## MATHEMATICS STRAND CONTINUUM



## **NISS Maths Strand Continuum:**

Based on the <u>UK National Curriculum</u> with: <u>Australian Curriculum Docs</u> <u>Ontario Curriculum</u> <u>Nexus Maths S&S</u> <u>Early Years Foundation Stage</u>

N-Y2	Nursery	Kindergarten	Year 1	Year 2
Shape & Space	<ul> <li>show an interest in shapes in the environment.</li> <li>name and identify 2D shapes (square, circle, triangle, rectangle, oval, hexagon).</li> <li>describe 2D shapes using language such as straight, curved, sides, corners.</li> <li>sort and organise 2D shapes.</li> <li>compare different 2D shapes.</li> <li>use familiar objects and common shapes to explore and create models.</li> </ul>	<ul> <li>identify 2D and 3D shapes in the environment.</li> <li>name and identify 2D shapes (square, circle, triangle, rectangle, oval, hexagon).</li> <li>name and identify 3D shapes (cube, cuboid, sphere, pyramid, cone).</li> <li>sort and organise 2D shapes and use mathematical language to explain their thinking.</li> <li>describe 2D and 3D shapes (straight, curved, sides, corners, faces, edges).</li> <li>use familiar objects and common shapes to create models and arrangements and describe.</li> </ul>	<ul> <li>identify and describe more complex 2D shapes in the environment (hexagon, pentagon, octagon, trapezium, semicircle).</li> <li>identify and describe common 3D shapes (Eg. cube, cuboid, cone, pyramid, sphere, prism, cylinder).</li> <li>sort and organise 2D shapes (including complex shapes) and use mathematical language to explain their thinking (straight, curved, sides, corners, faces, edges, vertices).</li> <li>identify and describe properties of common 2D and 3D shapes.</li> <li>use 2D and 3D shapes to create models and describe using mathematical language.</li> <li>understand that geometric shapes are useful for representing real-world situations e.g. cylinders are used for bottles,jars.</li> <li>identify symmetrical patterns in the environment</li> </ul>	<ul> <li>identify and describe the properties of 2D shapes, including the number of sides and corners.</li> <li>identify the line of symmetry in 2D shapes in a vertical line.</li> <li>identify and describe the properties of 3D shapes, including the number of edges, vertices and faces.</li> <li>identify 2D shapes on the surface of 3D shapes, (eg. circle on a cylinder, triangle on a pyramid).</li> <li>compare and sort 2D and 3D shapes based on their properties.</li> </ul>
Angles	Not taught at this age.	Not taught at this age.	Not taught at this age.	Not taught at this age.

(report under measurement but teach with Shape & Space)				
Vocabulary	square, circle, triangle, rectangle, oval, hexagon, straight, curved, sides, corners.	square, circle, triangle, rectangle, oval, hexagon, straight, curved, sides, corners cube, cuboid, sphere, pyramid, cone, straight, curved, sides, corners, faces, edges, flat,	2D Shapes:     - pentagon, hexagon,     octagon, trapezium, semi     circle  3D Shapes:     - cube, cuboid, cone,     pyramid, sphere, prism,     cylinder	attributes, sides, edges, vertices, faces quadrilaterals, polygons, cuboids, prisms, cones
Position & Direction	<ul> <li>explore language associated with position (inside, outside, above, below, next to, behind, in front of, up, down).</li> <li>use positional language to describe position and direction.</li> <li>order and arrange a set of objects following positional language.</li> <li>follow simple instructions using positional language eg stand next to the chair, put your hands above your head.</li> </ul>	<ul> <li>use positional language to describe position and direction.</li> <li>follow and give simple instructions using positional language.</li> <li>order and arrange a set of objects following positional language.</li> <li>describe the position and location of themselves and objects in relation to other people and objects within a familiar space.</li> </ul>	<ul> <li>use positional language to describe the location of themselves, objects or people (include left, right).</li> <li>order and arrange a set of objects using and following positional language.</li> <li>describe the position and location of themselves and objects in relation to other people and objects within a familiar space.</li> <li>follow, use and interpret simple directions.</li> </ul>	<ul> <li>use positional language to describe position, direction and movement, including movement in a straight line.</li> <li>order and arrange combinations of mathematical objects in patterns and sequences.</li> <li>describe position and direction and movement, including whole, half, quarter and three-quarter turns for clockwise and anticlockwise.</li> </ul>
Vocabulary	inside, outside, above, below, next to, behind, in front of, up, down, forwards, backwards	inside, outside, above, below, next to, behind, in front of, up, down, inbetween, beside, forwards and backwards	left, right, top, bottom, middle, on top of, in front of, above, between) around, near, close and far, up and down, forwards and backwards,	right, left, whole, half, quarter, three-quarter, clockwise and anticlockwise

			inside and outside	
N-Y2	Nursery	Kindergarten	Year 1	Year 2
Data Handling	<ul> <li>explore and understand that sets can be organised by 1 or 2 given attributes (shape, size, colour, texture).</li> <li>identify how a group of objects have been classified using mathematical language (shape, size, colour).</li> <li>collect and sort data through everyday activities or events eg. sorting toys into different categories.</li> <li>sort objects into different attributes.</li> <li>collect and organise data to answer yes/no questions.</li> <li>explore simple pictographs and tally charts.</li> <li>interpret information on simple pictographs and tally charts.</li> </ul>	<ul> <li>understand that sets can be organised into different attributes (shape, size, colour, texture).</li> <li>identify how a group of objects have been classified using mathematical language (shape, size, colour).</li> <li>sort a group of objects into different attributes.</li> <li>sort a group of objects into different attributes and explain their choices</li> <li>collect and organise data for sorting.</li> <li>represent information through pictographs and tally marks.</li> <li>read and interpret information on simple pictographs and tally charts.</li> </ul>	<ul> <li>independently organise a set of objects using a chosen attribute and explain their thinking.</li> <li>represent information through pictographs and tally marks.</li> <li>create a simple bar graph.</li> <li>create living graphs using real objects and people.</li> <li>independently conduct a simple survey and record the results in a pictograph or bar graph.</li> <li>answer questions about the data collected and interpret information on simple charts.</li> </ul>	<ul> <li>construct simple pictographs, tally charts and bar graph.</li> <li>interpret pictographs, tally charts and bar graphs.</li> <li>represent the relationship between objects using Venn and Carroll diagrams.</li> <li>ask and answer questions by counting the number of objects in each category and sorting the categories by quantity.</li> <li>ask and answer questions about totalling and comparing categories.</li> </ul>
Probability	explore possible and impossible events.	explore, name and discuss possible and impossible	identify and describe chance in daily events.	understand the concept of chance in daily events

		events eg. it is possible that it will rain today, it is impossible that it will snow today.	explain why it is impossible/possible, likely, unlikely that an event may or may not happen.	<ul> <li>(impossible, less likely, maybe, most likely, certain).</li> <li>express the chance of an event happening using words or phrases (impossible, less likely, maybe, most likely, certain).</li> <li>identify and describe chance in daily events (impossible, less likely, maybe, most likely, certain).</li> </ul>
Vocabulary	pictograph, tally charts, possible/impossible/maybe	pictograph, tally charts, survey, category  possible/impossible likely/unlikely/maybe	data, pictograph, tally charts survey, sort, groups  possible/impossible likely/unlikely/maybe/certain/more likely/less likely/chance	data, pictograph, tally (charts) tables, total, categories,sort impossible, less likely, maybe most likely, certain
N-Y2	Nursery	Kindergarten	Year 1	Year 2

## Measurement

- identify items that are long/short/big/small/heavy/ light/ empty/full.
- order and compare 2 or 3 items by length or height.
- compare 2 items by weight and capacity.
- identify, compare and describe attributes of real objects (eg. longer, shorter, heavier, full, empty).
- identify and sequence events in their daily routine (eg. first, then, next, today, tomorrow).

- identify items that are long/short/big/small/heavy/li ght/empty/full.
- identify, compare and describe attributes of real objects (eg. longer, shorter, heavier, full, empty).
- compare the length, mass and capacity of objects using non-standard units.
- identify, describe and sequence events in their daily routine.
- sequence days of the week and times of the day including morning, lunchtime afternoon and night time, and connect them to familiar events and actions.
- sequence the events from a story in the order in which they occurred using specific vocabulary (eg. first, then, next).

- identify, compare and describe attributes of real objects (eg. longer, shorter, heavier, lighter, full, empty,) and explain their thinking.
- use non-standard units when measuring length, mass and capacity and make an estimate.
- compare the length, mass and capacity of objects using nonstandard units.
- use non-standard units of measurement to solve problems in real-life situations involving length, mass and capacity, with some support.
- identify and describe some events in their daily routine (e.g. morning, afternoon and evening tasks).
- understand that time is measured using universal units of measure (e.g. years, months, days, hours, minutes and seconds).
- tell the time to the hour using a model clock.
- read and write the time to the hour, half hour.
- identify and sort Singapore Money (\$1, \$2, \$5, \$10, 10/20/50 cents).

- choose and use appropriate non-standard units to estimate and measure length, mass, volume and capacity.
- choose and use appropriate standard units to estimate and measure length using rulers.
- choose and use appropriate standard units to estimate and measure mass, volume and capacity.
- choose and use appropriate standard units to measure temperature to the nearest appropriate unit using thermometers.
- compare and order lengths, mass, volume and capacity.
- tell and record the time including the hour, half hour and quarter hour and draw the hands on a clock face to show these times.
- record the time (quarter hour, half hour and hour) on an analogue and digital clock.
- recall the number of seconds in a minute, the number of minutes in an hour and the number of hours in a day.
- understand that calendars can be used to determine the date, and to identify and sequence days of the week and months of the year.
- use measures of time to assist with problem solving in real-life situations.

				<ul> <li>understand the use of standard units to measure temperature.</li> <li>understand that tools can be used to measure.</li> <li>estimate and measure objects using standard units of measurement: temperature.</li> <li>use standard units of measurement to solve problems in real-life situations involving temperature.</li> <li>recognise and use symbols for dollars (\$) and cents (¢) and combine to make a particular value.</li> <li>find different combinations of coins that equal the same amounts of money.</li> <li>solve simple problems in a practical context involving addition and subtraction of money of the same unit (\$ or ¢), including giving change.</li> </ul>
Vocabulary	long, short, longer, shorter, tall, tallest. (length and height) heavy, light. (mass) full, empty, half full. (capacity) first, then, next, last, finally. (time and sequencing.)	long, short, longer, shorter, tall, taller (length and height) heavy, light, heavier, lighter, (Mass) full, empty, nearly empty, nearly full (Capacity) first, next, after ,then, last, finally.tall, taller (Time and sequencing)	long / short/longer/shorter/ longest/shortest (Length/height) heavy / light/heavier/lighter/ heaviest/lightest (Mass) full / empty/half/ nearly full, nearly empty, half full (Capacity) clock, hour hand / minute hand, hours, minutes, seconds o'clock, half past	estimate,length,centimetres, metres, height, mass, volume capacity,quarter to, quarter past

N-Y2	Nursery	Kindergarten	Year 1	Year 2
Pattern & Function	<ul> <li>explore and identify patterns in the environment and everyday life (sounds, actions, objects, nature, numbers).</li> <li>describe patterns using words, drawings, symbols, materials, actions or numbers.</li> <li>create simple patterns.</li> <li>recreate simple patterns.</li> </ul>	<ul> <li>identify patterns in the environment and everyday life (sounds, actions, objects, numbers,nature).</li> <li>describe patterns using words, drawings, symbols, materials, actions or numbers.</li> <li>create and extend patterns.</li> <li>recreate patterns.</li> </ul>	<ul> <li>use number patterns to represent and understand real-life situations.</li> <li>understand the properties and associated number patterns of odd and even numbers.</li> <li>explore the relationship between addition and subtraction (e.g. fact families).</li> <li>apply knowledge of skip counting in 2s, 5s and 10s to identify and continue number patterns.</li> </ul>	<ul> <li>understand the properties and associated number patterns of odd and even numbers to 100.</li> <li>understand the relationship between addition and subtraction and multiplication and division (e.g. fact families).</li> <li>apply knowledge of skip counting in 2s, 5s and 10s to identify and continue number patterns.</li> <li>create and extend number patterns such as skip counting (e.g., 6, 9, 12 _, _, _,).</li> </ul>
Vocabulary	before, next, copy, repeat, different, same.	before, after, next, start, finish, copy, repeat, between, different, same	repeated, odd, even, skip counting, fact families	

Y3 -Y6	Year 3	Year 4	Year 5	Year 6
Shape & Space (Properties of shapes)	<ul> <li>recognise and describe 2D symmetrical and non-symmetrical polygons including quadrilaterals, triangles and pentagons.</li> <li>identify horizontal and vertical lines and pairs of perpendicular and parallel lines.</li> <li>classify 3D shapes including cylinders, spheres, prisms and pyramids according to attributes.</li> <li>create 2D and 3D shapes using modelling materials.</li> <li>recognise 2D and 3D shapes in different orientations.</li> <li>recognise angles as a property of shape or as a description of a turn.</li> </ul>	<ul> <li>compare and classify geometric shapes, including quadrilaterals and triangles, based on their size and properties such as regular/irregular, symmetrical/non-symmetrical type of angle, parallel, perpendicular etc. (see vocabulary below).</li> <li>identify lines of symmetry in 2D shapes presented in different orientations.</li> <li>complete a simple symmetric figure with respect to a specific horizontal or vertical line of symmetry.</li> <li>begin to classify triangles as isosceles, equilateral and scalene.</li> <li>identify different quadrilaterals such as trapezium, rhombus, parallelogram.</li> </ul>	<ul> <li>identify 3D shapes, including cubes and other cuboids, from 2D representations.</li> <li>identify geometric shapes based on their properties and sizes.</li> <li>distinguish between regular and irregular 2D polygons based on reasoning about equal sides and angles.</li> <li>classify triangles according to their properties.</li> </ul>	<ul> <li>draw 2D shapes using given dimensions and angles.</li> <li>identify geometric properties of triangles, and construct different types of triangles when given side or angle measurements.</li> <li>illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice as wide as the radius.</li> <li>use conventional markings for lines and angles.</li> </ul>
Vocabulary	faces, edges, vertex, vertices, 2 dimensional, 3 dimensional, symmetry, quadrilateral, triangle, pentagon, attribute	parallel lines, perpendicular lines, regular shapes, irregular shapes line of symmetry, geometric	parallel lines, perpendicular lines, regular shapes, irregular shapes line of symmetry, geometric, polygon vertices, faces, edges. nets	radius diameter circumference arc
Angles (report under measurement but teach with Shape & Space)	<ul> <li>identify whether an angle is greater or less than a right angle using the vocabulary acute angle and obtuse angle.</li> <li>recognise that right angles occur in a number of everyday objects; for example, books, windows, table tops and whiteboards.</li> <li>identify angles that are bigger than, smaller than and the same</li> </ul>	<ul> <li>identify acute and obtuse angles.</li> <li>compare and order angles up to 2 right angles by size.</li> <li>identify whole turn as 360°, half turn as 180°, quarter turn as 90°.</li> <li>measure angles smaller than 180° to the nearest degree using a protractor.</li> <li>calculate a missing angle within a right angle. Eg: 25° + ? = 90°</li> <li>relate angles to compass</li> </ul>	<ul> <li>estimate and compare acute, obtuse and reflex angles.</li> <li>draw given angles and measure them in degrees.</li> <li>identify angles at a point and one whole turn.</li> <li>identify angles at a point on a straight line and half a turn.</li> <li>find missing angles in triangles, straight lines, and round a point.</li> <li>use the properties of rectangles</li> </ul>	<ul> <li>find unknown angles in any triangles, quadrilaterals and regular polygons.</li> <li>recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.</li> <li>compare angles and determine their relative size by matching them and by</li> </ul>

	as a right angle; for example, opening doors partially and fully, and comparing the angles created to a right angle.  • using quarter, half and three-quarter turns compare them to a right angle; for example, a quarter turn is the same as a right angle; a half turn is the same as 2 right angles; a three-quarter turn is the same as 3 right angles.	directions. Eg: From north, turn 90° clockwise to face east.	to deduce related facts and find missing lengths and angles.	measuring them.  use angle sum facts and other properties to make deductions about missing angles.
Vocabulary	point, ray, line, line segment, turn, right angle, acute angle, obtuse angle, parallel lines, perpendicular lines	rotation, degrees, protractor	point, ray, line, line segment, turn, right angle, acute angle, obtuse angle, parallel lines, perpendicular lines, vertex, rotation, degrees, protractor,	Vertically opposite
(Position and Direction)	<ul> <li>demonstrate the movements of flip, slide, turn of 2D shapes.</li> <li>understand the points on a compass rose (north, south, east, west).</li> <li>describe the position of an object on a grid or map using the vocabulary left and right, top, middle and bottom; rows go across and columns go up and down.</li> <li>read and create maps using letters and numbers along the axis in order to pinpoint particular objects.</li> </ul>	<ul> <li>describe and plot positions on a 2D grid as coordinates in the first quadrant.</li> <li>describe the movement of a shape on a grid as translation by giving the units moved the left/right and up/down.</li> <li>plot specified points and draw sides to a complete given polygon.</li> <li>describe position using the 8 points of the compass rose.</li> <li>(eg: N, NE, E, SE, S, SW, W, NW).</li> <li>explain how the compass points relate to angles of rotation.</li> </ul>	<ul> <li>identify, describe and represent the position of a shape following a reflection translation, or rotation and know that the shapes are congruent.</li> <li>describe transformations as being horizontal, vertical, or diagonal e.g. a diagonal reflection.</li> <li>describe and plot position on a 4 quadrant grid using coordinates.</li> <li>identify multiple lines of symmetry in 2D shapes</li> </ul>	<ul> <li>describe positions on the full coordinate grid.</li> <li>draw and translate simple shapes on the coordinate plane, and reflect them in the axes.</li> <li>describe and perform translations, reflections, and rotations up to 180° on a grid, and predict the results of these transformations.</li> </ul>
Vocabulary	flip, slide, turn, compass rose, north, south, east, west, left, right, top, middle, bottom, grid, reference	Isosceles, equilateral, scalene, right angle triangle, reflective symmetry, mirror line, 'slide' 8 point compass direction. enlarge - reduce	rays, vertex, translation, reflection rotation, congruent, horizontal, vertical, diagonal	tessellation
Y3 -Y6	Year 3	Year 4	Year 5	Year 6

Data Handling	<ul> <li>collect and organise data by asking questions and organising information.</li> <li>demonstrate an understanding of how to use the tally method.</li> <li>interpret and present data in column graphs (bar charts), picture graphs (pictographs), dot plots and two-way tables.</li> <li>understand and use simple scales; for example 1, 2, 5, 10 units in column charts and picture graphs.</li> <li>create a survey, design a question and present findings.</li> </ul>	<ul> <li>collect and organise data using Google Forms, tables, tally charts, Venn Diagrams and Carroll Diagrams.</li> <li>create decision trees to categorise data.</li> <li>interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and timelines.</li> <li>solve comparison, sum and difference problems using information presented in bar charts, pictographs, tables and timelines.</li> <li>understand and use a greater range of scales other than 2, 5, 10 intervals in their representations.</li> <li>begin to relate the graphical representation of data to recording change over time.</li> </ul>	<ul> <li>draw line graphs accurately, deciding on the suitable scale.</li> <li>solve comparison, sum and difference problems using information presented in a line graph.</li> <li>complete, read and interpret information in graphs and tables including timetables.</li> <li>begin to decide which representations of data are most appropriate and why.</li> <li>represent and interpret cumulative frequencies by using a frequency graph.</li> </ul>	<ul> <li>interpret and construct pie charts and line graphs and use these to solve problems.</li> <li>calculate and interpret the mean as an average.</li> <li>draw graphs relating 2 variables.</li> <li>analyse and interpret a variety of graphs including grouped data.</li> </ul>
Vocabulary	bar graph, pictographs count, tally, diagram, axis, axes, column graph, picture graph, dot graph, two-way table, venn diagram, most popular, most common, least popular, least common.	carroll diagrams, decision trees represent,intervals, difference	line graph, scale, suitable scale, axis, diagram,	mean, average, range, mode
Probability	<ul> <li>order events based on the likelihood of something happening; for example, impossible, even chance, certain, likely and unlikely.</li> <li>understand the difference between expected results and actual results.</li> <li>represent the difference between fair and unfair chances; for example, create a spinner game, coin or dice</li> </ul>	<ul> <li>understand that probability is based on experimental events.</li> <li>use tree diagrams to express probability using simple fractions.</li> <li>use probability to determine mathematically fair and unfair games and to explain possible outcomes</li> <li>express probability using sim ple fractions for dice activities.</li> <li>put events on a probability scale using words such as no chance -</li> </ul>	<ul> <li>express probabilities using a fraction, a scale (0–1) or per cent (0%–100%).</li> <li>explain probabilities expressed as a fraction and how they relate to corresponding word expressions (e.g. ½ = even chance, % = very likely, 2/6 = unlikely).</li> <li>solve simple probability problems expressing answers in both fraction and word form.</li> </ul>	<ul> <li>describe probabilities using fractions, decimals and percentages.</li> <li>conduct chance experiments with both small and large numbers of trials.</li> <li>compare observed frequencies across experiments with expected frequencies.</li> </ul>

	investigation.	unlikely - even chance - likely - definite.		
Vocabulary	no chance - unlikely - even chance - likely - definite probable - improbable fair - unfair	express as a fraction eg: the probability is ¼ outcome.	impossible, very unlikely, unlikely, even chance, likely, very likely, certain. express as a fraction e.g. 1 out of 6 chance. express as a percentage - e.g. 80% chance. frequency.	frequency, trial
Y3-Y6	Year 3	Year 4	Year 5	Year 6
Measurement	Perimeter & Area  measure the perimeter and area of simple 2D shapes using standard and non-standard units.  Length, Mass, Volume/Capacity measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g) volume/capacity (l/ml). measure using the appropriate tools and units and begin to use mixed units; for example, 1kg and 200g. compare measurements using simple equivalents; for example, 5m = 500cm.  Time & Calendar tell and record the time from an analogue clock, including 12-hour and 24-hour clocks. estimate and read time with increasing accuracy to the nearest minute. record and and compare time in terms of seconds, minutes and hours.	<ul> <li>measure and calculate the perimeter of a rectangular figure (including squares) in centimetres and metres.</li> <li>find the area of rectangular shapes by counting squares.</li> <li>begin to relate area to arrays in multiplication.</li> <li>Length, Mass, Volume/Capacity</li> <li>convert between different units of measure by multiplying (eg. kilometre to metre; litres to ml; kg to grams.</li> <li>convert simple fractional parts of a unit of measurement to smaller units. Eg ½ kg = 500 grams; ¼ metres = 25cm etc.) and use conversion in problem solving situations.</li> <li>begin to use decimal notation to record metric measures, including money.</li> <li>estimate, compare and calculate different measures, including money in dollars and cents.</li> <li>read scales to measure mass, capacity and temperature.</li> </ul>	<ul> <li>calculate and compare the area of rectangles (including squares) using standard units, square centimetres (cm²) and square metres (m²) and estimate the areas of irregular shapes.</li> <li>calculate the area from 'not to scale' drawings using given measurements.</li> <li>measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres.</li> <li>use the relations of perimeter and area to find unknown lengths.</li> <li>Length, Mass, Volume/Capacity</li> <li>convert between different units of measure (eg. kilometre and metre; gram and kilogram; litre and millilitre)</li> <li>understand the difference between, and be able to identify metric and imperial units. (No conversion in Y5)</li> <li>estimate and measure the length</li> </ul>	<ul> <li>Perimeter &amp; Area</li> <li>recognise that shapes with the same areas can have different perimeters and vice versa.</li> <li>recognise when it is possible to use formulae for area and volume of shapes.</li> <li>calculate the area of parallelograms and triangles.</li> <li>solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places.</li> <li>Length, Mass, Volume/Capacity</li> <li>use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit and vice versa, using decimal notation up to three decimal places.</li> <li>calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm³) and cubic metres (m³),</li> </ul>

	<ul> <li>use vocabulary such as o'clock am/pm, morning, afternoon, noon and midnight.</li> <li>know the number of seconds in a minute and the number of days in each month, year and leap year.</li> <li>compare durations of events; for example, time taken to complete events or tasks.</li> </ul>	Time  tell and record the time from an analogue clock, including Roman numerals from I to XII, and a review for 12-hour and 24-hour clocks  solve problems involving converting from hours to minutes, minutes to seconds, years to months, weeks to days.  use calendars, timelines, stopwatches and clocks to solve one-step problems.  know the number of days in each month.  read, write and convert time.  Temperature:  use a thermometer to measure temperature using graduated intervals on a scale in degrees celsius  recognise and explain how negative and positive numbers are used to describe temperature.  know the boiling and freezing point of water in degrees Celsius.	and mass of objects using suitable units.  estimate volume (eg. using 1cm³ blocks to build cuboids) and capacity (eg. using water)  use all four operations to solve problems involving measure (eg. length, mass, volume, money) using decimal notation, including scaling.  Time and Calendar  solve problems involving converting between units of time (eg. days to weeks) and across time zones.  read and interpret information from timetables.  Temperature  calculate the rise, fall and difference in temperatures on a positive and negative thermometer scale. (Eg: what is the fall in temperature between 3 degrees and -2 degrees.	and extending to other units (eg. mm³ and km³).  • know approximate conversions and are able to tell if the answer is sensible.  • relate the area of rectangles to parallelograms and triangles.  Time & Calendar  • use timetables and schedules (12-hour and 24-hour clocks) in real-life situations.  • determine times worldwide.
Vocabulary	length, mass, volume, capacity, perimeter, area, money, currency, time, hour, minutes, seconds, calendar, morning, afternoon, noon, midnight.	analogue clocks, digital clocks, 12 hour clock time, 24 hour clock time, intervals, thermometer degree celsius,negative and positive numbers rise and fall	convert, kilometre, metre, litre, millilitre, grams, kilograms, centimetre, millimetre, length, mass, volume, capacity, volume, square metres, cubic metres time zones, scales, 12 hour clock, 24 hour clock, intervals, metric, imperial	cubic metres
Y3 -Y6	Year 3	Year 4	Year 5	Year 6

Pattern & Function	Pattern & Function is linked to the number continuum in Y3-6.	Pattern & Function is linked to the number continuum in Y3-6.	Pattern & Function is linked to the number continuum in Y3-6.	Pattern & Function is linked to the number continuum in Y3-6.
	use mathematical language to describe the properties of a number (e.g. odd, even, less than, more than, made up of groups of, can be shared into groups of)			
	recognise, describe and use rules to generate number patterns.			
	create and extend number patterns to increase or decrease values e.g. skip counting forwards or backwards.			
	analysis patterns to make predictions and problem solve.			
	analyse patterns and identify and articulate rules using mathematical language.			
	represent patterns in a variety of ways (e.g. words, drawings, symbols, materials, actions and numbers).			