

MATHS POLICY

Approved by Governors:	
Signed	Chair of Governors
For review:	
Website updated:	

The School is committed to safeguarding and promoting the welfare of children and expects all staff and volunteers to share this commitment.

Contents

1. Intent.....	3
2. Implementation.....	4
2.1 Planning.....	4
2.2 Lessons/ learning/ teaching.....	4
2.3 Inclusion.....	5
3. Impact.....	6
3.1 Assessment.....	6
4. Baldwins Gate Primary School – Maths Progression.....	7

1. Intent

The new National Curriculum states that:

“Mathematics is a creative and highly inter-connected discipline that has been developed over centuries, providing the solution to some of history’s most intriguing problems. It is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment. A high-quality mathematics education therefore provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject.”

At Baldwins Gate School we recognise that Mathematics is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment. The intention of the Maths curriculum at BG is that all children are taught to become positive, confident, competent and independent mathematicians equipped with the skills to become lifelong learners.

The intent of our Maths Curriculum is to develop;

- a positive attitude towards mathematics and an awareness of the importance of the subject to real life
- competence and confidence in mathematical knowledge, concepts and skills
- an ability to solve problems, to reason, to think logically and to work systematically and accurately
- initiative and an ability to work both independently and in cooperation with others
- an ability to communicate mathematical understanding and thinking
- an ability to use and apply mathematics across the curriculum
- an understanding of mathematics through a process of enquiry and investigation

The National Curriculum for mathematics aims to ensure that all pupils:



- become **fluent** in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately
- **reason mathematically** by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language
- can **solve problems** by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

2. Implementation

Maths is taught in accordance with the requirements set out in the Development Matters Non-Statutory Curriculum Guidance for the Early Years Foundation Stage 2020 (Revised 2023) and the objectives of the National Curriculum 2014 for KS1 and KS2.

At Baldwins Gate, maths is taught as a discrete subject. In EYFS, we ensure that in maths children are given a wide range of experiences and opportunities to learn and then apply their mathematical knowledge and skills.

In KS1 and KS2, Maths lessons incorporate both arithmetic and reasoning. However, there are opportunities for the application of maths through other subjects.

2.1 Planning

Fluency, reasoning and problem solving are at the heart of planning at Baldwins Gate. Each lesson should provide the opportunity to further their mathematical understanding. Our approach to planning is based on knowing our children, their prior learning and our use of assessment, both formative and summative.

Long-term planning follows the National Curriculum 2014 and the Develop Matters document including Early Learning Goals.

Medium term planning from EYFS to Year 6 is based on the use of the White Rose Maths Hubs scheme of learning and the School's Calculation Policy. These schemes provide teachers with exemplification for maths objectives and are broken down into fluency, reasoning and problem solving, which are key aims of the National Curriculum. They support

pupils working together as a whole group and provide plenty of time to build reasoning and problem-solving elements into the curriculum.

Other planning resources may be used to supplement our medium-term planning.

2.2 Lessons/ learning/ teaching

In our Nursery provision, children are taught skills as a whole class and within groups. The opportunity to embed and apply is done through a continuous provision. Activities are delivered to meet the objectives of the Early Years Foundation Stage Curriculum.

In our Reception class, Maths is taught daily as a whole class and/or in small groups.

Opportunities to embed and apply skills are done through group activities and the continuous provision of activities.

In both Key Stage One and Two, a range of teaching styles plus a variety of resources are used in the delivery of the curriculum. We have a range of mathematical resources including Numicon, Base10 and counters (concrete equipment). When children have grasped a concept using concrete equipment, images and diagrams are used (pictorial), prior to moving to abstract questions. Regular practice is used to reinforce knowledge, understanding and fluency. Through problem solving, children can use and apply their knowledge and demonstrate what they know and understand.

Within the class the children may be grouped in various ways for different activities (ability, mixed ability, peer learning etc). Opportunities are provided for all children to work as a whole class, in small groups and individually for a variety of appropriate activities, including discussions to promote mathematical language. Some activities are differentiated to meet all abilities and needs.

Lessons are personalised using our lesson structure and to address the individual needs and requirements of the class. We implement our approach through high quality teaching delivering appropriately challenging work for all individuals.

Warmup	Modelled/ Guided Learning	Practice	Plenary
Knowledge or skills connected to today's learning / Practice core arithmetic / Active Maths / Reasoning question	Share learning objective / Model learning / Guided learning / Scaffolded learning / Check understanding (Often whole class but can be grouped to meet needs)	Independent tasks / Guided groups / Differentiated (teacher directed or child directed) / Self, peer or live marked / Address misconceptions	Check understanding / Reasoning opportunity / Move on

In some classes, Maths on a Tuesday looks different. This is due to our curriculum coverage of Music and French. Tuesday's Maths focus on arithmetic and mental maths for fluency and recall.

R	1	2	3	4	5	6
Forest School	Normal	Normal	Times Tables	Times Tables	Mental maths	Arithmetic / Times Tables

2.3 Inclusion

It is our aim that all children can experience success and to achieve their potential.

Children with Special Educational Needs in Maths are monitored by the class teacher and where appropriate in liaison with the SENDCo. Teaching staff provide support, individually and in small groups and specific interventions are delivered when necessary for pupils to make progress.

We develop and encourage the talents and skills of gifted and talented children. Teachers plan activities for the gifted talented pupils which teach/consolidate the higher order skills as well problem solving in different contexts.

3. Impact

At Baldwins Gate, children are engaged in and enjoy their Maths lessons.

Children have a positive attitude and have the confidence to independently tackle problems, building resilience.

Children demonstrate a quick recall of facts and procedures, including the recollection of times tables.

They will show flexibility and fluidity to move between different concepts and areas of Maths.

Children are developing their skills in being articulate and are able to reason verbally, pictorially and in the written form.

Children are developing to ability to make connections between mathematical concepts.

Well planned sequences of learning support pupils to develop and refine their maths skills.

Children show pride in the presentation and accuracy of their work.

Children are independently able to apply their knowledge a range of increasingly complex problems and across the curriculum.

Most children meet end of year expectations.

3.1 Assessment

Assessment informs the teaching and learning sequence. Formative assessment in every lesson helps teachers to identify the children who need more support to achieve the intended outcome and those who need further challenge. Feedback takes place in both the verbal and written form.

Summative assessments are completed at the end of each academic term to support teacher assessment and future planning.
Key data is analysed by the subject leader and SLT to inform on progress and future actions.

4. Baldwins Gate Primary School – Maths Progression

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Place Value - Count	<ul style="list-style-type: none"> count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number Count numbers to 100 in numerals; count in multiples of twos, fives and tens 	<ul style="list-style-type: none"> count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward 	<ul style="list-style-type: none"> count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number 	<ul style="list-style-type: none"> count in multiples of 6, 7, 9, 25 and 1000 count backwards through zero to include negative numbers 	<ul style="list-style-type: none"> count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 count forwards and backwards with positive and negative whole numbers, including through zero 	
Place Value - Represent	<ul style="list-style-type: none"> identify and represent numbers using objects and pictorial representations read and write numbers to 100 in numerals read and write numbers from 1 to 20 in numerals and words 	<ul style="list-style-type: none"> read and write numbers to at least 100 in numerals and in words identify, represent and estimate numbers using different representations, including the number line 	<ul style="list-style-type: none"> identify, represent and estimate numbers using different representations read and write numbers up to 1000 in numerals and in words 	<ul style="list-style-type: none"> identify, represent and estimate numbers using different representations read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value 	<ul style="list-style-type: none"> read, write, (order and compare) numbers to at least 1 000 000 and determine the value of each digit read Roman numerals to 1000 (M) and recognise years written in Roman numerals 	<ul style="list-style-type: none"> read, write, (order and compare) numbers up to 10 000 000 and determine the value of each digit
Place Value – Use & Compare	<ul style="list-style-type: none"> given a number, identify one more and one less 	<ul style="list-style-type: none"> recognise the place value of each digit in a two-digit number (tens, ones) compare and order numbers from 0 up to 100; use <, > and = signs 	<ul style="list-style-type: none"> recognise the place value of each digit in a three-digit number (hundreds, tens, ones) compare and order numbers up to 1000 	<ul style="list-style-type: none"> find 1000 more or less than a given number recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) order and compare numbers beyond 1000 	<ul style="list-style-type: none"> (read, write) order and compare numbers to at least 1 000 000 and determine the value of each digit 	<ul style="list-style-type: none"> (read, write), order and compare numbers up to 10 000 000 and determine the value of each digit
Place Value – Rounding		<ul style="list-style-type: none"> use place value and number facts to solve problems 	<ul style="list-style-type: none"> solve number problems and practical problems involving these ideas 	<ul style="list-style-type: none"> round any number to the nearest 10, 100 or 1000 solve number and practical problems that involve all of the above and with increasingly large positive numbers 	<ul style="list-style-type: none"> interpret negative numbers in context round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000 solve number problems and practical problems that involve all of the above 	<ul style="list-style-type: none"> round any whole number to a required degree of accuracy use negative numbers in context, and calculate intervals across zero solve number and practical problems that involve all of the above

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Addition and Subtraction - Calculations	<ul style="list-style-type: none"> add and subtract one-digit and two-digit numbers to 20, including zero 	<ul style="list-style-type: none"> add and subtract numbers using concrete objects, pictorial representations, and mentally, including: <ul style="list-style-type: none"> a two-digit number and ones a two-digit number and tens two two-digit numbers adding three one-digit numbers 	<ul style="list-style-type: none"> add and subtract numbers mentally, including: <ul style="list-style-type: none"> a three-digit number and ones a three-digit number and tens a three-digit number and hundreds add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction 	<ul style="list-style-type: none"> add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate 	<ul style="list-style-type: none"> add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) add and subtract numbers mentally with increasingly large numbers 	<ul style="list-style-type: none"> perform mental calculations, including with mixed operations and large numbers use their knowledge of the order of operations to carry out calculations involving the four operations
Addition and Subtraction - Problems	<ul style="list-style-type: none"> solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = \square - 9$ 	<ul style="list-style-type: none"> solve problems with addition and subtraction: <ul style="list-style-type: none"> using concrete objects and pictorial representations, including those involving numbers, quantities and measures applying their increasing knowledge of mental and written methods 	<ul style="list-style-type: none"> solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction 	<ul style="list-style-type: none"> solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why 	<ul style="list-style-type: none"> solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign 	<ul style="list-style-type: none"> solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why
Multiplication and Division – Recall/Use		<ul style="list-style-type: none"> recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot 	<ul style="list-style-type: none"> recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables 	<ul style="list-style-type: none"> recall multiplication and division facts for multiplication tables up to 12×12 use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers recognise and use factor pairs and commutativity in mental calculations 	<ul style="list-style-type: none"> identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers establish whether a number up to 100 is prime and recall prime numbers up to 19 recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3) 	<ul style="list-style-type: none"> identify common factors, common multiples and prime numbers use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Multiplication and Division – Calculations		<ul style="list-style-type: none"> calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (\times), division (\div) and equals (=) signs 	<ul style="list-style-type: none"> write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods 	<ul style="list-style-type: none"> multiply two-digit and three-digit numbers by a one-digit number using formal written layout 	<ul style="list-style-type: none"> multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers multiply and divide numbers mentally drawing upon known facts divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 	<ul style="list-style-type: none"> multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context perform mental calculations, including with mixed operations and large numbers
Multiplication and Division – Problems	<ul style="list-style-type: none"> solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher 	<ul style="list-style-type: none"> solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts 	<ul style="list-style-type: none"> solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects 	<ul style="list-style-type: none"> solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects 	<ul style="list-style-type: none"> solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates 	<ul style="list-style-type: none"> solve problems involving addition, subtraction, multiplication and division
Multiplication and Division – Combined					<ul style="list-style-type: none"> solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign 	<ul style="list-style-type: none"> use their knowledge of the order of operations to carry out calculations involving the four operations

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Fractions – Recognise & Write	<ul style="list-style-type: none"> recognise, find and name a half as one of two equal parts of an object, shape or quantity recognise, find and name a quarter as one of four equal parts of an object, shape or quantity 	Recognise, find, name and write fractions $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$ and $\frac{3}{4}$ of a length, shape, set of objects or quantity.	<ul style="list-style-type: none"> count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10 recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators. 	<ul style="list-style-type: none"> count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten. 	<ul style="list-style-type: none"> identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number [for example, $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$] 	
Fractions – Compare		Recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$.	<ul style="list-style-type: none"> recognise and show, using diagrams, equivalent fractions with small denominators compare and order unit fractions, and fractions with the same denominators 	<ul style="list-style-type: none"> recognise and show, using diagrams, families of common equivalent fractions 	<ul style="list-style-type: none"> compare and order fractions whose denominators are all multiples of the same number 	<ul style="list-style-type: none"> use common factors to simplify fractions; use common multiples to express fractions in the same denomination compare and order fractions, including fractions > 1
Fractions – Calculations		Write simple fractions e.g., $\frac{1}{2}$ of $6 = 3$.	<ul style="list-style-type: none"> add and subtract fractions with the same denominator within one whole [for example, $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$] 	<ul style="list-style-type: none"> add and subtract fractions with the same denominator 	<ul style="list-style-type: none"> add and subtract fractions with the same denominator and denominators that are multiples of the same number multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams 	<ul style="list-style-type: none"> add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions multiply simple pairs of proper fractions, writing the answer in its simplest form [for example, $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$] divide proper fractions by whole numbers [for example $\frac{1}{3} \div 2 = \frac{1}{6}$]
Fractions – Solve Problems			<ul style="list-style-type: none"> solve problems that involve all of the above 	<ul style="list-style-type: none"> solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number 		

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Decimals – Recognise, Write, Compare				<ul style="list-style-type: none"> • recognise and write decimal equivalents of any number of tenths or hundredths • recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$ • round decimals with one decimal place to the nearest whole number • compare numbers with the same number of decimal places up to two decimal places 	<ul style="list-style-type: none"> • read and write decimal numbers as fractions [for example, $0.71 = \frac{71}{100}$] • recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents • round decimals with two decimal places to the nearest whole number and to one decimal place • read, write, order and compare numbers with up to three decimal places 	<ul style="list-style-type: none"> • identify the value of each digit in numbers given to three decimal places
Fractions, Decimals, Percentages				<ul style="list-style-type: none"> • solve simple measure and money problems involving fractions and decimals to two decimal places 	<ul style="list-style-type: none"> • recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal • solve problems which require knowing percentage and decimal equivalents of $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{2}{5}$, $\frac{4}{5}$ and those fractions with a denominator of a multiple of 10 or 25 	<ul style="list-style-type: none"> • associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example,] • recall and use equivalences between simple fractions, decimals and percentages, including in different contexts
Ratio and Proportion						<ul style="list-style-type: none"> • solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts • solve problems involving the calculation/use of percentages for comparison • solve problems involving similar shapes where the scale factor is known or can be found • solve problems involving unequal sharing and grouping using knowledge of fractions and multiples

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Algebra	<ul style="list-style-type: none"> • solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = \square - 9$ 	<ul style="list-style-type: none"> • recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems 	<ul style="list-style-type: none"> • solve problems, including missing number problems 			<ul style="list-style-type: none"> • use simple formulae • generate and describe linear number sequences • express missing number problems algebraically • find pairs of numbers that satisfy an equation with two unknowns • enumerate possibilities of combinations of two variables
<p>Note – although formal algebraic notation is not introduced until Y6, algebraic thinking starts much earlier as exemplified by the ‘missing number’ objectives from Y1/2/3</p>						
Measurement - Money	<ul style="list-style-type: none"> • recognise and know the value of different denominations of coins and notes 	<ul style="list-style-type: none"> • recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value • find different combinations of coins that equal the same amounts of money • solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change 	<ul style="list-style-type: none"> • add and subtract amounts of money to give change, using both £ and p in practical contexts 	<ul style="list-style-type: none"> • estimate, compare and calculate different measures, including money in pounds and pence 	<ul style="list-style-type: none"> • use all four operations to solve problems involving measure [for example, money] 	
Measurement - Time	<ul style="list-style-type: none"> • sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening] • recognise and use language relating to dates, including days of the week, weeks, months and years • tell the time to the hour and half past the hour and draw the hands on a clock face to show these times 	<ul style="list-style-type: none"> • compare and of time • tell and time to five quarter the hands on a these times • know the number hour and the in a day 	<ul style="list-style-type: none"> • tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12- hour and 24-hour clocks • estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight • know the number of seconds in a minute and the number of days in each month, year and leap year • compare durations of events [for example to calculate the time taken by particular events or tasks] 	<ul style="list-style-type: none"> • read, write and convert time between analogue and digital 12- and 24-hour clocks • solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days 	<ul style="list-style-type: none"> • solve problems involving converting between units of time 	<ul style="list-style-type: none"> • use, read, write and convert between standard units, converting measurements of time from a smaller unit of measure to a larger unit, and vice versa

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Measurement – Perimeter, Area, Volume			<ul style="list-style-type: none"> measure the perimeter of simple 2-D shapes 	<ul style="list-style-type: none"> measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres find the area of rectilinear shapes by counting squares 	<ul style="list-style-type: none"> measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres calculate and compare the area of rectangles (including squares) and including using standard units, square centimetres (cm²) and square metres (m²) and estimate the area of irregular shapes estimate volume [for example, using blocks to build cuboids] and capacity [for example, using water] 	<ul style="list-style-type: none"> recognise that shapes with the same areas can have different perimeters and vice versa recognise when it is possible to use formulae for area and volume of shapes calculate the area of parallelograms and triangles calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm³) and cubic metres (m³), and extending to other units
Geometry – 2D shapes	<ul style="list-style-type: none"> recognise and name common 2- D shapes [for example, rectangles (including squares), circles and triangles] 	<ul style="list-style-type: none"> identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid] compare and sort common 2-D shapes and everyday objects 	<ul style="list-style-type: none"> Draw 2-D shapes. 	<ul style="list-style-type: none"> compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes identify lines of symmetry in 2-D shapes presented in different orientations 	<ul style="list-style-type: none"> distinguish between regular and irregular polygons based on reasoning about equal sides and angles. use the properties of rectangles to deduce related facts and find missing lengths and angles 	<ul style="list-style-type: none"> draw 2-D shapes using given dimensions and angles compare and classify geometric shapes based on their properties and sizes illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius
Geometry – 3D shapes	<ul style="list-style-type: none"> recognise and name common 3- D shapes [for example, cuboids (including cubes), pyramids and spheres] 	<ul style="list-style-type: none"> recognise and name common 3- D shapes [for example, cuboids (including cubes), pyramids and spheres] compare and sort common 3-D shapes and everyday objects 	<ul style="list-style-type: none"> make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them 		<ul style="list-style-type: none"> identify 3-D shapes, including cubes and other cuboids, from 2-D representations 	<ul style="list-style-type: none"> recognise, describe and build simple 3-D shapes, including making nets
Geometry – Angles & Lines			<ul style="list-style-type: none"> recognise angles as a property of shape or a description of a turn identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle identify horizontal and vertical lines and pairs of perpendicular and parallel lines 	<ul style="list-style-type: none"> identify acute and obtuse angles and compare and order angles up to two right angles by size identify lines of symmetry in 2-D shapes presented in different orientations complete a simple symmetric figure with respect to a specific line of symmetry 	<ul style="list-style-type: none"> know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles draw given angles, and measure them in degrees identify: <ul style="list-style-type: none"> angles at a point and one whole turn (total 360°) angles at a point on a straight line and a turn (total 180°) other multiples of 90° 	<ul style="list-style-type: none"> find unknown angles in any triangles, quadrilaterals, and regular polygons recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Geometry - Position and Direction	<ul style="list-style-type: none"> describe position, direction and movement, including whole, half, quarter and three-quarter turns 	<ul style="list-style-type: none"> order and arrange combinations of mathematical objects in patterns and sequences use mathematical vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise) 		<ul style="list-style-type: none"> describe positions on a 2-D grid as coordinates in the first quadrant describe movements between positions as translations of a given unit to the left/right and up/down plot specified points and draw sides to complete a given polygon 	<ul style="list-style-type: none"> identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed 	<ul style="list-style-type: none"> describe positions on the full coordinate grid (all four quadrants) draw and translate simple shapes on the coordinate plane, and reflect them in the axes
Statistics – Present & Interpret		<ul style="list-style-type: none"> interpret and construct simple pictograms, tally charts, block diagrams and simple tables 	<ul style="list-style-type: none"> interpret and present data using bar charts, pictograms and tables 	<ul style="list-style-type: none"> interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs 	<ul style="list-style-type: none"> complete, read and interpret information in tables, including timetables 	<ul style="list-style-type: none"> interpret and construct pie charts and line graphs and use these to solve problems
Statistics – Solve statistical problems		<ul style="list-style-type: none"> ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity ask and answer questions about totalling and comparing categorical data 	<ul style="list-style-type: none"> solve one-step and two-step questions [for example, ‘How many more?’ and ‘How many fewer?’] using information presented in scaled bar charts and pictograms and tables 	<ul style="list-style-type: none"> solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs 	<ul style="list-style-type: none"> solve comparison, sum and difference problems using information presented in a line graph 	<ul style="list-style-type: none"> calculate and interpret the mean as an average

	3- and 4-year-olds	Reception
Number - Comparison	<ul style="list-style-type: none"> Link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5. Experiment with their own symbols and marks as well as numerals 	<ul style="list-style-type: none"> Count objects, actions and sounds. Compare numbers.
Number - Counting	<ul style="list-style-type: none"> Recite numbers past 5. Say one number for each item in order: 1, 2, 3, 4, 5. 	<ul style="list-style-type: none"> Count beyond ten
Number - Cardinality	<ul style="list-style-type: none"> Develop fast recognition of up to 3 objects, without having to count them individually (‘subitising’). Know that the last number reached when counting a small set of objects tells you how many there are in total (‘cardinal principle’). Show ‘finger numbers’ up to 5. 	<ul style="list-style-type: none"> Subitise Link the number symbol (numeral) with its cardinal number value.
Number - Composition	<ul style="list-style-type: none"> Solve real world mathematical problems with numbers up to 5. 	<ul style="list-style-type: none"> Understand the ‘one more than/one less than’ relationship between consecutive numbers. Explore the composition of numbers to 10. Automatically recall number bonds for numbers 0-5 and some to 10.
Shape, Space & Measure – Spatial awareness	<ul style="list-style-type: none"> Compare quantities using language: ‘more than’, ‘fewer than’, Understand position through words alone – for example, “The bag is under the table,” – with no pointing. Describe a familiar route. Discuss routes and locations, using words like ‘in front of’ and ‘behind’. 	<ul style="list-style-type: none"> Select, rotate and manipulate shapes in order to develop spatial reasoning skills.

Shape, Space & Measure – Shape	<ul style="list-style-type: none"> • Talk about and explore 2D and 3D shapes (for example, circles, rectangles, triangles and cuboids) using informal and mathematical language: ‘sides’, ‘corners’, ‘straight’, ‘flat’, ‘round’. • Select shapes appropriately: flat surfaces for building, a triangular prism for a roof, etc. • Combine shapes to make new ones – an arch, a bigger triangle, etc. 	<ul style="list-style-type: none"> • Compose and decompose shapes so that children recognise a shape can have other shapes within it, just as numbers can.
Shape, Space & Measure – Pattern	<ul style="list-style-type: none"> • Talk about and identify the patterns around them. For example: stripes on clothes, designs on rugs and wallpaper. Use informal language like ‘pointy’, ‘spotty’, ‘blobs’, etc. • Extend and create ABAB patterns – stick, leaf, stick, leaf. • Notice and correct an error in a repeating pattern. 	<ul style="list-style-type: none"> • Continue, copy and create repeating patterns.
Shape, Space & Measure – Measure	<ul style="list-style-type: none"> • Make comparisons between objects relating to size, length, weight and capacity. • Begin to describe a sequence of events, real or fictional, using words such as ‘first’, ‘then...’ 	<ul style="list-style-type: none"> • Compare length, weight and capacity.