'It is equally likely that you will get an odd or an even number when you roll a die'				
• compare the chance of familiar events occurring and describe the events as being 'more likely' or 'less likely' to occur than each other				
• order events from least likely to most likely to occur, e.g. 'Having 10 children away sick on the same day is less likely than having one or two away'				