Crow Orchard Primary School

Progression in Maths

At Crow Orchard Primary School, our definition of progress is the widening and deepening of essential knowledge, skills, understanding and learning behaviours. We design, organise and sequence both our mixed age and single year group curriculum to ensure that children are not merely covering content but achieving a depth to their learning which enables them to use their skills and understanding in all areas of the curriculum.
This careful curriculum sequencing means that we build in opportunities to revisit previous learning, which allows them to build on their prior knowledge and gradually develop a deeper understanding of the skills and processes within subjects at their own pace and in the best possible way for each individual child.

EYFS Mathematics

Number ELG

Children at the expected level of development will:

- Have a deep understanding of number to 10, including the composition of each number;
- Subitise (recognise quantities without counting) up to 5;
- Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts.

Numerical Patterns ELG

Children at the expected level of development will:

- Verbally count beyond 20, recognising the pattern of the counting system;
- Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity;
- Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.

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	EYFS White Rose Learning			
	Week 1-3	Week 4-6	Week 7-9	Week 10-12

Kindness	Curiosity	Creativity	Courage	Proud	Honesty	Aspire	Resilience

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Autumn	Getting to know you	Just like me • I can identify representations of one, two and three. • I can count up to three objects accurately. • I can use mark-making to represent one, two and three. • I know that when I count, each number is one more than the one before. • I know that when I count back each number • is one less than the previous number. • I can use words like 'more', 'fewer' and 'same' to compare numbers to three. • I can explore the different compositions of two. • I can explore the different compositions of three. • I can explain the features of circles and triangles. • I can recognise real-life examples of circles and triangles. • I can build circles and triangles. I can use positional language. • I can copy a picture to build a model from cubes. • I can follow instructions including positional language to build a model.	It's me 1,2,3 • I can talk about how items have been sorted based on their attributes. • I can sort objects into groups based on their attributes. • I can identify objects in a sorted group that do not follow the sorting rule. • I can find and match objects which are the same. • I can identify and talk about attributes that are the same and those that are different. • I can compare small sets of objects using the words 'more', 'fewer' and 'same'. • I can compare sets of objects of different sizes. • I can compare and order items by size. • I can compare the mass of objects. • I can compare the capacity of objects. • I can use positional language. • I can copy a picture to build a model from cubes. • I can follow instructions including positional language to build a model.	Light and Dark • I can count on and back to four. • I can count or subitise groups of up to four objects. • I can subitise up to five objects and • count forwards and backwards. • I can show five on a five- frame and understand that the five frame is full. • I can count and subitise to explore one more and one less. • I can see a link between the one more and one less pattern. • I can recognise that squares and rectangles of different sizes and orientations have four straight sides and four corners. • I can talk about day and night.

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Spring	**Alive in 5** • I can recognise when there is zero of something. • I can identify representations of zero. • I can use language such as more than and fewer than. • I can recognise when an amount is the same. • I can find different ways to make 4 and 5. • I can use mathematical language, such as heavy, heaviest, light or lightest when making direct comparisons between objects. • I can recognise when a container is full, nearly full, half full, nearly empty or empty.	**Growing 6,7,8** • I can make 6, 7 and 8. • I can see 6, 7 and 8 in different ways. • I can recognise that a pair is two. • I can arrange small quantities into pairs and recognise when I have one left over. • I can combine two groups to work out how many I have altogether. • I can use language to describe length and height. • I can make indirect comparisons using objects, such as cubes. • I can name the days ofthe week and discuss the events that happenin my week.	**Building 9 and 10** • I can recognise and show the numbers 9 and 10 in different ways. • I can use a ten-frame to recognise groups of 9 and 10. • I can compare items using one-one • correspondence or by counting. • I can compare sets of items and say whether they have more, fewer or the same number of items as another set. • I can explore number bonds to 10 using real objects. • I can talk about 3D shapes and describe the similarities and differences between them. • I can consider a shape's properties and how they can be used. • I can talk about more complex patterns.	**Consolidation** • Revision and consolidation of previous learning
Summer	**To 20 and beyond** • I can recognise numbers to 20 on a range of different resources. • I can use a double ten- frame to build numbers beyond ten. • I can recognise full tens and parts of tens. • I can recognise representations of numbers to 20. • I can identify shapes that look the same. • I can copy a simple arrangement of shapes	**First then now** • I can use the first, then, now structure to say an 'adding more' number story. • I can create and represent an 'adding more' number story using a ten-frame. • I can work out a missing number from an 'adding more' number story. • I can create and represent a 'taking away' number story using a ten-frame. • I can work out a missing number from a 'taking away' number story. I can talk about how shapes can be combined and separated to make new shapes. •	**Find my pattern** • I can make doubles. • I can sort doubles and non-doubles. • I can share a small quantity equally. • I can arrange small quantities into equal groups. • I can use positional language to describe where objects are in relation to other objects. • I can visualise simple models. • I can recognise that some quantities can be shared equally into two groups and some can't. • I can recognise the structure of odd and even numbers.	**On the move** • I can solve problems and find different possibilities. • I can talk about how I've solved a problem. • I can explore the relationship between numbers and shapes. • I can copy, continue and create complex repeating patterns. • I can create a symmetrical arrangement. • I can talk about maps and plans. • I can create a map and describe a simple route.

Kindness	Curiosity	Creativity	Courage	Proud	Honesty	Aspire	Resilience

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Mixed Age Progression – Place Value

	Year 1	Year 2	Year 3	Year 4
Place Value: Counting	• 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 **Y1/2- Autumn 1** **Y1/2- Autumn 3** **Y1/2- Spring 2** **Y1/2- Summer 3**	• count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward **Y1/2- Autumn 3** **Y2/3- Autumn 3**	• count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number **Y2/3- Autumn 1** **Y2/3- Autumn 3** **Y2/3- Summer 2** **Y3/4- Autumn 1** **Y3/4- Autumn 3**	• count in multiples of 6, 7, 9, 25 and 1000 • count backwards through zero to include negative numbers **Y3/4- Autumn 1** **Y3/4- Autumn 3** **Y4/5- Autumn 1** **Y4/5- Autumn 3**
Place Value: Represent	• 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. **Y1/2- Autumn 1** **Y1/2- Autumn 3** **Y1/2- Spring 2** **Y1/2- Summer 3**	• 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 **Y1/2- Autumn 3** **Y2/3- Autumn 3**	• identify, represent and estimate numbers using different representations • read and write numbers up to 1000 in numerals and in words **Y2/3- Autumn 1** **Y3/4- Autumn 1**	• 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 **Y3/4- Autumn 1** **Y4/5- Autumn 1**

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Mixed Age Progression – Place Value

	Year 1	Year 2	Year 3	Year 4
Place Value: Counting	• 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 **Y1/2- Autumn 1** **Y1/2- Autumn 3** **Y1/2- Spring 2** **Y1/2- Summer 3**	• count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward **Y1/2- Autumn 3** **Y2/3- Autumn 3**	• count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number **Y2/3- Autumn 1** **Y2/3- Autumn 3** **Y2/3- Summer 2** **Y3/4- Autumn 1** **Y3/4- Autumn 3**	• count in multiples of 6, 7, 9, 25 and 1000 • count backwards through zero to include negative numbers **Y3/4- Autumn 1** **Y3/4- Autumn 3** **Y4/5- Autumn 1** **Y4/5- Autumn 3**
Place Value: Represent	• 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. **Y1/2- Autumn 1** **Y1/2- Autumn 3** **Y1/2- Spring 2** **Y1/2- Summer 3**	• 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 **Y1/2- Autumn 3** **Y2/3- Autumn 3**	• identify, represent and estimate numbers using different representations • read and write numbers up to 1000 in numerals and in words **Y2/3- Autumn 1** **Y3/4- Autumn 1**	• 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 **Y3/4- Autumn 1** **Y4/5- Autumn 1**

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Progression in Maths

Mixed Age Progression – Addition & Subtraction

	Year 1	Year 2	Year 3	Year 4
Addition & Subtraction: Recall, Represent, Use	• read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs • represent and use number bonds and related subtraction facts within 20 Y1/2- Autumn 2 Y1/2- Summer 5	• 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 Y1/2- Autumn 2 Y2/3- Autumn 2	• estimate the answer to a calculation and use inverse operations to check answers Y2/3- Autumn 2 Y2/3- Summer 2 Y3/4- Autumn 2	• estimate and use inverse operations to check answers to a calculation Y3/4- Autumn 2 Y4/5- Autumn 2

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Progression in Maths

Mixed Age Progression – Addition & Subtraction

	Year 1	Year 2	Year 3	Year 4
Addition & Subtraction: Calculations	• add and subtract one-digit and two-digit numbers to 20, including zero **Y1/2- Autumn 2** **Y1/2- Summer 5**	• add and subtract numbers using concrete objects, pictorial representations, and mentally, including: ➢ a two-digit number and ones ➢ a two-digit number and tens ➢ two two-digit numbers ➢ adding three one-digit numbers **Y1/2- Autumn 2** **Y2/3- Autumn 2**	• add and subtract numbers mentally, including: ➢ 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 **Y2/3- Autumn 2** **Y2/3- Summer 2** **Y3/4- Autumn 2**	• add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate **Y3/4- Autumn 2** **Y4/5- Autumn 2**

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Progression in Maths

Mixed Age Progression – Addition & Subtraction

	Year 1	Year 2	Year 3	Year 4
Addition & Subtraction: Solve Problems	• solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = □ – 9 Y1/2- Autumn 2 Y1/2- Summer 5	• solve problems with addition and subtraction: ➢ using concrete objects and pictorial representations, including those involving numbers, quantities and measures ➢ applying their increasing knowledge of mental and written methods Y1/2- Autumn 2 Y2/3- Autumn 2	• solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction Y2/3- Autumn 2 Y2/3- Summer 2 Y3/4- Autumn 2	• solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why Y3/4- Autumn 2 Y4/5- Autumn 2

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Progression in Maths

Mixed Age Progression – Multiplication & Division

	Year 1	Year 2	Year 3	Year 4
Multiplication & Division: Recall, Represent, Use		• 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 Y1/2- Autumn 3 Y1/2- Spring 1 Y2/3- Autumn 3 Y2/3- Spring 1	• recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables Y2/3- Autumn 3 Y2/3- Summer 2 Y3/4- Autumn 3	• 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 Y3/4- Autumn 3 Y3/4- Spring 1 Y4/5- Autumn 3 Y4/5- Spring 1

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Progression in Maths

Mixed Age Progression – Multiplication & Division

	Year 1	Year 2	Year 3	Year 4
Multiplication & Division: Calculations		• calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs Y1/2- Autumn 3 Y1/2- Spring 1 Y2/3- Autumn 3 Y2/3- Spring 1	• 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 Y2/3- Autumn 3 Y2/3- Spring 1 Y2/3- Summer 2 Y3/4- Autumn 3 Y3/4- Spring 1	• multiply two-digit and three-digit numbers by a one-digit number using formal written layout Y3/4- Autumn 3 Y3/4- Spring 1 Y4/5- Autumn 3 Y4/5- Spring 1

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Progression in Maths

Mixed Age Progression – Multiplication & Division

	Year 1	Year 2	Year 3	Year 4
Multiplication & Division: Solve Problems	• 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 Y1/2- Autumn 3 Y1/2- Spring 1 Y1/2- Summer 5	• solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts Y1/2- Autumn 3 Y1/2- Spring 1 Y2/3- Autumn 3 Y2/3- Spring 1	• 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 Y2/3- Spring 1 Y2/3- Summer 2 Y3/4- Spring 1	• 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 Y3/4- Spring 1 Y4/5- Spring 1

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Progression in Maths

Mixed Age Progression – Fractions, Decimals, Percentages

	Year 1	Year 2	Year 3	Year 4
Fractions: Recognise and Write	• 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 **Y1/2- Spring 5**	• 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 **Y1/2- Spring 5** **Y2/3- Spring 5**	• 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 **Y2/3- Spring 5** **Y3/4- Spring 3**	• count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten. **Y3/4- Spring 4** **Y4/5- Spring 3**
Fractions: Compare		• Recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$ **Y1/2- Spring 5** **Y2/3- Spring 5**	• recognise and show, using diagrams, equivalent fractions with small denominators • compare and order unit fractions, and fractions with the same denominators **Y2/3- Spring 5** **Y3/4- Spring 3**	• recognise and show, using diagrams, families of common equivalent fractions **Y3/4- Spring 3** **Y4/5- Spring 2**

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Progression in Maths

Mixed Age Progression – Fractions, Decimals, Percentages

	Year 1	Year 2	Year 3	Year 4
Fractions: Calculations		• write simple fractions for example, $\frac{1}{2}$ of 6 = 3 Y1/2- Spring 5 Y2/3- Spring 5	• add and subtract fractions with the same denominator within one whole [for example, $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$] Y2/3- Spring 5 Y2/3- Summer 4 Y3/4- Summer 3	• add and subtract fractions with the same denominator Y3/4- Spring 3 Y4/5- Spring 2
Fractions: Solve Problems			• solve problems that involve all of the above Y2/3- Spring 5 Y2/3- Summer 4 Y3/4- Summer 3	• 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 Y3/4- Spring 3 Y4/5- Spring 2

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Progression in Maths

Mixed Age Progression – Fractions, Decimals, Percentages

	Year 1	Year 2	Year 3	Year 4
Decimals: Recognise and Write				• recognise and write decimal equivalents of any number of tenths or hundredths • recognise and write decimal equivalents to $\frac{1}{4}, \frac{1}{2}, \frac{3}{4}$ **Y3/4- Spring 4** **Y3/4- Summer 1** **Y4/5- Spring 3** **Y4/5- Summer 1**
Decimals: Compare				• 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 **Y3/4- Summer 1** **Y4/5- Summer 1**

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Progression in Maths

Mixed Age Progression – Fractions, Decimals, Percentages

	Year 1	Year 2	Year 3	Year 4
Decimals: Calculations & Problems				• 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 Y3/4- Spring 4 Y4/5- Spring 3

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Progression in Maths

Mixed Age Progression – Fractions, Decimals, Percentages

	Year 1	Year 2	Year 3	Year 4
Fractions, Decimals and Percentages				• solve simple measure and money problems involving fractions and decimals to two decimal places Y3/4- Spring 3 Y3/4- Spring 4 Y3/4- Summer 1 Y3/4- Spring 2 Y3/4- Spring 3 Y3/4- Summer 1

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Mixed Age Progression – Algebra

	Year 1	Year 2	Year 3	Year 4
Algebra	• solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = □ – 9	• recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems	• solve problems, including missing number problems	

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

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Progression in Maths

Mixed Age Progression – Measurement

	Year 1	Year 2	Year 3	Year 4
Measurement: Using Measures	• compare, describe and solve practical problems for: ➢ 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: ➢ lengths and heights ➢ mass/weight ➢ capacity and volume ➢ time (hours, minutes, seconds) **Y1/2- Spring 3** **Y1/2- Summer 2** **Y1/2- Summer 4**	• 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 = **Y1/2- Spring 3** **Y1/2- Summer 4** **Y2/3- Spring 3** **Y2/3- Summer 3**	• measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) **Y2/3- Spring 3** **Y2/3- Summer 3** **Y3/4- Spring 2** **Y3/4- Spring 4**	• Convert between different units of measure [for example, kilometre to metre; hour to minute] • estimate, compare and calculate different measures **Y3/4- Spring 2** **Y3/4- Summer 2** **Y4/5- Autumn 4** **Y4/5- Summer 2**

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Progression in Maths

Mixed Age Progression – Measurement

	Year 1	Year 2	Year 3	Year 4
Measurement: Money	• recognise and know the value of different denominations of coins and notes Y1/2- Autumn 2	• 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 Y1/2- Autumn 2 Y2/3- Autumn 2	• add and subtract amounts of money to give change, using both £ and p in practical contexts Y2/3- Autumn 2 Y3/4- Summer 1	• estimate, compare and calculate different measures, including money in pounds and pence Y3/4- Summer 1 Y4/5- Summer 1

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Mixed Age Progression – Measurement

	Year 1	Year 2	Year 3	Year 4
Measurement: Time	• 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 **Y1/2- Summer 2**	• 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 **Y1/2- Summer 2** **Y2/3- Summer 1**	• 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] **Y2/3- Summer 1** **Y3/4- Summer 2**	• 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 **Y3/4- Summer 2** **Y4/5- Summer 2**

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Mixed Age Progression – Measurement

	Year 1	Year 2	Year 3	Year 4
Measurement: Perimeter, Area, Volume			• measure the perimeter of simple 2-D shapes Y2/3- Spring 4 Y3/4- Spring 2	• measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres • find the area of rectilinear shapes by counting squares Y3/4- Spring 2 Y3/4- Autumn 4

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Mixed Age Progression – Geometry

	Year 1	Year 2	Year 3	Year 4
Geometry: 2-D Shapes	• recognise and name common 2-D shapes [for example, rectangles (including squares), circles and triangles] **Y1/2- Spring 4**	• 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 **Y1/2- Spring 4** **Y2/3- Spring 4**	• draw 2-D shapes **Y2/3- Spring 4** **Y3/4- Summer 4**	• 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 **Y3/4- Summer 4** **Y4/5- Summer 4**
Geometry: 3-D Shapes	• recognise and name common 3-D shapes [for example, cuboids (including cubes), pyramids and spheres] **Y1/2- Spring 4**	• 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 **Y1/2- Spring 4** **Y2/3- Spring 4**	• make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them **Y2/3- Spring 4** **Y3/4- Summer 4**	

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Progression in Maths

Mixed Age Progression – Geometry

	Year 1	Year 2	Year 3	Year 4
Geometry: Angles & Lines			• 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 **Y2/3- Spring 4** **Y3/4- Summer 4**	• 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 **Y3/4- Summer 4** **Y4/5- Summer 4**

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Progression in Maths

Mixed Age Progression – Geometry

	Year 1	Year 2	Year 3	Year 4
Geometry: Position & Direction	• describe position, direction and movement, including whole, half, quarter and three-quarter turns **Y1/2- Summer 1**	• 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) **Y1/2- Spring 4** **Y1/2- Summer 1** **Y2/3- Spring 4**		• 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 **Y3/4- Summer 4** **Y4/5- Summer 5**

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Progression in Maths

Kindness	Curiosity	Creativity	Courage	Proud	Honesty	Aspire	Resilience

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Progression in Maths

Mixed Age Progression – Statistics

	Year 1	Year 2	Year 3	Year 4
Statistics: Present and Interpret		• interpret and construct simple pictograms, tally charts, block diagrams and simple tables **Y1/2- Spring 2** **Y2/3- Spring 2**	• interpret and present data using bar charts, pictograms and tables **Y2/3- Spring 2** **Y3/4- Summer 3**	• interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs **Y3/4- Summer 3** **Y4/5- Summer 3**
Statistics: Solve Problems		• 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 **Y1/2- Spring 2** **Y2/3- Spring 2**	• 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 **Y2/3- Spring 2** **Y3/4- Summer 3**	• solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs **Y3/4- Summer 3** **Y4/5- Summer 3**

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Progression in Maths

YEAR 5 and 6 WILL WORK FROM MATHS – NO PROBLEM! SCHEME AS PART OF OUR 2 YEAR PLAN IN MATHS 2022-2024

	Year 6	Year 5
Number and Place Value		
Number and Place Value	• Create and identify numbers to 10 000 000 • Write in numerals and words numbers to 10 000000. • Recognise the value ofdigits to 10 000 000. • Compare and order numbers to 10 000 000using place value. • Round numbers to 10 000 000 to the nearestmillion, hundred thousand and ten thousand. • Round numbers to thenearest appropriate number up to and including million • Determine when rounding is appropriateand to which value.	• Read and represent numbers to 1 000 000using number discs. • Compare numbers to 1 000 000 using place value, pictorial representations, proportionality, lists andnumber lines. • Make and identify patterns in numbers using knowledge of placevalue. • Make number patternsthat decrease in multiples of 10 000 or 100 000. • Round numbers to thenearest 100, 1000, 10 000 and 100 000 using number lines.
Roman Numerals		• Write Roman numerals to1000.
Negative Numbers	• Add and subtract negative numbers using anumber line and solve problems	

Kindness	Curiosity	Creativity	Courage	Proud	Honesty	Aspire	Resilience

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Progression in Maths

	Calculations	
Addition and Subtraction	**Year 6**	**Year 5**
	• Use multiple operations and create expressions from a picture • Use the order of operations to solve expressions. • Create and solve expressions using the four operations	• Add numbers within 1 000 000 using rounding and concrete materials. • Use addition and subtraction to solve comparison problems with numbers to 1 000 000. • Add numbers within 1 000 000 using the column method of addition. • Subtract using the column method, number bonds and number discs using numbers to 1 000 000. • Add and subtract using number bonds as a key strategy using numbers within 1 000 000. • Subtract numbers to 1 000 000 using concrete materials, the column method and number bonds.
Multiplication and Division	• Multiply by multiples of 10 • Multiply 3- and 4-digit numbers by 2-digit numbers without and with regrouping or renaming • Estimate products of multiplying 3-and 4-digit numbers by 2-digits • Use knowledge of multiplication to create specific products. • Divide 3-digit numbers by 2-digit numbers using a variety of strategies • Use number bonds, long division and bar models to facilitate division by 2-digit numbers. • Divide 4-digit numbers by 2-digit numbers using a variety of methods	• Define and find common factors of numbers to 100. • To identify and name the prime numbers • Define and determine prime numbers to 100. • Create and determine square and cubed numbers. • Multiply 1- and 2-digit numbers by 10, 100 and 1000. • Multiply 2- and 3-digit numbers by a 1-digit number using multiple strategies. • Multiply 4-digit numbers by 1-digit numbers with regrouping, using a variety of strategies.

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Progression in Maths

	• Divide 3-digit numbers by 2-digit numbers with remainders • Divide 4-digit numbers by 2-digit numbers with a remainder • Represent the remainder as part of a whole amount of money or decimal. • Use the bar model to solve word multiplication and division problems. • Solve word problems using division as the main strategy • Solve word problems involving multiple operations, including multiplication and division. • Find common multiples • Use common multiples to solve problems • Find the largest common factor of 3-digit numbers using multiplication and division • Find common factors using concrete materials. • Identify prime numbers above 100 using multiplication or division	• Multiply 2-digit numbers by 2-digit numbers using multiple methods. • Multiply a 3-digit number by a 2-digit number, with the grid method and column method • Multiply a 3-digit number by a 2-digit number with regrouping, using the column method • Divide 3- and 4-digit numbers by 1-digit numbers, using number bonds and long division • Divide 3-digit numbers by 1-digit numbers, using long division, short division and mental methods, with remainders. •
Additional Word Problems	• Use bar models to solve word problems involving the four operations. • Solve complex word problems using pictorial representation and the four operations. • Create and solve complex word problems using the four operations.	• Identify the operation needed to solve a problem • Solve word problems involving multiplication and division using bar models • Solve word problems involving multiple operations, identifying key information and representing information using bar model diagrams.

Kindness	Curiosity	Creativity	Courage	Proud	Honesty	Aspire	Resilience

Crow Orchard Primary School

Progression in Maths

Fractions including Decimal and Percentages		
	Year 6	**Year 5**
Fractions	• Recognise equivalence in fractions to 1/4. • Simplify fractions using concrete materials, pictorial representation, division and common factors. • Compare fractions and place them in order from smallest to largest. • Compare and order fractions by finding common denominators and common factors • Add and subtract fractions with different denominators • Add and subtract mixed numbers, including fractions with different denominators • Subtract from the whole and add the remainder back on. • Add and subtract mixed numbers. • Multiply fractions using concrete materials, pictorial representations and abstract methods. • Determine if the commutative law applies to fractions; • Divide a fraction by a whole number • Divide fractions by whole numbers using concrete materials and pictorial representations • Divide fractions when the numerator and divisor are not easily divisible.	• Divide whole numbers to create fractions • Create mixed numbers and improper fractions when dividing whole numbers. • Write improper fractions and mixed numbers using a number line and pictorial methods. • Find equivalent fractions using pictorial methods. • Compare and order fractions using the pictorial method. • Compare mixed numbers using pictorial representations • Find common denominators where one fraction is already the common denominator for all fractions in the question. • Add unlike fractions by finding a common denominator using pictorial methods. • Add together unlike fractions where the sum is greater than 1, creating mixed numbers or improper fractions. • Add unlike fractions which create improper fractions and mixed numbers that give rise to simplification. • Subtract fractions with different denominators • Subtract fractions from whole numbers. • Use bar models for subtracting fractions. • Subtract fractions and mixed numbers from mixed numbers with different denominators. • Multiply fractions by whole numbers where the product is an improper fraction or mixed number. • Multiply mixed numbers by whole numbers, creating larger mixed numbers. • Multiply mixed numbers by whole numbers in multi-step word problems.

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Progression in Maths

Decimals	• Read and write decimals to thousandths • Use concrete materials to represent decimals. • Divide whole numbers by larger whole numbers • Divide whole numbers that give rise to decimals • Calculate decimal fraction equivalents using long division • Convert fractions into decimals using bar models and long division. • Write fractions as decimals • Multiply decimals by whole numbers using partitioning, regrouping and renaming • Multiply whole numbers that include a decimal by other whole numbers • Divide decimals using number bonds, number bonds and long division including regrouping and renaming. • Multiply decimals by a 2-digit whole number using number discs and the column method. • Divide decimals by 2-digit numbers using number bonds and the worded method.	• Read and write decimal numbers • Compare tenths and hundredths written as decimals. • Order and compare decimals. • Write fractions as decimals. • Add and subtract decimals. • Add and subtract amounts in pounds and pence. • Add and subtract decimals to find the smallest possible sum and difference. • Find number pairs that add up to 1. • Add and subtract the perimeter of an object using decimals. • Round decimals to the nearest whole number • Round numbers to nearest tenth.
Percentages	• Find the percentage of a whole number using division and multiplication • Find the percentage of a quantity • Find the percentage change in an amount over time • Calculate the percentage change where the number gives rise to a decimal. • Use percentage, bar models and fractions to compare amounts.	• Compare fractions, decimals and percentages • Convert fractions to decimals and percentages • Convert values of an amount into percentages • Convert fractions into percentages. • Convert values of an amount into percentages

Kindness	Curiosity	Creativity	Courage	Proud	Honesty	Aspire	Resilience

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Progression in Maths

Measurements		
	Year 6	**Year 5**
Measurement	• Convert common measurements into metres, centimetres and millimetres. • Use knowledge of decimals and fractions to help convert units. • Convert metres into kilometres as units of measure. • Convert units of mass from grams to kilograms using decimals and fractions. • Convert units of volume from millilitres to litres.	• Convert units of length including centimetres and metres. • Solve problems by converting units of length. • Convert units of mass including grams into kilograms. • Convert units of mass, including kilograms and pounds
Time	• Convert units of time from minutes to hours • Represent time using 24-hour notation • Use the bar model to solve complex word problems involving time.	• Convert units of time • Convert units of time from days into weeks and months. • Solve problems by converting units of time.
Area and Perimeter	• Find the area and perimeter of rectangles • Calculate perimeter using the known area and vice versa. • Find and calculate the area of a parallelogram • Use concrete materials and prior understanding of the area to construct a formula for the area. • Use prior knowledge of area to determine and solve the area of a triangle • Use and apply the formula for the area • of a rectangle to solve problems involving triangles. • Calculate the area of a triangle using a formula; to calculate the area of a triangle in multiple ways. • Use multiple methods to solve the area of a triangle. • Find the area of a parallelogram using an understanding of triangles	• Find the perimeter of shapes. • Find shapes with a specific perimeter. • Use scale diagrams to find the perimeter of a shape. • Measure the area of shapes by counting squares. • Measure the area of squares. • Measure the area of a shape. • Measure and find area in square metres. • Make an estimation of area in kilometres.

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Progression in Maths

Volume and Mass	• Find the volume of cubes and cuboids using concrete materials. • Determine the formula for the volume of cubes and cuboids and apply it to calculate the volume of shapes. • Estimate the volume of objects and spaces • Calculate the volume of boxes using the formula for volume of cubes and cuboids. • Calculate the volume of cubes or cuboids using the formula for volume of a cube • Solve word problems involving the volume of cubes and cuboids	• Understand the volume of solids. • Find the volume of 3-D shapes. • Find the volume of solids. • Find the capacity of a cuboid. • Compare and convert units of volume. • Convert units of volume (metric and imperial). • Solve word problems involving volume.
Temperature		• Read the temperature on a thermometer

Kindness	Curiosity	Creativity	Courage	Proud	Honesty	Aspire	Resilience

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Progression in Maths

Ratio and proportion	
Year 6	**Year 5**
• Use ratios and fractions to compare objects • Find the relationship between ratios, percentages and fractions. • Determine the ratio of a quantity using concrete materials • Simplify ratios using concrete materials in addition to division. • Compare more than two quantities using the term 'ratio' • Use bar models to express ratios where there is more than one quantity. • Compare quantity using both fractions and ratios • Use bar model diagrams to represent ratios. • Compare quantities using bar models and common factors • Use multiplication and division to simplify ratios. • Compare numbers using ratios • Solve word problems using a variety of methods including guess-and-check and bar models • Apply knowledge of ratios to word problems. • Solve word problems using the bar model • Employ division and multiplication as primary strategies when solving word problems visually. • Apply the guess-and-check and advanced bar model to ratio word problems.	

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Progression in Maths

Algebra	
Year 6	**Year 5**
• Determine a pattern using concrete materials and pictorial representation • Use a table to identify a repeating pattern • Express a rule using a letter or symbol • Determine a pattern using concrete materials and pictorial representation • Express the relationship between consecutive numbers in terms of a symbol or letter. • Express unknown numbers in terms of a letter or symbol, including using a number before aletter for multiplication. • Write algebraic expressions using each of the four operations. • Use examples to identify rules • Evaluate algebraic expressions including the use of inverse operations. • Recognise patterns • Write and evaluate algebraic expressions with two steps • Write and use formulae. • Use formulae to solve problems • Replace a letter/variable with a number then solve the equation • Use inverse operations to solve equations. • Solve equations • Use equations to find unknown values.	

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Progression in Maths

Geometry		
	Year 6	**Year 5**
Angles	• Investigate opposite angles • Use prior knowledge of angles to solve problems involving angles. • Solve problems involving angles using the bar model • Solve problems involving angles without protractors. • Determine and show the sum of the angles inside a triangle. • Investigate and determine angles in quadrilaterals. • Use the knowledge of angles inside a triangle and a quadrilateral to solve problems involving angles in other shapes.	• Know the names and qualities of acute, right, obtuse and reflex angles. • Draw, measure and add angles using a protractor. • Identify two angles which add up to 180 degrees on a straight line. • Investigate angles that, when combined, make 360 degrees. • Draw angles using a protractor accurately • Describe the sides and angles of both rectangles and squares. • Investigate the angles of various quadrilaterals, including squares and rectangles. • Solve problems involving angles in rectangles. • Solve angle problems • Investigate regular polygons.
Position and Movement	• Represent negative numbers on both vertical and horizontal number lines. • Describe the positions of objects on a coordinate grid • Use x and y axes to determine the position of objects on a grid. • Describe the position of points using coordinates on a grid. • Draw polygons on a coordinate grid • Recognise polygons on a coordinate grid. • Describe the translation of shapes on a coordinate grid. • Describe reflection using a mirror line and the terms 'object' and 'image'. • Reposition objects so they can be reflected in the x and y axis as the mirror line. • Describe the movement of objects using the terms 'translation' and 'reflection'. • Use algebra to describe the positions of coordinates in relationship to one another. • Represent translation and reflection using algebraic notation.	• Name and plot points. • Describe the position of a shape following a translation. • Describe movements and reflecting shapes. • Describe the movement of a 2-D shape when reflected. • Reflect a shape more than once.

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Progression in Maths

Properties of shapes	• Name the parts of a circle; to calculate diameter and radius using parts of a circle. • Solve problems involving angles in a circle. • Draw quadrilaterals with specific side lengths and parallel lines • Find the perimeter of shapes and name trapeziums and parallelograms. • Draw triangles using measurements and angles as the starting point • Use a protractor to draw triangles using angles. • Construct triangles using a protractor and ruler • Use ratio to determine the dimensions of a triangle. • Construct the nets of 3-D shapes by identifying the faces and the 2-D shapes that construct them.	• Investigate regular polygons • See angles for more about shapes

Statistics		
	Year 6	**Year 5**
Averages	• Calculate the mean. • Solve problems involvingthe mean • Use the mean and thenumber of values to calculate the total • Use given information tofind unknown values.	

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Progression in Maths

Graphs	• Convert miles into kilometres and kilometres into miles. • Read and interpret line graphs. • Show information on graphs • Transfer information from a table to a pie chart. • Read and interpret pie charts. • Use percentages in pie charts. • Use knowledge of angles to interpret pie charts. • Read and interpret line graphs • Interpret the information in line graphs that show distance and time. • Answer questions about the information in line graphs	• Read the information presented in a table and interpret its meaning. • Read and respond to tables that have a variety of data sets. • Read and interpret information provided in a line graph where a single line represents the data. • Read and interpret information presented on a line graph where the data is represented by more than one line. • Read and interpret information presented in a table and turn it into a line graph • Determine relationships between data sets.

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Progression in Maths

Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Have a deep understanding of number to 10,including the composition of each number. • Subitise (recognise quantities without counting) up to 5. • Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts. Verbally count beyond 20, recognising the pattern of the counting system. • Compare quantities up to 10 in different	Count to and across 100, forwards & backwards from any number. • Read and write numbers to 20 in numerals & words. • Read and write numbers to 100 in numerals. • Say 1 more/1 less to 100. • Count in multiples of 2, 5 & 10. • Use bonds and subtraction facts to 20. • Add & subtract 1 digit & 2 digit numbers to 20, including zero. • Solve one-step multiplication and division using objects, pictorial representation and arrays.	Compare and order numbers up to 100 and use < > =. • Read and write all numbers to 100 in digits & words. • Say 10 more/less than any number to 100. • Count in steps of 2, 3 & 5 from zero and in 10s from any number (forwards and backwards). • Recall and use multiplication & division facts for 2, 5 & 10 tables. • Recall and use +/- facts to 20. • Derive and use related facts to 100. • Recognise place value of any 2-digit number. • Add & subtract:	Compare & order numbers up to 1000. • Read & write all numbers to 1000 in digits and words. • Find 10 or 100 more/less than a given number. • Count from 0 in multiples of 4, 8, 50 and 100. • Recall & use multiplication & division facts for 3, 4, 8 tables. • Recognise place value of any 3-digit number. • Add and subtract: o 3-digit nos and ones o 3-digit nos and tens o 3-digit nos and hundreds • Add and subtract:	Count backwards through zero to include negative numbers. • Compare and order numbers beyond 1,000. • Compare and order numbers with up to 2 decimal places. • Read Roman numerals to 100. • Find 1,000 more/less than a given number. • Count in multiples of 6, 7, 9, 25 and 1000. • Recall and use multiplication and division facts all tables to 12x12. • Recognise PV of any 4-digit number. • Round any number to the nearest 10, 100 or 1,000.	Count forwards and backward with positive and negative numbers through zero. • Count forwards/backwards in steps of powers of 10 for any given number up to 1,000,000. • Compare and order numbers up to 1,000,000. • Compare and order numbers with 3 decimal places. • Read Roman numerals to 1,000. • Identify all multiples and factors, including finding all factor pairs. • Use known tables to derive other number facts. • Recall prime numbers up to 19. • Recognise and use square numbers and cube numbers. • Recognise place value of any number up to 1,000,000. • Round any number up to 1,000,000 to the nearest 10, 100, 1000, 10,000 or 100,000.	Use negative numbers in context and calculate intervals across zero. • Compare and order numbers up to 10,000,000. • Identify common factors, common multiples and prime numbers. • Round any whole number to a required degree of accuracy. • Identify the value of each digit to 3 decimal places. • Use knowledge of order of operations to carry out calculations involving four operations. • Multiply 4-digit by 2-digit • Divide 4-digit by 2-digit • Recognise the relationship between fractions, decimals and percentages, finding equivalences.

Kindness	Curiosity	Creativity	Courage	Proud	Honesty	Aspire	Resilience

Crow Orchard Primary School

Progression in Maths

contexts, recognising when one quantity is greater than, less than or the same as the other quantity. • Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally	• Recognise half and quarter of object, shape or quantity. • Sequence events in chronological order. • Use language of day, week, month and year. • Tell time to hour & half past.	o 2-digit nos & ones o 2-digit nos & tens o Two 2-digit nos o Three 1-digit nos • Recognise and use inverse (+/-). • Calculate and write multiplication & division calculations using multiplication tables. • Recognise, find, name and write 1/3; 1/4; 2/4; 3/4. • Write and recognise equivalence of simple fractions. • Tell time to five minutes, including quarter past/to.	o Numbers with up to 3-digits using written columnar method. • Estimate and use inverse to check. • Multiply: o 2-digit by 1-digit • Count up/down in tenths. • Compare and order fractions with same denominator. • Add and subtract fractions with same denominator with whole. • Tell time using 12 and 24 hour clocks; and using Roman numerals. • Tell time to nearest minute. • Know number of days in each month and number of seconds in a minute.	• Round decimals with 1dp to nearest whole number. • Add and subtract numbers with up to 4-digits using written columnar method. • Multiply: o 2-digit by 1-digit o 3-digit by 1-digit • Count up/down in hundredths. • Recognise and write equivalent fractions • Add and subtract fractions with same denominator. • Read, write and convert time between analogue and digital 12 and 24 hour clocks.	• Round decimals with 2 decimal places to nearest whole number and 1 decimal place. • Add and subtract numbers with more than 4-digits using formal written method. • Use rounding to check answers. • Multiply 4-digits by 1-digit/ 2-digit • Divide up to 4-digits by 1-digit • Multiply & divide whole numbers & decimals by 10, 100 and 1,000 • Recognise and use thousandths. • Recognise mixed numbers and improper fractions and convert from one to another. • Multiply proper fractions and mixed numbers by whole numbers. • Identify and write equivalent fractions. • Solve time problems using timetables and converting between different units of time.	• Add and subtract fractions with different denominators and mixed numbers. • Multiply simple pairs of proper fractions, writing the answer in the simplest form. • Divide proper fractions by whole numbers. • Calculate percentage of whole number. • Solve simple algebraic problems. • Calculate with measures • Use mathematical reasoning to find missing angles

Kindness	Curiosity	Creativity	Courage	Proud	Honesty	Aspire	Resilience

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Progression in Maths

1NF-1 Fluently add and subtract within 10 – All Year 1 addition facts

+	0	1	2	3	4	5	6	7	8	9	10
0	0+0	0+1	0+2	0+3	0+4	0+5	0+6	0+7	0+8	0+9	0+10
1	1+0	1+1	1+2	1+3	1+4	1+5	1+6	1+7	1+8	1+9	1+10
2	2+0	2+1	2+2	2+3	2+4	2+5	2+6	2+7	2+8	2+9	2+10
3	3+0	3+1	3+2	3+3	3+4	3+5	3+6	3+7	3+8	3+9	3+10
4	4+0	4+1	4+2	4+3	4+4	4+5	4+6	4+7	4+8	4+9	4+10
5	5+0	5+1	5+2	5+3	5+4	5+5	5+6	5+7	5+8	5+9	5+10
6	6+0	6+1	6+2	6+3	6+4	6+5	6+6	6+7	6+8	6+9	6+10
7	7+0	7+1	7+2	7+3	7+4	7+5	7+6	7+7	7+8	7+9	7+10
8	8+0	8+1	8+2	8+3	8+4	8+5	8+6	8+7	8+8	8+9	8+10
9	9+0	9+1	9+2	9+3	9+4	9+5	9+6	9+7	9+8	9+9	9+10
10	10+0	10+1	10+2	10+3	10+4	10+5	10+6	10+7	10+8	10+9	10+10

Y1 facts

Y2 facts

Adding 1

Adding 2

Bonds to 10

Adding 0

Doubles

Near doubles

- This grid shows the addition facts within 10 and strategies to recall or derive them.
- Children should also be fluent in the corresponding subtractions to be ready to progress to Year 2.

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Thinking about relationships between facts

Kindness	Curiosity	Creativity	Courage	Proud	Honesty	Aspire	Resilience

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Progression in Maths

Multiplication and division facts

The full set of multiplication calculations that pupils need to be able to solve by automatic recall are shown in the table below. Pupils must also have automatic recall of the corresponding division facts.

1 × 1	1 × 2	1 × 3	1 × 4	1 × 5	1 × 6	1 × 7	1 × 8	1 × 9	1 × 10	1 × 11	1 × 12
2 × 1	2 × 2	2 × 3	2 × 4	2 × 5	2 × 6	2 × 7	2 × 8	2 × 9	2 × 10	2 × 11	2 × 12
3 × 1	3 × 2	3 × 3	3 × 4	3 × 5	3 × 6	3 × 7	3 × 8	3 × 9	3 × 10	3 × 11	3 × 12
4 × 1	4 × 2	4 × 3	4 × 4	4 × 5	4 × 6	4 × 7	4 × 8	4 × 9	4 × 10	4 × 11	4 × 12
5 × 1	5 × 2	5 × 3	5 × 4	5 × 5	5 × 6	5 × 7	5 × 8	5 × 9	5 × 10	5 × 11	5 × 12
6 × 1	6 × 2	6 × 3	6 × 4	6 × 5	6 × 6	6 × 7	6 × 8	6 × 9	6 × 10	6 × 11	6 × 12
7 × 1	7 × 2	7 × 3	7 × 4	7 × 5	7 × 6	7 × 7	7 × 8	7 × 9	7 × 10	7 × 11	7 × 12
8 × 1	8 × 2	8 × 3	8 × 4	8 × 5	8 × 6	8 × 7	8 × 8	8 × 9	8 × 10	8 × 11	8 × 12
9 × 1	9 × 2	9 × 3	9 × 4	9 × 5	9 × 6	9 × 7	9 × 8	9 × 9	9 × 10	9 × 11	9 × 12
10 × 1	10 × 2	10 × 3	10 × 4	10 × 5	10 × 6	10 × 7	10 × 8	10 × 9	10 × 10	10 × 11	10 × 12
11 × 1	11 × 2	11 × 3	11 × 4	11 × 5	11 × 6	11 × 7	11 × 8	11 × 9	11 × 10	11 × 11	11 × 12
12 × 1	12 × 2	12 × 3	12 × 4	12 × 5	12 × 6	12 × 7	12 × 8	12 × 9	12 × 10	12 × 11	12 × 12

Pupils must be fluent in these facts by the end of year 4, and this is assessed in the multiplication tables check. Pupils should continue with regular practice through year 5 to secure and maintain fluency.

The 36 most important facts are highlighted in the table. Fluency in these facts should be prioritised because, when coupled with an understanding of commutativity and fluency in the formal written method for multiplication, they enable pupils to multiply any pair of numbers.

Year 2 facts

Year 3 facts

Year 4 facts

×	0	1	2	3	4	5	6	7	8	9	10	11	12
0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	1	2	3	4	5	6	7	8	9	10	11	12
2	0	2	4	6	8	10	12	14	16	18	20	22	24
3	0	3	6	9	12	15	18	21	24	27	30	33	36
4	0	4	8	12	16	20	24	28	32	36	40	44	48
5	0	5	10	15	20	25	30	35	40	45	50	55	60
6	0	6	12	18	24	30	36	42	48	54	60	66	72
7	0	7	14	21	28	35	42	49	56	63	70	77	84
8	0	8	16	24	32	40	48	56	64	72	80	88	96
9	0	9	18	27	36	45	54	63	72	81	90	99	108
10	0	10	20	30	40	50	60	70	80	90	100	110	120
11	0	11	22	33	44	55	66	77	88	99	110	121	132
12	0	12	24	36	48	60	72	84	96	108	120	132	144

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Progression in Maths

Factual fluency progression

	Year 1	Year 2	Year 3	Year 4	Year 5
Additive factual fluency	Addition and subtraction within 10.	Addition and subtraction across 10.	Secure and maintain fluency in addition and subtraction within and across 10, through continued practice.		
Multiplicative factual fluency			Recall the 10 and 5 multiplication tables, and corresponding division facts.	Recall the 3, 6 and 9 multiplication tables, and corresponding division facts.	Secure and maintain fluency in all multiplication tables, and corresponding division facts, through continued practice.
			Recall the 2, 4 and 8 multiplication tables, and corresponding division facts.	Recall the 7 multiplication table, and corresponding division facts.	
				Recall the 11 and 12 multiplication tables, and corresponding division facts.	

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