



Progression for Mathematics

Purpose of Study

Broadway First School's teaching of mathematics is largely based upon the [White Rose Maths Hub](#) mastery approach. This ensures that pupils become fluent in the fundamentals of maths, building knowledge that allows them to confidently apply key skills and reason mathematically.

It is essential that all children have a secure and confident grasp and can apply age-appropriate key skills and mathematical vocabulary, which allows them to access a deeper understanding and make links between areas of maths, applying their mathematical knowledge across a range of subjects.

Aims

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.

Attainment targets

By the end of each key stage, pupils are expected to know, apply and understand the matters, skills and processes specified in the relevant programme of study.

Broadway First School's Intent

Although relating specifically to mathematics, our aims for the subject are also in line with the school's general aims. We aim to provide the pupils with a mathematics curriculum, which will equip our children to become fluent in key concepts and build a deep, secure understanding that allows them to apply skills, reason and problem solve. It is vital that all children have a secure and confident grasp and can apply age-appropriate skills and mathematical vocabulary. That is why we aim to teach year groups together, delivering the same content wherever possible. The use of small steps ensures concepts can be accessed by all and understanding assessed before children move on. The use of rich and sophisticated tasks allows children to be challenged and secure a deep understanding that can be applied across a range of subjects.


Time to practise and rehearse known facts is given so that children can continue to build fluency and develop accuracy and speed when recalling key age-appropriate mathematical facts.

The use of supporting resources is important. New concepts are introduced using a variety of concrete and pictorial representations wherever possible. This builds deeper understanding, links prior learning and contributes to progression over time towards defined end points.

Staff strive to deliver new learning based on what children already know whilst consolidating the key skills they have already learned.

Progression

Pre-school

<p>Counting / number sense</p> <ul style="list-style-type: none"> Verbally count to 10 Count out up to 5 objects or actions (counting principles) Understand the position of numbers up to 5 Subitise up to 3-4 Recognise representations of numbers up to 5 including numerals Explore the composition of numbers to 5 Perceptual comparing an amount of objects; use language of more and fewer, same/equal 	<p>Five frames</p> 	<p>Adding/Subtracting</p> <ul style="list-style-type: none"> Begin to explore the composition of numbers to 5 Begin to find the total number of objects in 2 groups by counting them all 	<p>“x is a part of me, x is a part of me and the whole of me is x”</p>
		<p>Geometry</p> <ul style="list-style-type: none"> Recognise, name and match colours Sort objects by various attributes Continue AB, ABC patterns Talk about the properties of shapes in the environment e.g straight, smooth, round Begin to name 2D shapes 	<p>Measures</p> <ul style="list-style-type: none"> Use the language of size, length and height Compare 2 objects by their size / length / height Talk about the order of their day Use the language of light and heavy Compare 2 objects by their weight Use the language of full, half full empty

			<ul style="list-style-type: none"> • Compare 2 container of liquid by their capacity • Use the language of in, on, under, up, down, across, in front of, behind, on top of
--	--	--	--

Reception (Based on NCETM Mastering Number Programme)

Term 1	Term 2	Term 3
<p>Pupils will build on previous experiences of number from their home and nursery environments, and further develop their subitising and counting skills. They will explore the composition of numbers within 5. They will begin to compare sets of objects and use the language of comparison.</p> <p>Pupils will:</p> <ul style="list-style-type: none"> • identify when a set can be subitised and when counting is needed • subitise different arrangements, both unstructured and structured, including using the Hungarian number frame • make different arrangements of numbers within 5 and talk about what they can see, to develop their conceptual subitising skills • spot smaller numbers 'hiding' inside larger numbers 	<p>Pupils will continue to develop their subitising and counting skills and explore the composition of numbers within and beyond 5. They will begin to identify when two sets are equal or unequal and connect two equal groups to doubles. They will begin to connect quantities to numerals.</p> <p>Pupils will:</p> <ul style="list-style-type: none"> • continue to develop their subitising skills for numbers within and beyond 5, and increasingly connect quantities to numerals • begin to identify missing parts for numbers within 5 • explore the structure of the numbers 6 and 7 as '5 and a bit' and connect this to finger patterns and the Hungarian number frame • focus on equal and unequal groups when comparing numbers 	<p>Pupils will consolidate their counting skills, counting to larger numbers and developing a wider range of counting strategies. They will secure knowledge of number facts through varied practice.</p> <p>Pupils will:</p> <ul style="list-style-type: none"> • continue to develop their counting skills, counting larger sets as well as counting actions and sounds • explore a range of representations of numbers, including the 10-frame, and see how doubles can be arranged in a 10-frame • compare quantities and numbers, including sets of objects which have different attributes • continue to develop a sense of magnitude, e.g. knowing that 8 is quite a lot more than 2, but 4 is only a little bit more than 2

<ul style="list-style-type: none"> • connect quantities and numbers to finger patterns and explore different ways of representing numbers on their fingers • hear and join in with the counting sequence, and connect this to the 'staircase' pattern of the counting numbers, seeing that each number is made of one more than the previous number • develop counting skills and knowledge, including: that the last number in the count tells us 'how many' (cardinality); to be accurate in counting, each thing must be counted once and once only and in any order; the need for 1:1 correspondence; understanding that anything can be counted, including actions and sounds • compare sets of objects by matching • begin to develop the language of 'whole' when talking about objects which have parts 	<ul style="list-style-type: none"> • understand that two equal groups can be called a 'double' and connect this to finger patterns • sort odd and even numbers according to their 'shape' • continue to develop their understanding of the counting sequence and link cardinality and ordinality through the 'staircase' pattern • order numbers and play track games • join in with verbal counts beyond 20, hearing the repeated pattern within the counting numbers 	<ul style="list-style-type: none"> • begin to generalise about 'one more than' and 'one less than' numbers within 10 • continue to identify when sets can be subitised and when counting is necessary • develop conceptual subitising skills including when using a rekenrek
--	---	---

Geometry & Spatial Thinking – 2d shape (circles, triangles, squares and rectangles), explore 3d shapes, positional language, making simple maps.

Measurement – Compare length/height, mass & capacity, identify night & day, time sequencing and related vocabulary, exploring relationship between number and shape.

Exploring Pattern – Make simple patterns, explore more complex patterns.

Year 1/2 Mixed Aged Yearly Plan (White Rose Version 3.0)

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn term	Number Place value (within 10) VIEW					Number Addition and subtraction (within 10) VIEW					Geometry Shape VIEW	Consolidation
Autumn term	Number Place value VIEW				Number Addition and subtraction VIEW				Geometry Shape VIEW			
Spring term	Number Place value (within 20) VIEW		Number Addition and subtraction (within 20) VIEW		Number Place value (within 50) VIEW		Measurement Length and height VIEW		Measurement Mass and volume VIEW			
Spring term	Measurement Money VIEW	Number Multiplication and division VIEW				Measurement Length and height VIEW		Measurement Mass, capacity and temperature VIEW				
Summer term	Number Multiplication and division VIEW			Number Fractions VIEW		Geometry Position and direction VIEW	Number Place value (within 100) VIEW		Measurement Money VIEW	Measurement Time VIEW		Consolidation
Summer term	Statistics VIEW		Number Fractions VIEW			Geometry Position and direction VIEW		Problem solving		Measurement Time VIEW		

Year 3/4 Mixed Aged Yearly Plan (White Rose Version 3.0)

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn term	Number Place value VIEW		Number Addition and subtraction VIEW				Number Multiplication and division VIEW					
Autumn term	Number Place value VIEW			Number Addition and subtraction VIEW		Measurement Area VIEW	Number Multiplication and division VIEW			Consolidation		
Spring term	Number Multiplication and division VIEW		Measurement Length and perimeter VIEW		Number Fractions VIEW		Measurement Mass and capacity VIEW					
Spring term	Number Multiplication and division VIEW		Measurement Length and perimeter VIEW	Number Fractions VIEW			Number Decimals VIEW					
Summer term	Number Fractions VIEW	Measurement Money VIEW	Measurement Time VIEW		Geometry Shape VIEW	Statistics VIEW		Consolidation				
Summer term	Number Decimals VIEW	Measurement Money VIEW	Measurement Time VIEW	Consolidation	Geometry Shape VIEW	Statistics VIEW	Geometry Position and direction VIEW					

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12	
Autumn	Number: Place Value				Number: Addition and Subtraction			Number: Multiplication and Division			Measurement: Length, Perimeter and Area		
Spring	Number: Multiplication and Division			Number: Fractions					Number: Decimals (including Y5 Percentages)				
Summer	Number: Decimals (including Y4 Money)		Measurement: Time	Statistics		Geometry: Properties of Shape		Geometry: Position and Direction	Y4: Consolidation		Y5: Converting Units & Volume		Consolidation

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Place Value: Counting	<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 <p>Y1/2- Autumn 1 Y1/2- Autumn 3 Y1/2- Spring 2 Y1/2- Summer 3</p>	<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 <p>Y1/2- Autumn 3 Y2/3- Autumn 3</p>	<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 <p>Y2/3- Autumn 1 Y2/3- Autumn 3 Y2/3- Summer 2 Y3/4- Autumn 1 Y3/4- Autumn 3</p>	<ul style="list-style-type: none"> count in multiples of 6, 7, 9, 25 and 1000 count backwards through zero to include negative numbers <p>Y3/4- Autumn 1 Y3/4- Autumn 3 Y4/5- Autumn 1 Y4/5- Autumn 3</p>	<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 <p>Y4/5- Autumn 1 Y5/6- Autumn 1</p>	
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. <p>Y1/2- Autumn 1 Y1/2- Autumn 3 Y1/2- Spring 2 Y1/2- Summer 3</p>	<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 <p>Y1/2- Autumn 3 Y2/3- Autumn 3</p>	<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 <p>Y2/3- Autumn 1 Y3/4- Autumn 1</p>	<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 <p>Y3/4- Autumn 1 Y4/5- Autumn 1</p>	<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. <p>Y4/5- Autumn 1 Y5/6- Autumn 1</p>	<ul style="list-style-type: none"> read, write, (order and compare) numbers up to 10 000 000 and determine the value of each digit <p>Y5/6- Autumn 1</p>

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Place Value : Use PV and Compare	<ul style="list-style-type: none"> given a number, identify one more and one less <p>Y1/2- Autumn 1 Y1/2- Autumn 3 Y1/2- Spring 2 Y1/2- Summer 3</p>	<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 <p>Y1/2- Autumn 3 Y2/3- Autumn 3</p>	<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 <p>Y2/3- Autumn 1 Y3/4- Autumn 1</p>	<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 <p>Y3/4- Autumn 1 Y4/5- Autumn 1</p>	<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 <p>Y4/5- Autumn 1 Y5/6- Autumn 1</p>	<ul style="list-style-type: none"> (read, write), order and compare numbers up to 10 000 000 and determine the value of each digit <p>Y5/6- Autumn 1</p>
Place Value: Problems & Rounding		<ul style="list-style-type: none"> use place value and number facts to solve problems. <p>Y1/2- Autumn 3 Y2/3- Autumn 3</p>	<ul style="list-style-type: none"> solve number problems and practical problems involving these ideas <p>Y2/3- Autumn 1 Y3/4- Autumn 1</p>	<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 <p>Y3/4- Autumn 1 Y4/5- Autumn 1</p>	<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 <p>Y4/5- Autumn 1 Y5/6- Autumn 1</p>	<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 <p>Y5/6- Autumn 1</p>

Mixed Age Progression – Addition & Subtraction



	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Addition & Subtraction: Recall, Represent, Use	<ul style="list-style-type: none"> read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs represent and use number bonds and related subtraction facts within 20 <p>Y1/2- Autumn 2 Y1/2- Summer 5</p>	<ul style="list-style-type: none"> recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems <p>Y1/2- Autumn 2 Y2/3- Autumn 2</p>	<ul style="list-style-type: none"> estimate the answer to a calculation and use inverse operations to check answers <p>Y2/3- Autumn 2 Y2/3- Summer 2 Y3/4- Autumn 2</p>	<ul style="list-style-type: none"> estimate and use inverse operations to check answers to a calculation <p>Y3/4- Autumn 2 Y4/5- Autumn 2</p>	<ul style="list-style-type: none"> use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy <p>Y4/5- Autumn 2 Y5/6- Autumn 2 Y5/6- Summer 3</p>	

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Addition & Subtraction: Calculations	<ul style="list-style-type: none"> add and subtract one-digit and two-digit numbers to 20, including zero <p>Y1/2- Autumn 2 Y1/2- Summer 5</p>	<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 <p>Y1/2- Autumn 2 Y2/3- Autumn 2</p>	<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 <p>Y2/3- Autumn 2 Y2/3- Summer 2 Y3/4- Autumn 2</p>	<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 <p>Y3/4- Autumn 2 Y4/5- Autumn 2</p>	<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 <p>Y4/5- Autumn 2 Y5/6- Autumn 2 Y5/6- Summer 3</p>	<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 <p>Y5/6- Autumn 2</p>

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Addition & Subtraction: Solve 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 $7 = \square - 9$ <p>Y1/2- Autumn 2 Y1/2- Summer 5</p>	<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 <p>Y1/2- Autumn 2 Y2/3- Autumn 2</p>	<ul style="list-style-type: none"> solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction <p>Y2/3- Autumn 2 Y2/3- Summer 2 Y3/4- Autumn 2</p>	<ul style="list-style-type: none"> solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why <p>Y3/4- Autumn 2 Y4/5- Autumn 2</p>	<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 <p>Y4/5- Autumn 2 Y5/6- Autumn 2 Y5/6- Summer 3</p>	<ul style="list-style-type: none"> solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why <p>Y5/6- Autumn 2</p>

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Multiplication & Division: Recall, Represent, 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 <p>Y1/2- Autumn 3 Y1/2- Spring 1 Y2/3- Autumn 3 Y2/3- Spring 1</p>	<ul style="list-style-type: none"> recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables <p>Y2/3- Autumn 3 Y2/3- Summer 2 Y3/4- Autumn 3</p>	<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 <p>Y3/4- Autumn 3 Y3/4- Spring 1 Y4/5- Autumn 3 Y4/5- Spring 1</p>	<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) <p>Y4/5- Autumn 3 Y5/6- Autumn 2 Y5/6- Summer 3</p>	<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. <p>Y5/6- Autumn 2</p>

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Multiplication & 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 <p>Y1/2- Autumn 3 Y1/2- Spring 1 Y2/3- Autumn 3 Y2/3- Spring 1</p>	<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 <p>Y2/3- Autumn 3 Y2/3- Spring 1 Y2/3- Summer 2 Y3/4- Autumn 3 Y3/4- Spring 1</p>	<ul style="list-style-type: none"> multiply two-digit and three-digit numbers by a one-digit number using formal written layout <p>Y3/4- Autumn 3 Y3/4- Spring 1 Y4/5- Autumn 3 Y4/5- Spring 1</p>	<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 <p>Y4/5- Autumn 3 Y4/5- Spring 1 Y4/5- Spring 3 Y5/6- Autumn 2 Y5/6- Spring 2</p>	<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 <p>Y5/6- Autumn 2</p>

Mixed Age Progression – Multiplication & Division



	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Multiplication & Division: Solve 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 <p>Y1/2- Autumn 3 Y1/2- Spring 1 Y1/2- Summer 5</p>	<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 <p>Y1/2- Autumn 3 Y1/2- Spring 1 Y2/3- Autumn 3 Y2/3- Spring 1</p>	<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 <p>Y2/3- Spring 1 Y2/3- Summer 2 Y3/4- Spring 1</p>	<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 <p>Y3/4- Spring 1 Y4/5- Spring 1</p>	<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 <p>Y4/5- Autumn 3 Y4/5- Spring 1 Y5/6- Autumn 2</p>	<ul style="list-style-type: none"> solve problems involving addition, subtraction, multiplication and division <p>Y5/6- Autumn 2</p>
Multiplication & Division: Mixed Operations					<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 <p>Y4/5- Autumn 3 Y4/5- Spring 1 Y5/6- Autumn 2</p>	<ul style="list-style-type: none"> use their knowledge of the order of operations to carry out calculations involving the four operations <p>Y5/6- Autumn 2</p>

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Fractions: Recognise and 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 <p>Y1/2- Spring 5</p>	<ul style="list-style-type: none"> 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 <p>Y1/2- Spring 5 Y2/3- Spring 5</p>	<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 <p>Y2/3- Spring 5 Y3/4- Spring 3</p>	<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. <p>Y3/4- Spring 4 Y4/5- Spring 3</p>	<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, $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$] <p>Y4/5- Spring 2 Y5/6- Autumn 3 Y5/6- Spring 1 Y5/6- Summer 4</p>	
Fractions: Compare		<ul style="list-style-type: none"> Recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$ <p>Y1/2- Spring 5 Y2/3- Spring 5</p>	<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 <p>Y2/3- Spring 5 Y3/4- Spring 3</p>	<ul style="list-style-type: none"> recognise and show, using diagrams, families of common equivalent fractions <p>Y3/4- Spring 3 Y4/5- Spring 2</p>	<ul style="list-style-type: none"> compare and order fractions whose denominators are all multiples of the same number <p>Y4/5- Spring 2 Y5/6- Autumn 3 Y5/6- Spring 1 Y5/6- Summer 4</p>	<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 <p>Y5/6- Autumn 3</p>

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Fractions: Calculations		<ul style="list-style-type: none"> write simple fractions for example, $\frac{1}{2}$ of 6 = 3 <p>Y1/2- Spring 5 Y2/3- Spring 5</p>	<ul style="list-style-type: none"> add and subtract fractions with the same denominator within one whole [for example, $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$] <p>Y2/3- Spring 5 Y2/3- Summer 4 Y3/4- Summer 3</p>	<ul style="list-style-type: none"> add and subtract fractions with the same denominator <p>Y3/4- Spring 3 Y4/5- Spring 2</p>	<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 <p>Y4/5- Spring 2 Y5/6- Autumn 3 Y5/6- Spring 1 Y5/6- Summer 4</p>	<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, $\frac{1}{3} \div 2 = \frac{1}{6}$] <p>Y5/6- Autumn 3</p>
Fractions: Solve Problems			<ul style="list-style-type: none"> solve problems that involve all of the above <p>Y2/3- Spring 5 Y2/3- Summer 4 Y3/4- Summer 3</p>	<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 <p>Y3/4- Spring 3 Y4/5- Spring 2</p>		

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Decimals: Recognise and Write				<ul style="list-style-type: none"> recognise and write decimal equivalents of any number of tenths or hundredths recognise and write decimal equivalents to $\frac{1}{4}, \frac{1}{2}, \frac{3}{4}$ <p>Y3/4- Spring 4 Y3/4- Summer 1 Y4/5- Spring 3 Y4/5- Summer 1</p>	<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 <p>Y4/5- Spring 3 Y5/6- Spring 2 Y5/6- Summer 4</p>	<ul style="list-style-type: none"> identify the value of each digit in numbers given to three decimal places <p>Y5/6- Spring 2</p>
Decimals: Compare				<ul style="list-style-type: none"> 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 <p>Y3/4- Summer 1 Y4/5- Summer 1</p>	<ul style="list-style-type: none"> 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 <p>Y4/5- Spring 3 Y5/6- Spring 2 Y5/6- Summer 4</p>	

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Decimals: Calculations & Problems				<ul style="list-style-type: none"> find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths <p>Y3/4- Spring 4 Y4/5- Spring 3</p>	<ul style="list-style-type: none"> solve problems involving number up to three decimal places <p>Y4/5- Spring 3 Y4/5- Summer 1 Y5/6- Spring 2 Y5/6- Spring 3 Y5/6- Summer 4</p>	<ul style="list-style-type: none"> multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places multiply one-digit numbers with up to two decimal places by whole numbers use written division methods in cases where the answer has up to two decimal places solve problems which require answers to be rounded to specified degrees of accuracy <p>Y5/6- Spring 2</p>

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Fractions, Decimals and Percentages				<ul style="list-style-type: none"> solve simple measure and money problems involving fractions and decimals to two decimal places <p>Y3/4- Spring 3 Y3/4- Spring 4 Y3/4- Summer 1 Y3/4- Spring 2 Y3/4- Spring 3 Y3/4- Summer 1</p>	<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 <p>Y4/5- Spring 3 Y5/6- Spring 2 Y5/6- Summer 4</p>	<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, $\frac{3}{8}$] recall and use equivalences between simple fractions, decimals and percentages, including in different contexts <p>Y5/6- Spring 2</p>

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
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 of percentages [for example, of measures, and such as 15% of 360] and the 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. <p>Y5/6- Spring 1 Y5/6- Spring 2</p>

	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>Y5/6- Spring 3</p>

Note – although algebraic notation is not introduced until Y6, algebraic thinking starts much earlier as exemplified by the ‘missing number’ objectives from Y1/2/3

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Measurement: Using Measures	<ul style="list-style-type: none"> compare, describe and solve practical problems for: <ul style="list-style-type: none"> ➤ lengths and heights [for example, long/short, longer/shorter, tall/short, double/half] ➤ mass/weight [for example, heavy/light, heavier than, lighter than] ➤ capacity and volume [for example, full/empty, more than, less than, half, half full, quarter] ➤ time [for example, quicker, slower, earlier, later] measure and begin to record the following: <ul style="list-style-type: none"> ➤ lengths and heights ➤ mass/weight ➤ capacity and volume ➤ time (hours, minutes, seconds) <p>Y1/2- Spring 3 Y1/2- Summer 2 Y1/2- Summer 4</p>	<ul style="list-style-type: none"> choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels compare and order lengths, mass, volume/capacity and record the results using $>$, $<$ and $=$ <p>Y1/2- Spring 3 Y1/2- Summer 4 Y2/3- Spring 3 Y2/3- Summer 3</p>	<ul style="list-style-type: none"> measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) <p>Y2/3- Spring 3 Y2/3- Summer 3 Y3/4- Spring 2 Y3/4- Spring 4</p>	<ul style="list-style-type: none"> Convert between different units of measure [for example, kilometre to metre; hour to minute] estimate, compare and calculate different measures <p>Y3/4- Spring 2 Y3/4- Summer 2 Y4/5- Autumn 4 Y4/5- Summer 2</p>	<ul style="list-style-type: none"> convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre) understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling <p>Y4/5- Autumn 4 Y4/5- Summer 6 Y5/6- Spring 4 Y5/6- Summer 5</p>	<ul style="list-style-type: none"> solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate 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 to up to three decimal places convert between miles and kilometres <p>Y5/6- Spring 4</p>

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Measurement: Money	<ul style="list-style-type: none"> recognise and know the value of different denominations of coins and notes <p>Y1/2- Autumn 2</p>	<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 <p>Y1/2- Autumn 2 Y2/3- Autumn 2</p>	<ul style="list-style-type: none"> add and subtract amounts of money to give change, using both £ and p in practical contexts <p>Y2/3- Autumn 2 Y3/4- Summer 1</p>	<ul style="list-style-type: none"> estimate, compare and calculate different measures, including money in pounds and pence <p>Y3/4- Summer 1 Y4/5- Summer 1</p>	<ul style="list-style-type: none"> use all four operations to solve problems involving measure [for example, money] <p>Y4/5- Summer 1 Y5/6- Spring 3</p>	

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
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 <p>Y1/2- Summer 2</p>	<ul style="list-style-type: none"> compare and sequence intervals of time tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times know the number of minutes in an hour and the number of hours in a day <p>Y1/2- Summer 2 Y2/3- Summer 1</p>	<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] <p>Y2/3- Summer 1 Y3/4- Summer 2</p>	<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 <p>Y3/4- Summer 2 Y4/5- Summer 2</p>	<ul style="list-style-type: none"> solve problems involving converting between units of time <p>Y4/5- Summer 2 Y5/6- Spring 4</p>	<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 <p>Y5/6- Summer 4</p>

	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 <p>Y2/3- Spring 4 Y3/4- Spring 2</p>	<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 <p>Y3/4- Spring 2 Y3/4- Autumn 4</p>	<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 1 cm³ blocks to build cuboids (including cubes)] and capacity [for example, using water] <p>Y4/5- Autumn 4 Y4/5-Summer 6 Y5/6- Spring 5</p>	<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 [for example, mm³ and km³] <p>Y5/6- Spring 5</p>

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Geometry: 2-D Shapes	<ul style="list-style-type: none"> recognise and name common 2-D shapes [for example, rectangles (including squares), circles and triangles] <p>Y1/2- Spring 4</p>	<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 <p>Y1/2- Spring 4 Y2/3- Spring 4</p>	<ul style="list-style-type: none"> draw 2-D shapes <p>Y2/3- Spring 4 Y3/4- Summer 4</p>	<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 <p>Y3/4- Summer 4 Y4/5- Summer 4</p>	<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 <p>Y4/5- Summer 4 Y5/6- Summer 1</p>	<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 <p>Y5/6- Summer 1</p>
Geometry: 3-D Shapes	<ul style="list-style-type: none"> recognise and name common 3-D shapes [for example, cuboids (including cubes), pyramids and spheres] <p>Y1/2- Spring 4</p>	<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 <p>Y1/2- Spring 4 Y2/3- Spring 4</p>	<ul style="list-style-type: none"> make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them <p>Y2/3- Spring 4 Y3/4- Summer 4</p>		<ul style="list-style-type: none"> identify 3-D shapes, including cubes and other cuboids, from 2-D representations <p>Y4/5- Summer 4 Y5/6- Summer 1</p>	<ul style="list-style-type: none"> recognise, describe and build simple 3-D shapes, including making nets <p>Y5/6- Summer 1</p>

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
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 <p>Y2/3- Spring 4 Y3/4- Summer 4</p>	<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 <p>Y3/4- Summer 4 Y4/5- Summer 4</p>	<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 $\frac{1}{2}$ a turn (total 180°) other multiples of 90° <p>Y4/5- Summer 4 Y5/6- Summer 1</p>	<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 <p>Y5/6- Summer 1</p>

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Geometry: Position & Direction	<ul style="list-style-type: none"> describe position, direction and movement, including whole, half, quarter and three-quarter turns <p>Y1/2- Summer 1</p>	<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) <p>Y1/2- Spring 4 Y1/2- Summer 1 Y2/3- Spring 4</p>		<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 <p>Y3/4- Summer 4 Y4/5- Summer 5</p>	<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 <p>Y4/5- Summer 5 Y5/6- Summer 2</p>	<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 <p>Y5/6- Summer 2</p>

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Statistics: Present and Interpret		<ul style="list-style-type: none"> interpret and construct simple pictograms, tally charts, block diagrams and simple tables <p>Y1/2- Spring 2 Y2/3- Spring 2</p>	<ul style="list-style-type: none"> interpret and present data using bar charts, pictograms and tables <p>Y2/3- Spring 2 Y3/4- Summer 3</p>	<ul style="list-style-type: none"> interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs <p>Y3/4- Summer 3 Y4/5- Summer 3</p>	<ul style="list-style-type: none"> complete, read and interpret information in tables, including timetables <p>Y4/5- Summer 3 Y5/6- Spring 6</p>	<ul style="list-style-type: none"> interpret and construct pie charts and line graphs and use these to solve problems <p>Y5/6- Spring 6</p>
Statistics: Solve 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 <p>Y1/2- Spring 2 Y2/3- Spring 2</p>	<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 <p>Y2/3- Spring 2 Y3/4- Summer 3</p>	<ul style="list-style-type: none"> solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs <p>Y3/4- Summer 3 Y4/5- Summer 3</p>	<ul style="list-style-type: none"> solve comparison, sum and difference problems using information presented in a line graph <p>Y4/5- Summer 3 Y5/6- Spring 6</p>	<ul style="list-style-type: none"> calculate and interpret the mean as an average <p>Y5/6- Spring 6</p>