

Linking Number outcomes and key ideas across substrands

Mathematics - Early Stage 1

Outcomes	Number and Algebra - key ideas	Links to other substrands and key ideas
<p>Whole Numbers MAe-4NA counts to 30, and orders, reads and represents numbers in the range 0 to 20</p>	<p>Count forwards to 30 from a given number</p> <p>Count backwards from a given number in the range 0 to 20</p> <p>Compare, order, read and represent numbers to at least 20</p> <p>Read and use the ordinal names to at least 'tenth'</p> <p>Subitise small collections of objects</p> <p>Use the term 'is the same as' to express equality of groups</p> <p>Use the language of money</p>	<p>Time Compare and order the duration of events using everyday language Tell time on the hour on digital and analog clocks</p> <p>Data Organise actual objects into data displays</p>
<p>Addition and Subtraction MAe-5NA combines, separates and compares collections of objects, describes using everyday language, and records using informal methods</p>	<p>Combine two or more groups of objects to model addition</p> <p>Take part of a group away to model subtraction</p> <p>Compare two groups to determine 'how many more'</p> <p>Record addition and subtraction informally</p>	<p>Length Record comparisons of length informally</p> <p>Mass Record comparisons of mass informally</p>

Outcomes	Number and Algebra - key ideas	Links to other substrands and key ideas
<p>Multiplication and Division MAe-6NA groups, shares and counts collections of objects, describes using everyday language, and records using informal methods</p>	<p>Investigate and model equal groups</p> <hr/> <p>Record grouping and sharing using informal methods</p>	<p>3D Space Sort and manipulate three-dimensional objects found in the environment</p> <p>2D Space Sort, manipulate, make and draw circles, squares, triangles and rectangles</p>
<p>Fractions and Decimals MAe-7NA describes two equal parts as halves</p>	<p>Establish the concept of one-half</p> <hr/> <p>Record halves of objects using drawings</p>	<p>Length Describe length and distance using everyday language, including comparatives</p> <p>Area Describe area using everyday language, including comparatives</p> <p>Volume Describe capacity and volume using everyday language, including comparatives</p> <p>Mass Describe mass using everyday language, including comparatives</p>



Outcomes	Number and Algebra - key ideas	Links to other substrands and key ideas
<p>Patterns and Algebra MAe-8NA recognises, describes and continues repeating patterns</p>	Sort and classify objects into groups	<p>Multiplication & Division Investigate and model equal groups</p> <p>3D Space Sort and manipulate three-dimensional objects found in the environment</p> <p>2D Space Sort, manipulate, make and draw circles, squares, triangles and rectangles</p>
	Recognise, copy, continue, create and describe repeating patterns of objects and drawings	

Mathematics - Stage 1

Outcomes	Number and Algebra - key ideas	Links to other substrands and key ideas
Whole Numbers MA1-4NA applies place value, informally, to count, order, read and represent two- and three-digit numbers	Part 1 Count forwards and backwards by ones from a two-digit number	Addition and Subtraction Model addition and subtraction using concrete materials Recognise and recall combinations of numbers that add to numbers up to 20 Multiplication and Division Rhythmic and skip count by twos, fives and tens from zero Length Use uniform informal units to measure, compare and estimate lengths Record lengths by referring to the number and type of uniform informal unit used Area Use uniform informal units to measure and estimate areas Volume and Capacity Use uniform informal units to measure, compare and estimate capacities Mass Use uniform informal units to measure, compare and estimate the masses of objects Time Name and order months and seasons Use a calendar to identify the date and determine the number of days in each month Use informal units to measure and compare the durations of events Data Collect data and track what has been counted Create data displays using objects and pictures (one-to-one correspondence) and interpret them Chance Predict and record all possible combinations in a chance situation
	Partition two-digit numbers using place value	
	Read, write and order two-digit numbers	
	Read and use ordinal names to at least 'thirty-first'	
	Recognise, describe and order Australian coins according to their value	
	Part 2 Count forwards and backwards by twos, threes, fives and tens from any starting point	
	Partition numbers of up to three digits using place value	
	Read, write and order three-digit numbers	
Recognise, count and order Australian coins and notes according to their value		

Outcomes	Number and Algebra - key ideas	Links to other substrands and key ideas
<p>Addition and Subtraction MA1-5NA uses a range of strategies and informal recording methods for addition and subtraction involving one- and two-digit numbers</p>	<p>Part 1 Model addition and subtraction using concrete materials</p> <p>Recognise and recall combinations of numbers that add to numbers up to 20</p> <p>Model and apply the commutative property for addition</p> <p>Record number sentences using drawings, words, numerals and the symbols +, - and =</p> <p>Use and record a range of mental strategies for addition and subtraction of one- and two-digit numbers</p> <p>Use the equals sign to record equivalent number sentences</p> <p>Part 2 Make connections between addition and subtraction</p> <p>Use and record a range of mental strategies for addition and subtraction of two-digit numbers</p> <p>Solve word problems involving addition and subtraction</p>	<p>Multiplication and Division Model and use repeated addition as a strategy for multiplication</p> <p>Patterns and Algebra Find missing numbers in number sentences involving one operation of addition or subtraction</p> <p>Length Use uniform informal units to measure, compare and estimate lengths</p> <p>Area Use uniform informal units to measure and estimate areas</p> <p>Volume and Capacity Use uniform informal units to measure, compare and estimate capacities Compare and order surfaces based on area measured using uniform informal units</p> <p>Mass Use uniform informal units to measure, compare and estimate the masses of objects</p>

Outcomes	Number and Algebra - key ideas	Links to other substrands and key ideas
<p>Multiplication and Division MA1-6NA uses a range of mental strategies and concrete materials for multiplication and division</p>	<p>Part 1 Rhythmic and skip count by twos, fives and tens from zero</p> <p>Model and use equal 'groups of' objects as a strategy for multiplication</p> <p>Model division by sharing a collection equally into a given number of groups to determine the number in each group</p> <p>Model division by sharing a collection equally into groups of a given size to determine the number of groups</p> <p>Part 2 Model and use repeated addition as a strategy for multiplication</p> <p>Model and use arrays described in terms of 'rows' and 'columns' as a strategy for multiplication</p> <p>Model and use groups, arrays and repeated subtraction as strategies for division</p> <p>Record using drawings, words and numerals</p>	<p>Addition and Subtraction Use and record a range of mental strategies for addition and subtraction of one- and two-digit numbers</p> <p>Fractions and Decimals Recognise, describe and represent one-half as one of two equal parts of whole objects, shapes and collections</p> <p>Patterns and Algebra Recognise, copy, continue, create and describe increasing and decreasing number patterns</p> <p>Area Record areas by referring to the number and type of uniform informal unit used [rows or columns]</p> <p>Volume and Capacity Record capacities and volumes by referring to the number and type of uniform informal unit used [rows and layers]</p>

Outcomes	Number and Algebra - key ideas	Links to other substrands and key ideas
<p>Fractions and Decimals MA1-7NA represents and models halves, quarters and eighths</p>	<p>Part 1 Recognise, describe and represent one-half as one of two equal parts of whole objects, shapes and collections</p> <p>Use fraction notation $\frac{1}{2}$</p> <p>Part 2 Recognise, describe and represent halves, quarters and eighths of whole objects, shapes and collections</p> <p>Use fraction notation $\frac{1}{4}$ and $\frac{1}{8}$</p>	<p>Multiplication and Division Model division by sharing a collection equally into a given number of groups to determine the number in each group</p> <p>Length Compare and order shapes/objects based on length measured using uniform informal units</p> <p>Time Tell time to the half-hour Experience activities with duration of one hour, half/quarter of an hour, one minute and a few seconds</p> <p>2D Space Identify, perform, describe and record the result of full, half and quarter ‘turns’</p> <p>Position Give and follow directions to move to familiar locations and to position objects</p>
<p>Patterns and Algebra MA1-8NA creates, represents and continues a variety of patterns with numbers and objects</p>	<p>Part 1 Recognise, copy, continue, create and describe increasing and decreasing number patterns</p> <p>Recognise, copy, create, continue and describe repeating patterns of objects or symbols</p> <p>Model and describe odd and even numbers</p>	<p>Whole Numbers Count forwards and backwards by twos, threes, fives and tens from any starting point</p> <p>Addition and Subtraction Model addition and subtraction using concrete materials Recognise and recall combinations of numbers that add to numbers up to 20 Record number sentences using drawings, words, numerals and the symbols +, - and =</p>

Outcomes	Number and Algebra - key ideas	Links to other substrands and key ideas
<p>Patterns and Algebra (cont.) MA1-8NA creates, represents and continues a variety of patterns with numbers and objects</p>	<p>Part 2 Describe patterns with numbers and identify missing elements</p> <hr/> <p>Find missing numbers in number sentences involving one operation of addition or subtraction</p>	<p>Multiplication and Division Rhythmic and skip count by twos, fives and tens from zero</p> <p>2D Space Identify and name triangles, quadrilaterals, pentagons, hexagons and octagons presented in different orientations, in pictures and the environment Identify, perform and record the result of one-step 'slides' and 'flips' Identify, perform, describe and record the result of full, half and quarter 'turns'</p>

Mathematics - Stage 2

Outcomes	Number and Algebra - key ideas	Links to other strands and key ideas
<p>Whole Numbers MA2-4NA applies place value to order, read and represent numbers of up to five digits</p>	<p>Part 1 Count forwards and backwards by tens and hundreds from any starting point</p>	<p>Addition and Subtraction Use and record a range of mental strategies for addition and subtraction of two-, three- and four-digit numbers Perform calculations with money, including calculating equivalent amounts using different denominations</p>
	<p>State the place value of digits in numbers of up to four digits</p>	
	<p>Read, write and order numbers of up to four digits</p>	<p>Multiplication and Division Recall multiplication facts for twos, threes, fives and tens Use mental strategies to multiply one-digit numbers by multiples of 10</p>
	<p>Part 2 State the place value of digits in numbers of up to five digits</p>	<p>Patterns and Algebra Identify, continue, create, describe and record increasing and decreasing number patterns</p>
	<p>Read, write and order numbers of up to five digits</p>	<p>Volume and Capacity Use litres to measure, compare and estimate capacities and volumes</p>
<p>Record numbers of up to five digits using expanded notation</p>	<p>Data Collect data, organise into categories and create displays using lists, tables, picture graphs and simple column graphs (one-to-one correspondence)</p>	

Outcomes	Number and Algebra - key ideas	Links to other substrands and key ideas
<p>Addition and Subtraction MA2-5NA uses mental and written strategies for addition and subtraction involving two-, three-, four- and five-digit numbers</p>	<p>Part 1 Model and apply the associative property for addition</p>	<p>Multiplication and Division Use and record a range of mental strategies for multiplication of two single-digit numbers</p> <p>Fractions and Decimals Model, compare and represent decimals with one and two decimal places</p> <p>Patterns and Algebra Find missing numbers in number sentences involving addition or subtraction on one or both sides of the equals sign</p> <p>Length Use metres, centimetres and millimetres to measure, compare, order and estimate lengths Estimate and measure perimeters of two-dimensional shapes</p>
	<p>Use and record a range of mental strategies for addition and subtraction of two-, three- and four-digit numbers</p>	
	<p>Perform calculations with money, including calculating equivalent amounts using different denominations</p>	
	<p>Use the equals sign to record equivalent number sentences</p>	
	<p>Part 2 Use the inverse operation to check addition and subtraction calculations</p>	
	<p>Use and record a range of mental strategies for addition and subtraction of two-, three-, four- and five-digit numbers</p>	
	<p>Use the formal written algorithm for addition and subtraction</p>	
<p>Solve word problems, including those involving money</p>		

Outcomes	Number and Algebra - key ideas	Links to other substrands and key ideas
<p>Multiplication and Division MA2-6NA uses mental and informal written strategies for multiplication and division</p>	<p>Part 1 Recall multiplication facts for twos, threes, fives and tens</p> <p>Recognise and use the symbols \times and \div</p> <p>Link multiplication and division using arrays</p> <p>Model and apply to commutative property for multiplication</p> <p>Use mental strategies to multiply one-digit numbers by multiples of 10</p> <p>Use and record a range of mental strategies for multiplication of two single-digit numbers</p> <p>Part 2 Recall and use multiplication facts up to 10×10 with automaticity</p> <p>Relate multiplication facts to their inverse division facts</p> <p>Determine multiples and factors of whole numbers</p> <p>Use the equals sign to record equivalent number relationships involving multiplication</p> <p>Use and record a range of mental and informal written strategies for multiplication and division of two-digit numbers by a one-digit operator</p> <p>Use mental strategies and informal recording methods for division with remainders</p>	<p>Whole Numbers Count forwards and backwards by tens and hundreds from any starting point</p> <p>Fraction and Decimals Model and represent fractions with denominators 2, 3, 4, 5 and 8 [multiples linked to equivalent fractions]</p> <p>Patterns and Algebra Recognise, continue and describe number patterns resulting from performing multiplication Find missing numbers in number sentences involving one operation of multiplication or division</p> <p>Area Use square centimetres and square metres to measure and estimate rectangular (and square) areas Measure and compare the areas of regular and irregular shapes using a square-centimetre grid</p> <p>Volume and Capacity Use cubic centimetres to measure and compare volumes</p> <p>3D Space Make models of three-dimensional objects Represent three-dimensional objects in drawings showing depth</p>



Outcomes	Number and Algebra - key ideas	Links to other substrands and key ideas
<p>Fractions and Decimals MA2-7NA represents, models and compares commonly used fractions and decimals</p>	<p>Part 1 Model and represent fractions with denominators 2, 3, 4, 5 and 8</p> <p>Count by halves, quarters and thirds, including with mixed numerals</p> <p>Represent fractions on number lines, including number lines that extend beyond 1</p> <p>Part 2 Model and find equivalence between fractions with denominators 2, 4 and 8; 3 and 6; and 5, 10 and 100</p> <p>Apply the place value system to represent tenths and hundredths as decimals</p> <p>Make connections between fraction and decimal notation</p> <p>Model, compare and represent decimals with one and two decimal places</p> <p>Represent decimals on number lines</p>	<p>Addition and Subtraction Perform calculations with money, including calculating equivalent amounts using different denominations</p> <p>Multiplication and Division Determine multiples and factors of whole numbers</p> <p>Time Read and record time to the minute, using digital notation and the terms 'past' and 'to'</p> <p>2D Space Split common shapes into other shapes and record the result Use transformations to create and describe symmetrical designs [quarter turns etc]</p>

Outcomes	Number and Algebra - key ideas	Links to other substrands and key ideas
<p>Patterns and Algebra MA2-8NA generalises properties of odd and even numbers, generates number patterns, and completes simple number sentences by calculating missing values</p>	<p>Part 1 Identify, continue, create, describe and record increasing and decreasing number patterns</p>	<p>Whole Numbers Count forwards and backwards by tens and hundreds from any starting point Read, write and order numbers of up to four digits Read, write and order numbers of up to five digits</p> <p>Addition and Subtraction Model and apply the associative property for addition</p> <p>Multiplication and Division Recall multiplication facts for twos, threes, fives and tens</p>
	<p>Identify odd and even numbers of up to four digits</p>	
	<p>Part 2 Find missing numbers in number sentences involving addition or subtraction on one or both sides of the equals sign</p>	
	<p>Investigate and use the properties of odd and even numbers</p>	
	<p>Recognise, continue and describe number patterns resulting from performing multiplication</p>	
<p>Find missing numbers in number sentences involving one operation of multiplication or division</p>		

Mathematics - Stage 3

Outcomes	Number and Algebra - key ideas	Links to other substrands and key ideas
<p>Whole Numbers MA3-4NA orders, reads and represents integers of any size and describes properties of whole numbers</p>	<p>Part 1 Read, write and order numbers of any size</p>	<p>Multiplication and Division Use and record a range of mental and written strategies to multiply by one- and two-digit operators</p> <p>Patterns and Algebra Identify, continue create and describe increasing and decreasing number patterns with fractions, decimals and whole numbers Continue, create, record and describe geometric and number patterns in words Locate and record the coordinates of points in all four quadrants of the Cartesian plane</p> <p>Length Convert between kilometres, metres, centimetres and millimetres</p> <p>Volume and Capacity Convert between millilitres and litres</p> <p>Mass Convert between tonnes, kilograms and grams</p> <p>Time Draw and interpret timelines using a given scale</p> <p>Data Collect categorical and numerical data by observation and by survey</p>
	State the place value of digits in numbers of any size	
	Record numbers of any size using expanded notation	
	Determine factors and multiples of whole numbers	
	<p>Part 2 Recognise the location of negative numbers in relation to zero on a number line</p>	
	Identify and describe prime and composite numbers	
Model and describe square and triangular numbers		

Outcomes	Number and Algebra - key ideas	Links to other substrands and key ideas
<p>Addition and Subtraction MA3-5NA selects and applies appropriate strategies for addition and subtraction with counting numbers of any size</p>	<p>Part 1 Select and apply efficient mental, written and calculator strategies for addition and subtraction of numbers of any size</p> <p>Use estimation to check answers to calculations</p> <p>Solve word problems and record the strategy used, including problems involving money</p> <p>Create a simple budget</p> <p>Part 2 Select and apply efficient mental, written and calculator strategies to solve word problems and record the strategy used</p>	<p>Multiplication and Division Recognise and use grouping symbols Apply the order of operations in calculations</p> <p>Fractions and Decimals Model and represent strategies to add and subtract fractions with the same denominator Add and subtract fractions, included mixed numerals, with the same or related denominators Use mental, written and calculator strategies to add and subtract decimals with up to three decimal places Solve word problems involving fractions and decimals, including money problems Use mental, written and calculator strategies to calculate 10%, 25% and 50% of quantities, including as discounts</p> <p>Length Find perimeters of common two-dimensional shapes and record the strategy Solve problems involving length and perimeter</p>
<p>Multiplication and Division MA3-6NA selects and applies appropriate strategies for multiplication and division, and applies the order of operations to calculations involving more than one operation</p>	<p>Part 1 Use and record a range of mental and written strategies to multiply by one- and two-digit operators</p> <p>Use the formal algorithm for multiplication by one- and two-digit operators</p>	<p>Whole Numbers Determine factors and multiples of whole numbers Identify and describe prime and composite numbers Model and describe square and triangular numbers</p>

Outcomes	Number and Algebra - key ideas	Links to other substrands and key ideas
<p>Multiplication and Division (cont.) MA3-6NA selects and applies appropriate strategies for multiplication and division, and applies the order of operations to calculations involving more than one operation</p>	<p>Use and record a range of mental and written strategies to divide numbers with three or more digits by a one-digit operator, including problems that result in a remainder</p>	<p>Addition and Subtraction Create a simple budget</p> <p>Fractions and Decimals Multiply fractions by whole numbers Use mental, written and calculator strategies to divide decimals by one-digit whole numbers Multiply and divide decimals by 10, 100 and 1000</p> <p>Patterns and Algebra Find missing numbers in number sentences involving multiplication or division on one or both sides of the equals sign Continue, create, record and describe geometric and number patterns in words</p> <p>Area Develop a strategy to find areas of rectangles (including squares) and record the strategy in words Develop a strategy to find areas of triangles and record the strategy in words</p> <p>Volume and Capacity Develop a strategy to find volumes of rectangular prisms and record the strategy in words</p>
	<p>Solve word problems and record the strategy used</p>	
	<p>Interpret remainders in division problems</p>	
	<p>Use estimation to check answers to calculations</p>	
	<p>Part 2 Select and apply efficient mental, written and calculator strategies to solve word problems and record the strategy used</p>	
	<p>Recognise and use grouping symbols</p>	
	<p>Apply the order of operations in calculations</p>	

Outcomes	Number and Algebra - key ideas	Links to other substrands and key ideas
<p>Fractions and Decimals MA3-7NA compares, orders and calculates with fractions, decimals and percentages</p>	<p>Part 1 Compare and order unit fractions with denominators 2, 3, 4, 5, 6, 8, 10, 12 and 100</p>	<p>Addition and Subtraction Create a simple budget</p> <p>Patterns and Algebra Identify, continue create and describe increasing and decreasing number patterns with fractions, decimals and whole numbers</p> <p>Length Record lengths and distances using decimal notation to three decimal places Convert between kilometres, metres, centimetres and millimetres</p> <p>Area Develop a strategy to find areas of triangles and record the strategy in words</p> <p>Volume and Capacity Record volumes and capacities using decimal notation to three decimal places Convert between millilitres and litres</p> <p>Mass Record mass using decimal notation to three decimal places Convert between tonnes, kilograms and grams</p>
	<p>Express mixed numerals as improper fractions and vice versa</p>	
	<p>Model and represent strategies to add and subtract fractions with the same denominator</p>	
	<p>Apply the place value system to represent thousandths as decimals</p>	

Outcomes	Number and Algebra - key ideas	Links to other substrands and key ideas
Fractions and Decimals (cont.) MA3-7NA compares, orders and calculates with fractions, decimals and percentages	Compare, order and represent decimals with up to three decimal places	Chance List outcomes of chance experiments involving equally likely outcomes Represent probabilities using fractions Recognise that probabilities range from 0 to 1 Represent probabilities using fractions, decimals and percentages
Fractions and Decimals (cont.) MA3-7NA compares, orders and calculates with fractions, decimals and percentages	Part 2 Represent, compare and order fractions with denominators 2, 3, 4, 5, 6, 8, 10, 12 and 100 Determine, generate and record equivalent fractions Write fractions in their 'simplest form' Add and subtract fractions, included mixed numerals, with the same or related denominators Multiply fractions by whole numbers Find a simple fraction of a quantity Use mental, written and calculator strategies to add and subtract decimals with up to three decimal places Use mental, written and calculator strategies to multiply decimals by one- and two-digit whole numbers Use mental, written and calculator strategies to divide decimals by one-digit whole numbers Multiply and divide decimals by 10, 100 and 1000	Multiplication and Division Use and record a range of mental and written strategies to multiply by one- and two-digit operators Patterns and Algebra Identify, continue create and describe increasing and decreasing number patterns with fractions, decimals and whole numbers Addition and Subtraction Solve word problems and record the strategy used, including problems involving money Create a simple budget

Outcomes	Number and Algebra - key ideas	Links to other substrands and key ideas
<p>Fractions and Decimals (cont.) MA3-7NA compares, orders and calculates with fractions, decimals and percentages</p>	<p>Solve word problems involving fractions and decimals, including money problems</p> <p>Make connections between equivalent percentages, fractions and decimals</p> <p>Use mental, written and calculator strategies to calculate 10%, 25% and 50% of quantities, including as discounts</p>	
<p>Patterns and Algebra MA3-8NA analyses and creates geometric and number patterns, constructs and completes number sentences, and locates points on the Cartesian plane</p>	<p>Part 1 Identify, continue create and describe increasing and decreasing number patterns with fractions, decimals and whole numbers</p> <p>Find missing numbers in number sentences involving multiplication or division on one or both sides of the equals sign</p> <p>Part 2 Continue, create, record and describe geometric and number patterns in words</p> <p>Determine the rule for geometric and number patterns in words and use the rule to calculate values</p> <p>Locate and record the coordinates of points in all four quadrants of the Cartesian plane</p>	<p>Whole Numbers Recognise the location of negative numbers in relation to zero on a number line</p> <p>Multiplication and Division Use and record a range of mental and written strategies to multiply by one- and two-digit operators Recognise and use grouping symbols</p> <p>2D Space Compare and describe side properties of the special quadrilaterals and special triangles</p>

Links between key ideas in other non- Number strands

Early Stage 1

Length – 3D Space (comparing objects)

Length: Identify the attribute of ‘length’ as a measure of an object from end to end

3D Space: Describe features of common three-dimensional objects using everyday language

Area- 2D Space (closed shapes)

Area: Identify the attribute of ‘area’ as a measure of the amount of surface

Describe area using everyday language, including comparatives

2D Space: Sort, manipulate, make and draw circles, squares, triangles and rectangles

3D Space- Volume (stacking)

Volume : Describe capacity and volume using everyday language, including comparatives

3D Space: Sort and manipulate three-dimensional objects found in the environment

3D Space – Data (grouping objects)

Data: Organise actual objects into data displays

3D Space: Sort and manipulate three-dimensional objects found in the environment

3D Space- 2D Space (sorting by shape)

3D Space: Sort and manipulate three-dimensional objects found in the environment

2D Space: Sort, manipulate, make and draw circles, squares, triangles and rectangles

Stage 1

Area- 2D Space (identifying and manipulating shapes)

Area: Use uniform informal units to measure and estimate areas

2D Space: Identify and name triangles, quadrilaterals, pentagons, hexagons and octagons presented in different orientations, in pictures and the environment

Volume and Capacity- 3D Space (identifying and manipulating objects)

Volume and Capacity: Use uniform informal units to measure and estimate volumes

3D Space: Identify cones, cubes, cylinders, spheres and prisms presented in different orientations, in pictures and the environment

Mass- 3D Space (identify and manipulating objects)

Mass: Use a pan balance to compare two objects based on mass

3D Space: Identify cones, cubes, cylinders, spheres and prisms presented in different orientations, in pictures and the environment

2D Space- Data (counting/ drawing shapes)

Data: Create data displays using objects and pictures (one-to-one correspondence) and interpret them

2D Space: Make and draw two-dimensional shapes in different orientations

Position and 3D Space (making and sketching models)

Position: Give and follow directions to move to familiar locations and to position objects

Represent the position of objects in models, photographs and drawings

3D Space: Identify cones, cubes, cylinders, spheres and prisms presented in different orientations, in pictures and the environment

Represent three-dimensional objects in models and drawings

Area- Volume and Capacity (finding volume through area, then layers)

Area: Use uniform informal units to measure and estimate areas

Volume and Capacity: Use uniform informal units to measure and estimate volumes

Stage 2

Length- 2D Space (measuring shapes)

Length: Estimate and measure perimeters of two-dimensional shapes

2D Space: Describe and compare features of shapes, including the special quadrilaterals

Length- Position (measuring using cm)

Length: Use metres, centimetres and millimetres to measure, compare, order and estimate lengths

Convert between metres, centimetres and millimetres

Position: Use the scale to calculate the distance between two points on maps

Angles- 2D Space- 3D Space (angles as features)

3D Space: Represent three-dimensional objects in drawings showing depth

Identify, describe and compare features of prisms, pyramids, cylinders, cones and spheres

Sketch three-dimensional objects from different views

2D Space: Describe and compare features of shapes, including the special quadrilaterals

Angles: Identify 'perpendicular' lines and 'right angles'

Volume and Capacity- 3D Space (volume of objects)

Volume and Capacity: Compare volumes of objects by submerging each in water

3D Space: Identify, describe and compare features of prisms, pyramids, cylinders, cones and spheres

Stage 3

Length- 2D Space (perimeter of shapes)

Length: Find perimeters of common two-dimensional shapes and record the strategy

2D Space: Identify, name and draw right-angled, equilateral, isosceles and scalene triangles

Compare and describe side properties of the special quadrilaterals and special triangles

Area- 2D Space (area of shapes)

Area: Develop a strategy to find areas of rectangles (including squares) and record the strategy in words

2D Space: Classify and draw regular and irregular two-dimensional shapes from descriptions of their features

Volume and Capacity- 3D Space (relationship between volume and prisms)

Volume and Capacity: Develop a strategy to find volumes of rectangular prisms and record the strategy in words

3D Space: Describe and compare properties of prisms and pyramids in terms of their faces, edges and vertices

2D Space- Angles (angles as features/ properties)

2D Space: Identify, name and draw right-angled, equilateral, isosceles and scalene triangles

Explore angle properties of the special quadrilaterals and special triangles

Classify and draw regular and irregular two-dimensional shapes from descriptions of their features

Angles: Describe angle size in degrees for each angle classification

Measure, compare and estimate angles in degrees (up to 360°)

3D Space- 2D Space (naming objects by their bases)

3D Space: Name prisms and pyramids according to the shape of their 'base'

2D Space: Identify, name and draw right-angled, equilateral, isosceles and scalene triangles

Classify and draw regular and irregular two-dimensional shapes from descriptions of their features

3D Space- 2D Space (2D representations of 3D objects)

3D Space: Describe and compare properties of prisms and pyramids in terms of their faces, edges and vertices

Connect three-dimensional objects with their nets

2D Space: Classify and draw regular and irregular two-dimensional shapes from descriptions of their features

Reference

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