

The New National Curriculum Overview September 2014

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Maths

By Year Group

Mathematics
Age Related Expectations
Year 1

Number and place value	Number-addition and subtraction	Number-multiplication and division	Number-fractions	Measurement	Geometry-properties of shapes	Geometry-position and direction
<p>Pupils should be taught to:</p> <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, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens ▪ given a number, identify one more and one less ▪ identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least ▪ read and write numbers from 1 to 20 in numerals and words. 	<p>Pupils should be taught to:</p> <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 ▪ add and subtract one-digit and two-digit numbers to 20, including zero ▪ solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = <input type="text"/> – 9. 	<p>Pupils should be taught to:</p> <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>Pupils should be taught to:</p> <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>Pupils should be taught to:</p> <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) ▪ recognise and know the value of different denominations of coins and notes ▪ 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>Pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ recognise and name common 2-D and 3-D shapes, including: <ul style="list-style-type: none"> ▪ 2-D shapes [for example, rectangles (including squares), circles and triangles] ▪ 3-D shapes [for example, cuboids (including cubes), pyramids and spheres]. 	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ describe position, direction and movement, including whole, half, quarter and three-quarter turns.

Mathematics
Age Related Expectations
Year 2

Number and place value	Number-addition and subtraction	Number-multiplication and division	Number-fractions	Measurement	Geometry-properties of shapes	Geometry-position and direction
<p>Pupils should be taught to:</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 ▪ recognise the place value of each digit in a two-digit number (tens, ones) ▪ identify, represent and estimate numbers using different representations, including the number line ▪ compare and order numbers from 0 up to 100; use <, > and = signs ▪ read and write numbers to at least 100 in numerals and in words ▪ use place value and number facts to solve problems. 	<p>Pupils should be taught to:</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 ▪ recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 ▪ 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 ▪ 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>Pupils should be taught to:</p> <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 ▪ calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs ▪ show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot ▪ solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts. 	<p>Pupils should be taught to:</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 ▪ write simple fractions for example, $\frac{1}{2}$ of 6 = 3 and recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$. 	<p>Pupils should be taught to:</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 = ▪ 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 ▪ 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>Pupils should be taught to:</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 and describe the properties of 3-D shapes, including the number of edges, vertices and faces ▪ 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 and 3-D shapes and everyday objects. 	<p>Pupils should be taught to:</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).

Mathematics
Age Related Expectations
Year 3

Number and place value	Number-addition and subtraction	Number-multiplication and division	Number-fractions	Measurement	Geometry-properties of shapes	Statistics
<p>Pupils should be taught to:</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 ▪ recognise the place value of each digit in a three-digit number (hundreds, tens, ones) ▪ compare and order numbers up to 1000 ▪ identify, represent and estimate numbers using different representations ▪ read and write numbers up to 1000 in numerals and in words ▪ solve number problems and practical problems involving these ideas. 	<p>Pupils should be taught to:</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 ▪ estimate the answer to a calculation and use inverse operations to check answers ▪ solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction. 	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables ▪ 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 ▪ 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>Pupils should be taught to:</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 ▪ recognise and show, using diagrams, equivalent fractions with small denominators ▪ add and subtract fractions with the same denominator within one whole [for example, $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$] ▪ compare and order unit fractions, and fractions with the same denominators ▪ solve problems that involve all of the above. 	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) ▪ measure the perimeter of simple 2-D shapes ▪ add and subtract amounts of money to give change, using both £ and p in practical contexts ▪ 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>Pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them ▪ 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>Pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ interpret and present data using bar charts, pictograms and tables ▪ 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.

Mathematics
Age Related Expectations
Year 4

Number and place value	Number-addition and subtraction	Number-multiplication and division	Number-fractions (including decimals)	Measurement	Geometry-properties of shapes	Geometry-position and direction	Statistics
<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ count in multiples of 6, 7, 9, 25 and 1000 ▪ find 1000 more or less than a given number ▪ count backwards through zero to include negative numbers ▪ recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) ▪ order and compare numbers beyond 1000 ▪ identify, represent and estimate numbers using different representations ▪ 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 ▪ 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>Pupils should be taught to:</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 ▪ estimate and use inverse operations to check answers to a calculation ▪ solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why. 	<p>Pupils should be taught to:</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 ▪ multiply two-digit and three-digit numbers by a one-digit number using formal written layout ▪ 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>Pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ recognise and show, using diagrams, families of common equivalent fractions ▪ count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten. ▪ 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 ▪ add and subtract fractions with the same denominator ▪ recognise and write decimal equivalents of any number of tenths or hundredths ▪ recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$ ▪ 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 ▪ 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 ▪ solve simple measure and money problems involving fractions and decimals to two decimal places. 	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ Convert between different units of measure [for example, kilometre to metre; hour to minute] ▪ measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres ▪ find the area of rectilinear shapes by counting squares ▪ estimate, compare and calculate different measures, including money in pounds and pence ▪ 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>Pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes ▪ 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>Pupils should be taught to:</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>Pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs. ▪ solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.

Mathematics
Age Related Expectations
Year 5

Number and place value	Number-addition and subtraction	Number-multiplication and division	Number-fractions (including decimals and percentages)	Measurement	Geometry-properties of shapes	Geometry-position and direction	Statistics
<p>Pupils should be taught to:</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 ▪ count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 ▪ interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero ▪ 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 ▪ read Roman numerals to 1000 (M) and recognise years written in Roman numerals. 	<p>Pupils should be taught to:</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 ▪ use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy ▪ solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why. 	<p>Pupils should be taught to:</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 ▪ 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 ▪ recognise and use square numbers and cube numbers, and the notation for squared (²) and cubed (³) ▪ solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes ▪ solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign ▪ solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates. 	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ compare and order fractions whose denominators are all multiples of the same number ▪ 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, $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$] ▪ 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 ▪ read and write decimal numbers as fractions [for example, $0.71 = \frac{71}{100}$] ▪ recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents ▪ round decimals with two decimal places to the nearest whole number and to one decimal place ▪ read, write, order and compare numbers with up to three decimal places ▪ solve problems involving number up to three decimal places ▪ 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>Pupils should be taught to:</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 ▪ 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] ▪ solve problems involving converting between units of time ▪ use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling. 	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ identify 3-D shapes, including cubes and other cuboids, from 2-D representations ▪ 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° ▪ use the properties of rectangles to deduce related facts and find missing lengths and angles ▪ distinguish between regular and irregular polygons based on reasoning about equal sides and angles. 	<p>Pupils should be taught to:</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>Pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ solve comparison, sum and difference problems using information presented in a line graph ▪ complete, read and interpret information in tables, including timetables.

Mathematics
Age Related Expectations
Year 6

Number and place value	Number-addition, subtraction, multiplication and division	Number-fractions (including decimals and percentages)	Ratio and proportion
<p>Pupils should be taught to:</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 ▪ 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>Pupils should be taught to:</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 ▪ identify common factors, common multiples and prime numbers ▪ use their knowledge of the order of operations to carry out calculations involving the four operations ▪ 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 ▪ use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy. 	<p>Pupils should be taught to:</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 ▪ 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, $\frac{1}{3} \div 2 = \frac{1}{6}$] ▪ associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, $\frac{3}{8}$] ▪ identify the value of each digit in numbers given to three decimal places and 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 ▪ recall and use equivalences between simple fractions, decimals and percentages, including in different contexts. 	<p>Pupils should be taught to:</p> <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.

Mathematics
Age Related Expectations
Year 6 continued

Algebra	Measurement	Geometry-properties of shapes	Geometry-position and direction	Statistics
<p>Pupils should be taught to:</p> <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>Pupils should be taught to:</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 ▪ 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>Pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ draw 2-D shapes using given dimensions and angles ▪ recognise, describe and build simple 3-D shapes, including making nets ▪ compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons ▪ illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius ▪ recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles. 	<p>Pupils should be taught to:</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>Pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ interpret and construct pie charts and line graphs and use these to solve problems ▪ calculate and interpret the mean as an average.

Maths

Areas of Learning - Progression by Year

Mathematics

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	KS3
Number and Place Value	<p>Pupils will:</p> <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, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens ▪ given a number, identify one more and one less ▪ identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least ▪ read and write numbers from 1 to 20 in numerals and words. 	<p>Pupils will:</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 ▪ recognise the place value of each digit in a two-digit number (tens, ones) ▪ identify, represent and estimate numbers using different representations, including the number line ▪ compare and order numbers from 0 up to 100; use <, > and = signs ▪ read and write numbers to at least 100 in numerals and in words ▪ use place value and number facts to solve problems. 	<p>Pupils will:</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 ▪ recognise the place value of each digit in a three-digit number (hundreds, tens, ones) ▪ compare and order numbers up to 1000 ▪ identify, represent and estimate numbers using different representations ▪ read and write numbers up to 1000 in numerals and in words ▪ solve number problems and practical problems involving these ideas. 	<p>Pupils will:</p> <ul style="list-style-type: none"> ▪ count in multiples of 6, 7, 9, 25 and 1000 ▪ find 1000 more or less than a given number ▪ count backwards through zero to include negative numbers ▪ recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) ▪ order and compare numbers beyond 1000 ▪ identify, represent and estimate numbers using different representations ▪ 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 ▪ 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>Pupils will:</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 ▪ count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 ▪ interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero ▪ 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 ▪ read Roman numerals to 1000 (M) and recognise years written in Roman numerals. 	<p>Pupils will:</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 ▪ 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>Pupils will:</p> <ul style="list-style-type: none"> ▪ understand and use place value for decimals, measures and integers of any size ▪ use the number line as a model for ordering of the real numbers ▪ use the symbols =, ≠, <, >, ≤, ≥ ▪ interpret and compare numbers in standard form $A \times 10^n$ $1 \leq A < 10$, where n is a positive or negative integer or zero ▪ use conventional notation for the priority of operations, including brackets, powers, roots and reciprocals ▪ round numbers and measures to an appropriate degree of accuracy [for example, to a number of decimal places or significant figures] ▪ use approximation through rounding to estimate answers and calculate possible resulting errors expressed using inequality notation $a < x \leq b$ ▪ appreciate the infinite nature of the sets of integers, real and rational numbers.

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	KS3
Number-addition and subtraction	<p>Pupils will:</p> <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 add and subtract one-digit and two-digit numbers to 20, including zero 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>Pupils will:</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 recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 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 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>Pupils will:</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 estimate the answer to a calculation and use inverse operations to check answers solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction. 	<p>Pupils will:</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 estimate and use inverse operations to check answers to a calculation solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why. 	<p>Pupils will:</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 use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why. 	<p>Pupils will:</p> <ul style="list-style-type: none"> use their knowledge of the order of operations to carry out calculations involving the four operations decide which operations and methods to use and why solve addition and subtraction multi-step problems in contexts solve problems involving addition, subtraction, multiplication and division use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy. 	<p>Pupils will:</p> <ul style="list-style-type: none"> use the four operations, including formal written methods apply operations to integers, decimals, proper and improper fractions, and mixed numbers, all both positive and negative recognise and use relationships between operations including inverse operations use a calculator and other technologies to calculate results accurately and then interpret them appropriately

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	KS3
Number-multiplication and division	<p>Pupils will:</p> <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>Pupils will:</p> <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 calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (\times), division (\div) and equals (=) signs show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts. 	<p>Pupils will:</p> <ul style="list-style-type: none"> recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables 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 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>Pupils will:</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 multiply two-digit and three-digit numbers by a one-digit number using formal written layout 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>Pupils will:</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 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 recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3) solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates. 	<p>Pupils will:</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 identify common factors, common multiples and prime numbers use their knowledge of the order of operations to carry out calculations involving the four operations 	<p>Pupils will:</p> <ul style="list-style-type: none"> use integer powers and associated real roots (square, cube and higher), recognise powers of 2, 3, 4, 5 distinguish between exact representations of roots and their decimal approximations use the concepts and vocabulary of prime numbers, factors (or divisors), multiples, common factors, common multiples, highest common factor, lowest common multiple, prime factorisation use product notation and the unique factorisation property

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	KS3
Number-fractions (including decimals and percentages)	<p>Pupils will:</p> <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>Pupils will:</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 write simple fractions for example, $\frac{1}{2}$ of $6 = 3$ and recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$. 	<p>Pupils will:</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 recognise and show, using diagrams, equivalent fractions with small denominators add and subtract fractions with the same denominator within one whole [for example, $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$] compare and order unit fractions, and fractions with the same denominators solve problems that involve all of the above. 	<p>Pupils will:</p> <ul style="list-style-type: none"> recognise and show, using diagrams, families of common equivalent fractions count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten. 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 add and subtract fractions with the same denominator recognise and write decimal equivalents of any number of tenths or hundredths recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$ 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 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 solve simple measure and money problems involving fractions and decimals to two decimal places. 	<p>Pupils will:</p> <ul style="list-style-type: none"> compare and order fractions whose denominators are all multiples of the same number 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, $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$] 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 read and write decimal numbers as fractions [for example, $0.71 = \frac{71}{100}$] recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents round decimals with two decimal places to the nearest whole number and to one decimal place read, write, order and compare numbers with up to three decimal places solve problems involving number up to three decimal places 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>Pupils will:</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 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, $\frac{1}{3} \div 2 = \frac{1}{6}$] associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, $\frac{3}{8}$] identify the value of each digit in numbers given to three decimal places and 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 recall and use equivalences between simple fractions, decimals and percentages, including in different contexts. 	<p>Pupils will:</p> <ul style="list-style-type: none"> work interchangeably with terminating decimals and their corresponding fractions (such as 3.5 and $7\frac{2}{5}$ or 0.375 and $8\frac{3}{8}$) define percentage as 'number of parts per hundred' interpret percentages and percentage changes as a fraction or a decimal interpret these multiplicatively, express one quantity as a percentage of another compare two quantities using percentages, and work with percentages greater than 100% interpret fractions and percentages as operators order positive and negative integers, decimals and fractions

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	KS3
Measurement	<p>Pupils will:</p> <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) recognise and know the value of different denominations of coins and notes 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>Pupils will:</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 = 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 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>Pupils will:</p> <ul style="list-style-type: none"> measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) measure the perimeter of simple 2-D shapes add and subtract amounts of money to give change, using both £ and p in practical contexts 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>Pupils will:</p> <ul style="list-style-type: none"> Convert between different units of measure [for example, kilometre to metre; hour to minute] measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres find the area of rectilinear shapes by counting squares estimate, compare and calculate different measures, including money in pounds and pence 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>Pupils will:</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 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] solve problems involving converting between units of time use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling. 	<p>Pupils will:</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 up to three decimal places convert between miles and kilometres 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>Pupils will:</p> <ul style="list-style-type: none"> use standard units of mass, length, time, money and other measures, including with decimal quantities draw and measure line segments and angles in geometric figures, including interpreting scale drawings derive and use the standard ruler and compass constructions (perpendicular bisector of a line segment, constructing a perpendicular to a given line from/at a given point, bisecting a given angle); recognise and use the perpendicular distance from a point to a line as the shortest distance to the line describe, sketch and draw using conventional terms and notations: points, lines, parallel lines, perpendicular lines, right angles, regular polygons, and other polygons that are reflectively and rotationally symmetric

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	KS3
Geometry- properties of shapes	<p>Pupils will:</p> <ul style="list-style-type: none"> recognise and name common 2-D and 3-D shapes, including: <ul style="list-style-type: none"> 2-D shapes [for example, rectangles (including squares), circles and triangles] 3-D shapes [for example, cuboids (including cubes), pyramids and spheres]. 	<p>Pupils will:</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 and describe the properties of 3-D shapes, including the number of edges, vertices and faces 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 and 3-D shapes and everyday objects. 	<p>Pupils will:</p> <ul style="list-style-type: none"> draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them 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>Pupils will:</p> <ul style="list-style-type: none"> compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes 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>Pupils will:</p> <ul style="list-style-type: none"> identify 3-D shapes, including cubes and other cuboids, from 2-D representations 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° use the properties of rectangles to deduce related facts and find missing lengths and angles distinguish between regular and irregular polygons based on reasoning about equal sides and angles. 	<p>Pupils will:</p> <ul style="list-style-type: none"> draw 2-D shapes using given dimensions and angles recognise, describe and build simple 3-D shapes, including making nets compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles. 	<p>Pupils will:</p> <ul style="list-style-type: none"> derive and apply formulae to calculate and solve problems involving: perimeter and area of triangles, parallelograms, trapezia, volume of cuboids (including cubes) and other prisms (including cylinders) calculate and solve problems involving: perimeters of 2-D shapes (including circles), areas of circles and composite shapes use the standard conventions for labelling the sides and angles of triangle ABC, and know and use the criteria for congruence of triangles derive and illustrate properties of triangles, quadrilaterals, circles, and other plane figures [for example, equal lengths and angles] using appropriate language and technologies Use Pythagoras' Theorem and trigonometric ratios in similar triangles to solve problems involving right-angled triangles

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	KS3
Geometry-position and direction	<p>Pupils will:</p> <ul style="list-style-type: none"> describe position, direction and movement, including whole, half, quarter and three-quarter turns. 	<p>Pupils will:</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>Pupils will:</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>Pupils will:</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>Pupils will:</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>Pupils will:</p> <ul style="list-style-type: none"> identify properties of, and describe the results of, translations, rotations and reflections applied to given figures identify and construct congruent triangles, and construct similar shapes by enlargement, with and without coordinate grids

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	KS3
Statistics		<ul style="list-style-type: none"> 	<p>Pupils will:</p> <ul style="list-style-type: none"> interpret and present data using bar charts, pictograms and tables 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>Pupils will:</p> <ul style="list-style-type: none"> interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs. solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs. 	<p>Pupils will:</p> <ul style="list-style-type: none"> solve comparison, sum and difference problems using information presented in a line graph complete, read and interpret information in tables, including timetables. 	<p>Pupils will:</p> <ul style="list-style-type: none"> interpret and construct pie charts and line graphs and use these to solve problems calculate and interpret the mean as an average. 	<p>Pupils will:</p> <ul style="list-style-type: none"> describe, interpret and compare observed distributions of a single variable through: appropriate graphical representation involving discrete, continuous and grouped data; and appropriate measures of central tendency (mean, mode, median) and spread (range, consideration of outliers) construct and interpret appropriate tables, charts, and diagrams, including frequency tables, bar charts, pie charts, and pictograms for categorical data, and vertical line (or bar) charts for ungrouped and grouped numerical data describe simple mathematical relationships between two variables (bivariate data) in observational and experimental contexts and illustrate using scatter graphs.

	Year 6	KS3
Ratio and proportion	<p>Pupils will:</p> <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>Pupils will:</p> <ul style="list-style-type: none"> ▪ change freely between related standard units [for example time, length, area, volume/capacity, mass] ▪ use scale factors, scale diagrams and maps ▪ express one quantity as a fraction of another, where the fraction is less than 1 and greater than 1 ▪ use ratio notation, including reduction to simplest form ▪ divide a given quantity into two parts in a given part:part or part:whole ratio; express the division of a quantity into two parts as a ratio ▪ understand that a multiplicative relationship between two quantities can be expressed as a ratio or a fraction ▪ relate the language of ratios and the associated calculations to the arithmetic of fractions and to linear functions ▪ solve problems involving percentage change, including: percentage increase, decrease and original value problems and simple interest in financial mathematics ▪ solve problems involving direct and inverse proportion, including graphical and algebraic representations ▪ use compound units such as speed, unit pricing and density to solve problems.

	Year 6	Year 7	KS3
Algebra	<p>Pupils will:</p> <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>Pupils will:</p> <ul style="list-style-type: none"> ▪ use and interpret algebraic notation, including: <ul style="list-style-type: none"> ▪ ab in place of $a \times b$ ▪ $3y$ in place of $y + y + y$ and $3 \times y$ ▪ a^2 in place of $a \times a$, a^3 in place of $a \times a \times a$; $a2b$ in place of $a \times a \times b$ ▪ b ▪ a in place of $a \div b$ ▪ coefficients written as fractions rather than as decimals ▪ brackets ▪ substitute numerical values into formulae and expressions, including scientific formulae ▪ understand and use the concepts and vocabulary of expressions, equations, inequalities, terms and factors ▪ simplify and manipulate algebraic expressions to maintain equivalence by: <ul style="list-style-type: none"> ▪ collecting like terms ▪ multiplying a single term over a bracket ▪ taking out common factors ▪ expanding products of two or more binomials ▪ understand and use standard mathematical formulae; rearrange formulae to change the subject ▪ model situations or procedures by translating them into algebraic expressions or formulae and by using graphs ▪ use algebraic methods to solve linear equations in one variable (including all forms that require rearrangement) 	<p>Pupils will:</p> <ul style="list-style-type: none"> ▪ work with coordinates in all four quadrants ▪ recognise, sketch and produce graphs of linear and quadratic functions of one variable with appropriate scaling, using equations in x and y and the Cartesian plane ▪ interpret mathematical relationships both algebraically and graphically ▪ reduce a given linear equation in two variables to the standard form $y = mx + c$; calculate and interpret gradients and intercepts of graphs of such linear equations numerically, graphically and algebraically ▪ use linear and quadratic graphs to estimate values of y for given values of x and vice versa and to find approximate solutions of simultaneous linear equations ▪ find approximate solutions to contextual problems from given graphs of a variety of functions, including piece-wise linear, exponential and reciprocal graphs ▪ generate terms of a sequence from either a term-to-term or a position-to-term rule ▪ recognise arithmetic sequences and find the nth term ▪ recognise geometric sequences and appreciate other sequences that arise.

Reading

By Year Group

Age Related Expectations

Year 1

Spoken Language (1-6)	Reading-word reading	Reading-comprehension
<ul style="list-style-type: none"> ▪ listen and respond appropriately to adults and peers ▪ ask relevant questions to extend understanding and knowledge ▪ use relevant strategies to build vocabulary ▪ articulate and justify answers, arguments and opinions ▪ give well-structured descriptions, explanations and narratives for different purposes, including for expressing feelings ▪ maintain attention and participate actively in collaborative conversations, staying on topic and initiating and responding to comments ▪ use spoken language to develop understanding through speculating, hypothesising, imagining and exploring ideas ▪ speak audibly and fluently with an increasing command of Standard English ▪ participate in discussions, presentations, performances, role play, improvisations and debates ▪ gain, maintain and monitor the interest of the listener(s) ▪ consider and evaluate different viewpoints, attending to and building on the contributions of others ▪ select and use appropriate registers for effective communication <p>PSH 1.2, PSH 1.6, PSH 1.7, PSH 2.2, PSH 2.6, PSH 2.7, PSH 3.1, PSH 3.7, PSH 3.12, PSH 4.1, PSH 4.7, PSH 4.12, PSH 5.1, PSH 5.7, PSH 5.12</p>	<ul style="list-style-type: none"> ▪ apply phonic knowledge and skills as the route to decode words ▪ respond speedily with the correct sound to graphemes (letters or groups of letters) for all 40+ phonemes, including, where applicable, alternative sounds for graphemes ▪ read accurately by blending sounds in unfamiliar words containing GPCs that have been taught ▪ read common exception words, noting unusual correspondences between spelling and sound and where these occur in the word ▪ read words containing taught GPCs and –s, –es, –ing, –ed, –er and –est endings ▪ read other words of more than one syllable that contain taught GPCs ▪ read words with contractions [for example, I’m, I’ll, we’ll], and understand that the apostrophe represents the omitted letter(s) ▪ read aloud accurately books that are consistent with their developing phonic knowledge and that do not require them to use other strategies to work out words ▪ re-read these books to build up their fluency and confidence in word reading. 	<ul style="list-style-type: none"> ▪ develop a pleasure in reading, motivation to read, vocabulary and understanding by: <ul style="list-style-type: none"> ▪ listening to and discussing a wide range of poems, stories and non-fiction at a level beyond that at which read independently ▪ being encouraged to link what they read or hear read to their own experiences ▪ becoming very familiar with key stories, fairy stories and traditional tales, retelling them and considering their particular characteristics ▪ recognising and joining in with predictable phrases ▪ learning to appreciate rhymes and poems, and to recite some by heart ▪ discussing word meanings, linking new meanings to those already known ▪ understand both the books that they can already read accurately and fluently and those that they listen to by: <ul style="list-style-type: none"> ▪ drawing on what they already know or on background information and vocabulary provided by the teacher ▪ checking that the text makes sense as they read and correcting inaccurate reading ▪ discussing the significance of the title and events ▪ making inferences on the basis of what is being said and done ▪ predicting what might happen on the basis of what has been read so far ▪ participate in discussion about what is read to them, taking turns and listening to what others say ▪ explain clearly their understanding of what is read to them.

English-Reading
Age Related Expectations
Year 2

Spoken Language (1-6)	Reading-word reading	Reading-comprehension
<ul style="list-style-type: none"> ▪ listen and respond appropriately to adults and peers ▪ ask relevant questions to extend their understanding and knowledge ▪ use relevant strategies to build their vocabulary ▪ articulate and justify answers, arguments and opinions ▪ give well-structured descriptions, explanations and narratives for different purposes, including for expressing feelings ▪ maintain attention and participate actively in collaborative conversations, staying on topic and initiating and responding to comments ▪ use spoken language to develop understanding through speculating, hypothesising, imagining and exploring ideas ▪ speak audibly and fluently with an increasing command of Standard English ▪ participate in discussions, presentations, performances, role play, improvisations and debates ▪ gain, maintain and monitor the interest of the listener(s) ▪ consider and evaluate different viewpoints, attending to and building on the contributions of others ▪ select and use appropriate registers for effective communication <p>PSH 1.2, PSH 1.6, PSH 1.7, PSH 2.2, PSH 2.6, PSH 2.7, PSH 3.1, PSH 3.7, PSH 3.12, PSH 4.1, PSH 4.7, PSH 4.12, PSH 5.1, PSH 5.7, PSH 5.12</p>	<ul style="list-style-type: none"> ▪ continue to apply phonic knowledge and skills as the route to decode words until automatic decoding has become embedded and reading is fluent ▪ read accurately by blending the sounds in words that contain the graphemes taught so far, especially recognising alternative sounds for graphemes ▪ read accurately words of two or more syllables that contain the same graphemes as above ▪ read words containing common suffixes ▪ read further common exception words, noting unusual correspondences between spelling and sound and where these occur in the word ▪ read most words quickly and accurately, without overt sounding and blending, when they have been frequently encountered ▪ read aloud books closely matched to my improving phonic knowledge, sounding out unfamiliar words accurately, automatically and without undue hesitation ▪ re-read these books to build up their fluency and confidence in word reading. 	<ul style="list-style-type: none"> ▪ develop pleasure in reading, motivation to read, vocabulary and understanding by: <ul style="list-style-type: none"> ▪ listening to, discussing and expressing views about a wide range of contemporary and classic poetry, stories and non-fiction at a level beyond that at which read independently ▪ discussing the sequence of events in books and how items of information are related ▪ becoming increasingly familiar with and retelling a wider range of stories, fairy stories and traditional tales ▪ being introduced to non-fiction books that are structured in different ways ▪ recognising simple recurring literary language in stories and poetry ▪ discussing and clarifying the meanings of words, linking new meanings to known vocabulary ▪ discussing their favourite words and phrases ▪ continuing to build up a repertoire of poems learnt by heart, appreciating these and reciting some, with appropriate intonation to make the meaning clear ▪ understand both the books that already read accurately and fluently and those that they listen to by: <ul style="list-style-type: none"> ▪ drawing on what they already know or on background information and vocabulary provided by the teacher ▪ checking that the text makes sense as they read and correcting inaccurate reading ▪ making inferences on the basis of what is being said and done ▪ answering and asking questions ▪ predicting what might happen on the basis of what has been read so far ▪ participate in discussion about books, poems and other works that are read to me and those that read for themselves, taking turns and listening to what others say ▪ explain and discuss their understanding of books, poems and other material, both those that they listen to and those that they read for themselves.

English-Reading
Age Related Expectations
Year 3 & 4

Spoken Language (1-6)	Reading-word reading	Reading-comprehension
<ul style="list-style-type: none"> ▪ listen and respond appropriately to adults and their peers ▪ ask relevant questions to extend their understanding and knowledge ▪ use relevant strategies to build their vocabulary ▪ articulate and justify answers, arguments and opinions ▪ give well-structured descriptions, explanations and narratives for different purposes, including for expressing feelings ▪ maintain attention and participate actively in collaborative conversations, staying on topic and initiating and responding to comments ▪ use spoken language to develop understanding through speculating, hypothesising, imagining and exploring ideas ▪ speak audibly and fluently with an increasing command of Standard English ▪ participate in discussions, presentations, performances, role play, improvisations and debates ▪ gain, maintain and monitor the interest of the listener(s) ▪ consider and evaluate different viewpoints, attending to and building on the contributions of others ▪ select and use appropriate registers for effective communication <p>PSH 1.2, PSH 1.6, PSH 1.7, PSH 2.2, PSH 2.6, PSH 2.7, PSH 3.1, PSH 3.7, PSH 3.12, PSH 4.1, PSH 4.7, PSH 4.12, PSH 5.1, PSH 5.7, PSH 5.12</p>	<ul style="list-style-type: none"> ▪ apply their growing knowledge of root words, prefixes and suffixes (etymology and morphology) as listed in English Appendix 1, both to read aloud and to understand the meaning of new words they meet ▪ read further exception words, noting the unusual correspondences between spelling and sound, and where these occur in the word. 	<ul style="list-style-type: none"> ▪ develop positive attitudes to reading and understanding of what they read by: <ul style="list-style-type: none"> ▪ listening to and discussing a wide range of fiction, poetry, plays, non-fiction and reference books or textbooks ▪ reading books that are structured in different ways and reading for a range of purposes ▪ using dictionaries to check the meaning of words that they have read ▪ increasing their familiarity with a wide range of books, including fairy stories, myths and legends, and retelling some of these orally ▪ identifying themes and conventions in a wide range of books ▪ preparing poems and play scripts to read aloud and to perform, showing understanding through intonation, tone, volume and action ▪ discussing words and phrases that capture the reader’s interest and imagination ▪ recognising some different forms of poetry [for example, free verse, narrative poetry] <p>understand what they read, in books read independently, by:</p> <ul style="list-style-type: none"> ▪ checking that the text makes sense to them, discussing their understanding and explaining the meaning of words in context ▪ asking questions to improve their understanding of a text ▪ drawing inferences such as inferring characters’ feelings, thoughts and motives from their actions, and justifying inferences with evidence ▪ predicting what might happen from details stated and implied ▪ identifying main ideas drawn from more than one paragraph and summarising these ▪ identifying how language, structure, and presentation contribute to meaning <ul style="list-style-type: none"> ▪ retrieve and record information from non-fiction ▪ participate in discussion about both books that are read to them and those read for themselves, taking turns and listening to what others say.

English-Reading
Age Related Expectations
Year 5 & 6

Spoken Language (1-6)	Reading-word reading	Reading-comprehension
<ul style="list-style-type: none"> ▪ listen and respond appropriately to adults and their peers ▪ ask relevant questions to extend their understanding and knowledge ▪ use relevant strategies to build their vocabulary ▪ articulate and justify answers, arguments and opinions ▪ give well-structured descriptions, explanations and narratives for different purposes, including for expressing feelings ▪ maintain attention and participate actively in collaborative conversations, staying on topic and initiating and responding to comments ▪ use spoken language to develop understanding through speculating, hypothesising, imagining and exploring ideas ▪ speak audibly and fluently with an increasing command of Standard English ▪ participate in discussions, presentations, performances, role play, improvisations and debates ▪ gain, maintain and monitor the interest of the listener(s) ▪ consider and evaluate different viewpoints, attending to and building on the contributions of others ▪ select and use appropriate registers for effective communication <p>PSH 1.2, PSH 1.6, PSH 1.7, PSH 2.2, PSH 2.6, PSH 2.7, PSH 3.1, PSH 3.7, PSH 3.12, PSH 4.1, PSH 4.7, PSH 4.12, PSH 5.1, PSH 5.7, PSH 5.12</p>	<ul style="list-style-type: none"> ▪ apply their growing knowledge of root words, prefixes and suffixes (morphology and etymology), as listed in English Appendix 1, both to read aloud and to understand the meaning of new words that they meet. 	<ul style="list-style-type: none"> ▪ maintain positive attitudes to reading and understanding of what they read by: <ul style="list-style-type: none"> ▪ continuing to read and discuss an increasingly wide range of fiction, poetry, plays, non-fiction and reference books or textbooks ▪ reading books that are structured in different ways and reading for a range of purposes ▪ increasing their familiarity with a wide range of books, including myths, legends and traditional stories, modern fiction, fiction from our literary heritage, and books from other cultures and traditions ▪ recommending books that I have read to my peers, giving reasons for my choices ▪ identifying and discussing themes and conventions in and across a wide range of writing ▪ making comparisons within and across books ▪ learning a wider range of poetry by heart ▪ preparing poems and plays to read aloud and to perform, showing understanding through intonation, tone and volume so that the meaning is clear to an audience ▪ show that they understand what they read by: <ul style="list-style-type: none"> ▪ checking that the book makes sense to them, discussing their understanding and exploring the meaning of words in context ▪ asking questions to improve their understanding ▪ drawing inferences such as inferring characters’ feelings, thoughts and motives from their actions, and justifying inferences with evidence ▪ predicting what might happen from details stated and implied ▪ summarising the main ideas drawn from more than one paragraph, identifying key details that support the main ideas ▪ identifying how language, structure and presentation contribute to meaning ▪ discuss and evaluate how authors use language, including figurative language, considering the impact on the reader ▪ distinguish between statements of fact and opinion ▪ retrieve, record and present information from non-fiction ▪ participate in discussions about books that are read to me and those read for myself, building on their own and others’ ideas and challenging views courteously ▪ explain and discuss their understanding of what they have read, including through formal presentations and debates, maintaining a focus on the topic and using notes where necessary ▪ provide reasoned justifications for their views.

Reading

Areas of Learning - Progression by Year

Reading

	Year 1	Year 2	Year 3 & 4	Year 5 & 6	KS3
Word reading	<p>Pupils will:</p> <ul style="list-style-type: none"> ▪ apply phonic knowledge and skills as the route to decode words ▪ respond speedily with the correct sound to graphemes (letters or groups of letters) for all 40+ phonemes, including, where applicable, alternative sounds for graphemes ▪ read accurately by blending sounds in unfamiliar words containing GPCs that have been taught ▪ read common exception words, noting unusual correspondences between spelling and sound and where these occur in the word ▪ read words containing taught GPCs and –s, –es, –ing, –ed, –er and –est endings ▪ read other words of more than one syllable that contain taught GPCs ▪ read words with contractions [for example, I’m, I’ll, we’ll], and understand that the apostrophe represents the omitted letter(s) ▪ read aloud accurately books that are consistent with their developing phonic knowledge and that do not require them to use other strategies to work out words ▪ re-read these books to build up their fluency and confidence in word reading. 	<p>Pupils will:</p> <ul style="list-style-type: none"> ▪ continue to apply phonic knowledge and skills as the route to decode words until automatic decoding has become embedded and reading is fluent ▪ read accurately by blending the sounds in words that contain the graphemes taught so far, especially recognising alternative sounds for graphemes ▪ read accurately words of two or more syllables that contain the same graphemes as above ▪ read words containing common suffixes ▪ read further common exception words, noting unusual correspondences between spelling and sound and where these occur in the word ▪ read most words quickly and accurately, without overt sounding and blending, when they have been frequently encountered ▪ read aloud books closely matched to my improving phonic knowledge, sounding out unfamiliar words accurately, automatically and without undue hesitation ▪ re-read these books to build up their fluency and confidence in word reading. 	<p>Pupils will:</p> <ul style="list-style-type: none"> ▪ apply their growing knowledge of root words, prefixes and suffixes (etymology and morphology) as listed in English Appendix 1, both to read aloud and to understand the meaning of new words they meet ▪ read further exception words, noting the unusual correspondences between spelling and sound, and where these occur in the word. 	<p>Pupils will:</p> <ul style="list-style-type: none"> ▪ apply their growing knowledge of root words, prefixes and suffixes (morphology and etymology), as listed in English Appendix 1, both to read aloud and to understand the meaning of new words that they meet. 	<p>Pupils will:</p> <p>develop an appreciation and love of reading, and read increasingly challenging material independently through:</p> <ul style="list-style-type: none"> ▪ reading a wide range of fiction and non-fiction, including in particular whole books, short stories, poems and plays with a wide coverage of genres, historical periods, forms and authors. <p>The range will include high-quality works from:</p> <ul style="list-style-type: none"> • English literature, both pre-1914 and contemporary, including prose, poetry and drama • Shakespeare (two plays) • seminal world literature ▪ choosing and reading books independently for challenge, interest and enjoyment. ▪ re-reading books encountered earlier to increase familiarity with them and provide a basis for making comparisons. <p>understand increasingly challenging texts through:</p> <ul style="list-style-type: none"> ▪ learning new vocabulary, relating it explicitly to known vocabulary and understanding it with the help of context and dictionaries ▪ making inferences and referring to evidence in the text ▪ knowing the purpose, audience for and context of the writing and drawing on this knowledge to support comprehension ▪ checking their understanding to make sure that what they have read makes sense. <p>read critically through:</p> <ul style="list-style-type: none"> ▪ knowing how language, including figurative language, vocabulary choice, grammar, text structure and organisational features, presents meaning ▪ recognising a range of poetic conventions and understanding how these have been used ▪ studying setting, plot, and characterisation, and the effects of these ▪ understanding how the work of dramatists is communicated effectively through performance and how alternative staging allows for different interpretations of a play ▪ making critical comparisons across texts ▪ studying a range of authors, including at least two authors in depth each year.

	Year 1	Year 2	Year 3 & 4	Year 5 & 6	KS3
Comprehension	<p>Pupils will:</p> <p>develop a pleasure in reading, motivation to read, vocabulary and understanding by:</p> <ul style="list-style-type: none"> ▪ listening to and discussing a wide range of poems, stories and non-fiction at a level beyond that at which read independently ▪ being encouraged to link what they read or hear read to their own experiences ▪ becoming very familiar with key stories, fairy stories and traditional tales, retelling them and considering their particular characteristics ▪ recognising and joining in with predictable phrases ▪ learning to appreciate rhymes and poems, and to recite some by heart ▪ discussing word meanings, linking new meanings to those already known <p>understand both the books that they can already read accurately and fluently and those that they listen to by:</p> <ul style="list-style-type: none"> ▪ drawing on what they already know or on background information and vocabulary provided by the teacher ▪ checking that the text makes sense as they read and correcting inaccurate reading ▪ discussing the significance of the title and events ▪ making inferences on the basis of what is being said and done ▪ predicting what might happen on the basis of what has been read so far ▪ participate in discussion about what is read to them, taking turns and listening to what others say ▪ explain clearly their understanding of what is read to them. 	<p>Pupils will:</p> <p>develop pleasure in reading, motivation to read, vocabulary and understanding by:</p> <ul style="list-style-type: none"> ▪ listening to, discussing and expressing views about a wide range of contemporary and classic poetry, stories and non-fiction at a level beyond that at which read independently ▪ discussing the sequence of events in books and how items of information are related ▪ becoming increasingly familiar with and retelling a wider range of stories, fairy stories and traditional tales ▪ being introduced to non-fiction books that are structured in different ways ▪ recognising simple recurring literary language in stories and poetry ▪ discussing and clarifying the meanings of words, linking new meanings to known vocabulary ▪ discussing their favourite words and phrases ▪ continuing to build up a repertoire of poems learnt by heart, appreciating these and reciting some, with appropriate intonation to make the meaning clear <p>understand both the books that already read accurately and fluently and those that they listen to by:</p> <ul style="list-style-type: none"> ▪ drawing on what they already know or on background information and vocabulary provided by the teacher ▪ checking that the text makes sense as they read and correcting inaccurate reading ▪ making inferences on the basis of what is being said and done ▪ answering and asking questions ▪ predicting what might happen on the basis of what has been read so far ▪ participate in discussion about books, poems and other works that are read to me and those that read for themselves, taking turns and listening to what others say 	<p>Pupils will:</p> <p>develop positive attitudes to reading and understanding of what they read by:</p> <ul style="list-style-type: none"> ▪ listening to and discussing a wide range of fiction, poetry, plays, non-fiction and reference books or textbooks ▪ reading books that are structured in different ways and reading for a range of purposes ▪ using dictionaries to check the meaning of words that they have read ▪ increasing their familiarity with a wide range of books, including fairy stories, myths and legends, and retelling some of these orally ▪ identifying themes and conventions in a wide range of books ▪ preparing poems and play scripts to read aloud and to perform, showing understanding through intonation, tone, volume and action ▪ discussing words and phrases that capture the reader's interest and imagination ▪ recognising some different forms of poetry [for example, free verse, narrative poetry] <p>understand what they read, in books read independently, by:</p> <ul style="list-style-type: none"> ▪ checking that the text makes sense to them, discussing their understanding and explaining the meaning of words in context ▪ asking questions to improve their understanding of a text ▪ drawing inferences such as inferring characters' feelings, thoughts and motives from their actions, and justifying inferences with evidence 	<p>Pupils will:</p> <p>maintain positive attitudes to reading and understanding of what they read by:</p> <ul style="list-style-type: none"> ▪ continuing to read and discuss an increasingly wide range of fiction, poetry, plays, non-fiction and reference books or textbooks ▪ reading books that are structured in different ways and reading for a range of purposes ▪ increasing their familiarity with a wide range of books, including myths, legends and traditional stories, modern fiction, fiction from our literary heritage, and books from other cultures and traditions ▪ recommending books that I have read to my peers, giving reasons for my choices ▪ identifying and discussing themes and conventions in and across a wide range of writing ▪ making comparisons within and across books ▪ learning a wider range of poetry by heart ▪ preparing poems and plays to read aloud and to perform, showing understanding through intonation, tone and volume so that the meaning is clear to an audience <p>show that they understand what they read by:</p> <ul style="list-style-type: none"> ▪ checking that the book makes sense to them, discussing their understanding and exploring the meaning of words in context ▪ asking questions to improve their understanding ▪ drawing inferences such as inferring characters' feelings, thoughts and motives from their actions, and justifying inferences with evidence ▪ predicting what might happen from details stated and implied ▪ summarising the main ideas drawn from more than one paragraph, identifying key details that support the main ideas ▪ identifying how language, structure and presentation contribute to meaning ▪ discuss and evaluate how authors use language, including figurative language, considering the impact on the reader 	<p>Pupils will:</p> <p>There is no specified statutory requirements for comprehension in KS3</p>

		<ul style="list-style-type: none"> ▪ explain and discuss their understanding of books, poems and other material, both those that they listen to and those that they read for themselves. 	<ul style="list-style-type: none"> ▪ predicting what might happen from details stated and implied ▪ identifying main ideas drawn from more than one paragraph and summarising these ▪ identifying how language, structure, and presentation contribute to meaning ▪ retrieve and record information from non-fiction ▪ participate in discussion about both books that are read to them and those read for themselves, taking turns and listening to what others say. 	<ul style="list-style-type: none"> ▪ distinguish between statements of fact and opinion ▪ retrieve, record and present information from non-fiction ▪ participate in discussions about books that are read to me and those read for myself, building on their own and others' ideas and challenging views courteously ▪ explain and discuss their understanding of what they have read, including through formal presentations and debates, maintaining a focus on the topic and using notes where necessary ▪ provide reasoned justifications for their views. 	
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Writing

By Year Group

English-Writing
Age Related Expectations
Year 1

Writing-transcription	Handwriting	Writing-composition	Writing-vocabulary, grammar and punctuation
<ul style="list-style-type: none"> ▪ spell: <ul style="list-style-type: none"> ▪ words containing each of the 40+ phonemes already taught ▪ common exception words ▪ the days of the week ▪ name the letters of the alphabet: <ul style="list-style-type: none"> ▪ naming the letters of the alphabet in order ▪ using letter names to distinguish between alternative spellings of the same sound ▪ add prefixes and suffixes: <ul style="list-style-type: none"> ▪ using the spelling rule for adding –s or –es as the plural marker for nouns and the third person singular marker for verbs ▪ using the prefix un– ▪ using –ing, –ed, –er and –est where no change is needed in the spelling of root words [for example, helping, helped, helper, eating, quicker, quickest] ▪ apply simple spelling rules and guidance, as listed in English Appendix 1 ▪ write from memory simple sentences dictated by the teacher that include words using the GPCs and common exception words taught so far. 	<ul style="list-style-type: none"> ▪ sit correctly at a table, holding a pencil comfortably and correctly ▪ begin to form lower-case letters in the correct direction, starting and finishing in the right place ▪ form capital letters ▪ form digits 0-9 ▪ understand which letters belong to which handwriting ‘families’ (i.e. letters that are formed in similar ways) and to practise these. 	<ul style="list-style-type: none"> ▪ write sentences by: <ul style="list-style-type: none"> ▪ saying out loud what they are going to write about ▪ composing a sentence orally before writing it ▪ sequencing sentences to form short narratives ▪ re-reading what they have written to check that it makes sense ▪ discuss what they have written with the teacher or other pupils ▪ read aloud their writing clearly enough to be heard by their peers and the teacher. 	<ul style="list-style-type: none"> ▪ develop understanding of the concepts set out in English Appendix 2 by: <ul style="list-style-type: none"> ▪ leaving spaces between words ▪ joining words and joining clauses using and ▪ beginning to punctuate sentences using a capital letter and a full stop, question mark or exclamation mark ▪ using a capital letter for names of people, places, the days of the week, and the personal pronoun ‘I’ ▪ learning the grammar for year 1 in English Appendix 2 ▪ using the grammatical terminology in English Appendix 2 when discussing my writing.

English-Writing
Age Related Expectations
Year 2

Writing-transcription	Handwriting	Writing-composition	Writing-vocabulary, grammar and punctuation
<ul style="list-style-type: none"> ▪ spell by: <ul style="list-style-type: none"> ▪ segmenting spoken words into phonemes and representing these by graphemes, spelling many correctly ▪ learning new ways of spelling phonemes for which one or more spellings are already known, and learn some words with each spelling, including a few common homophones ▪ learning to spell common exception words ▪ learning to spell more words with contracted forms ▪ learning the possessive apostrophe (singular) [for example, the girl’s book] ▪ distinguishing between homophones and near-homophones ▪ add suffixes to spell longer words, including –ment, –ness, –ful, –less, –ly ▪ apply spelling rules and guidance, as listed in English Appendix 1 ▪ write from memory simple sentences dictated by the teacher that include words using the GPCs, common exception words and punctuation taught so far. 	<ul style="list-style-type: none"> ▪ form lower-case letters of the correct size relative to one another ▪ starting to use some of the diagonal and horizontal strokes needed to join letters and understand which letters, when adjacent to one another, are best left un-joined ▪ write capital letters and digits of the correct size, orientation and relationship to one another and to lower case letters ▪ use spacing between words that reflects the size of the letters. 	<ul style="list-style-type: none"> ▪ develop positive attitudes towards and stamina for writing by: <ul style="list-style-type: none"> ▪ writing narratives about personal experiences and those of others (real and fictional) ▪ writing about real events ▪ writing poetry ▪ writing for different purposes ▪ consider what they are going to write before beginning by: <ul style="list-style-type: none"> ▪ planning or saying out loud what they are going to write about ▪ writing down ideas and/or key words, including new vocabulary ▪ encapsulating what they want to say, sentence by sentence ▪ make simple additions, revisions and corrections to my own writing by: <ul style="list-style-type: none"> ▪ Evaluating their writing with the teacher and other pupils ▪ re-reading to check that their writing makes sense and that verbs to indicate time are used correctly and consistently, including verbs in the continuous form ▪ proof-reading to check for errors in spelling, grammar and punctuation [for example, ends of sentences punctuated correctly] ▪ read aloud what they have written with appropriate intonation to make the meaning clear. 	<ul style="list-style-type: none"> ▪ develop their understanding of the concepts set out in English Appendix 2 by: <ul style="list-style-type: none"> ▪ learning how to use both familiar and new punctuation correctly (see English Appendix 2), including full stops, capital letters, exclamation marks, question marks, commas for lists and apostrophes for contracted forms and the possessive (singular) ▪ Able to use: <ul style="list-style-type: none"> ▪ sentences with different forms: statement, question, exclamation, command ▪ expanded noun phrases to describe and specify [for example, the blue butterfly] ▪ the present and past tenses correctly and consistently including the progressive form ▪ subordination (using when, if, that, or because) and co-ordination (using or, and, or but) ▪ the grammar for year 2 in English Appendix 2 ▪ some features of written Standard English ▪ use and understand the grammatical terminology in English Appendix 2 when discussing my writing.

English-Writing
Age Related Expectations
Year 3 & 4

Writing-transcription	Handwriting	Writing-composition	Writing-vocabulary, grammar and punctuation
<ul style="list-style-type: none"> ▪ use further prefixes and suffixes and understand how to add them (English Appendix 1) ▪ spell further homophones ▪ spell words that are often misspelt (English Appendix 1) ▪ place the possessive apostrophe accurately in words with regular plurals [for example, girls', boys'] and in words with irregular plurals [for example, children's] ▪ use the first two or three letters of a word to check its spelling in a dictionary ▪ write from memory simple sentences, dictated by the teacher, that include words and punctuation taught so far. 	<ul style="list-style-type: none"> ▪ use the diagonal and horizontal strokes that are needed to join letters and understand which letters, when adjacent to one another, are best left un-joined ▪ increasing the legibility, consistency and quality of their handwriting [for example, by ensuring that the down strokes of letters are parallel and equidistant; that lines of writing are spaced sufficiently so that the ascenders and descenders of letters do not touch]. 	<ul style="list-style-type: none"> ▪ plan their writing by: <ul style="list-style-type: none"> ▪ discussing writing similar to that which they are planning to write in order to understand and learn from its structure, vocabulary and grammar ▪ discussing and recording ideas ▪ draft and write by: <ul style="list-style-type: none"> ▪ composing and rehearsing sentences orally (including dialogue), progressively building a varied and rich vocabulary and an increasing range of sentence structures (English Appendix 2) ▪ organising paragraphs around a theme ▪ in narratives, creating settings, characters and plot ▪ in non-narrative material, using simple organisational devices [for example, headings and sub-headings] ▪ evaluate and edit by: <ul style="list-style-type: none"> ▪ assessing the effectiveness of their own and others' writing and suggesting improvements ▪ proposing changes to grammar and vocabulary to improve consistency, including the accurate use of pronouns in sentences ▪ proof-read for spelling and punctuation errors ▪ read aloud their own writing, to a group or the whole class, using appropriate intonation and controlling the tone and volume so that the meaning is clear. 	<ul style="list-style-type: none"> ▪ developing my understanding of the concepts set out in English Appendix 2 by: <ul style="list-style-type: none"> ▪ extending the range of sentences with more than one clause by using a wider range of conjunctions, including when, if, because, although ▪ using the present perfect form of verbs in contrast to the past tense ▪ choosing nouns or pronouns appropriately for clarity and cohesion and to avoid repetition ▪ using conjunctions, adverbs and prepositions to express time and cause ▪ using fronted adverbials ▪ learning the grammar for years 3 and 4 in English Appendix 2 ▪ indicate grammatical and other features by: <ul style="list-style-type: none"> ▪ using commas after fronted adverbials ▪ indicating possession by using the possessive apostrophe with plural nouns ▪ using and punctuating direct speech ▪ use and understand the grammatical terminology in English Appendix 2 accurately and appropriately when discussing their writing and reading.

English-Writing
Age Related Expectations
Year 5 & 6

Writing-transcription	Handwriting	Writing-composition	Writing-vocabulary, grammar and punctuation
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<ul style="list-style-type: none"> ▪ use further prefixes and suffixes and understand the guidance for adding them ▪ spell some words with 'silent' letters [for example, knight, psalm, solemn] ▪ continue to distinguish between homophones and other words which are often confused ▪ use knowledge of morphology and etymology in spelling and understand that the spelling of some words needs to be learnt specifically, as listed in English Appendix 1 ▪ use dictionaries to check the spelling and meaning of words ▪ use the first three or four letters of a word to check spelling, meaning or both of these in a dictionary ▪ use a thesaurus. 	<ul style="list-style-type: none"> ▪ write legibly, fluently and with increasing speed by: <ul style="list-style-type: none"> ▪ choosing which shape of a letter to use when given choices and deciding whether or not to join specific letters ▪ choosing the writing implement that is best suited for a task. 	<ul style="list-style-type: none"> ▪ plan their writing by: <ul style="list-style-type: none"> ▪ identifying the audience for and purpose of the writing, selecting the appropriate form and using other similar writing as models for their own ▪ noting and developing initial ideas, drawing on reading and research where necessary ▪ in writing narratives, considering how authors have developed characters and settings in what pupils have read, listened to or seen performed ▪ draft and write by: <ul style="list-style-type: none"> ▪ selecting appropriate grammar and vocabulary, understanding how such choices can change and enhance meaning ▪ in narratives, describing settings, characters and atmosphere and integrating dialogue to convey character and advance the action ▪ précising longer passages ▪ using a wide range of devices to build cohesion within and across paragraphs ▪ using further organisational and presentational devices to structure text and to guide the reader [for example, headings, bullet points, underlining] ▪ evaluate and edit by: <ul style="list-style-type: none"> ▪ assessing the effectiveness of their own and others' writing ▪ proposing changes to vocabulary, grammar and punctuation to enhance effects and clarify meaning ▪ ensuring the consistent and correct use of tense throughout a piece of writing ▪ ensuring correct subject and verb agreement when using singular and plural, distinguishing between the language of speech and writing and choosing the appropriate register ▪ proof-read for spelling and punctuation errors ▪ perform their own compositions, using appropriate intonation, volume, and movement so that meaning is clear. 	<ul style="list-style-type: none"> ▪ develop an understanding of the concepts set out in English Appendix 2 by: <ul style="list-style-type: none"> ▪ recognising vocabulary and structures that are appropriate for formal speech and writing, including subjunctive forms ▪ using passive verbs to affect the presentation of information in a sentence ▪ using the perfect form of verbs to mark relationships of time and cause ▪ using expanded noun phrases to convey complicated information concisely ▪ using modal verbs or adverbs to indicate degrees of possibility ▪ using relative clauses beginning with who, which, where, when, whose, that or with an implied (i.e. omitted) relative pronoun ▪ learning the grammar for years 5 and 6 in English Appendix 2 ▪ indicate grammatical and other features by: <ul style="list-style-type: none"> ▪ using commas to clarify meaning or avoid ambiguity in writing ▪ using hyphens to avoid ambiguity ▪ using brackets, dashes or commas to indicate parenthesis ▪ using semi-colons, colons or dashes to mark boundaries between independent clauses ▪ using a colon to introduce a list ▪ punctuating bullet points consistently ▪ use and understand the grammatical terminology in English Appendix 2 accurately and appropriately when discussing their writing and reading.
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Writing

Areas of Learning - Progression by Year

Writing

	Year 1	Year 2	Year 3 & 4	Year 5 & 6	KS3
Transcription	<p>Pupils will:</p> <p>spell:</p> <ul style="list-style-type: none"> words containing each of the 40+ phonemes already taught common exception words the days of the week 	<p>Pupils will:</p> <p>spell by:</p> <ul style="list-style-type: none"> segmenting spoken words into phonemes and representing these by graphemes, spelling many correctly learning new ways of spelling phonemes for which one or more spellings are already 	<p>Pupils will:</p> <ul style="list-style-type: none"> use further prefixes and suffixes and understand how to add them (English Appendix 1) spell further homophones spell words that are often misspelt (English Appendix 1) 	<p>Pupils will:</p> <ul style="list-style-type: none"> use further prefixes and suffixes and understand the guidance for adding them spell some words with 'silent' letters [for example, knight, psalm, solemn] 	<p>Pupils will:</p> <ul style="list-style-type: none"> There is no specified statutory requirements for Transcription in KS3

<p>name the letters of the alphabet:</p> <ul style="list-style-type: none"> ▪ naming the letters of the alphabet in order ▪ using letter names to distinguish between alternative spellings of the same sound <p>add prefixes and suffixes:</p> <ul style="list-style-type: none"> ▪ using the spelling rule for adding –s or –es as the plural marker for nouns and the third person singular marker for verbs ▪ using the prefix un– ▪ using –ing, –ed, –er and –est where no change is needed in the spelling of root words [for example, helping, helped, helper, eating, quicker, quickest] <p>apply simple spelling rules and guidance, as listed in English Appendix 1</p> <ul style="list-style-type: none"> ▪ write from memory simple sentences dictated by the teacher that include words using the GPCs and common exception words taught so far. 	<p>known, and learn some words with each spelling, including a few common homophones</p> <ul style="list-style-type: none"> ▪ learning to spell common exception words ▪ learning to spell more words with contracted forms ▪ learning the possessive apostrophe (singular) [for example, the girl’s book] ▪ distinguishing between homophones and near-homophones ▪ add suffixes to spell longer words, including –ment, –ness, –ful, –less, –ly <p>apply spelling rules and guidance, as listed in English Appendix 1</p> <ul style="list-style-type: none"> ▪ write from memory simple sentences dictated by the teacher that include words using the GPCs, common exception words and punctuation taught so far. 	<ul style="list-style-type: none"> ▪ place the possessive apostrophe accurately in words with regular plurals [for example, girls’, boys’] and in words with irregular plurals [for example, children’s] ▪ use the first two or three letters of a word to check its spelling in a dictionary ▪ write from memory simple sentences, dictated by the teacher, that include words and punctuation taught so far. 	<ul style="list-style-type: none"> ▪ continue to distinguish between homophones and other words which are often confused ▪ use knowledge of morphology and etymology in spelling and understand that the spelling of some words needs to be learnt specifically, as listed in English Appendix 1 ▪ use dictionaries to check the spelling and meaning of words ▪ use the first three or four letters of a word to check spelling, meaning or both of these in a dictionary ▪ use a thesaurus. 	
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	Year 1	Year 2	Year 3 & 4	Year 5 & 6	KS3
Handwriting	<p>Pupils will:</p> <ul style="list-style-type: none"> ▪ sit correctly at a table, holding a pencil comfortably and correctly ▪ begin to form lower-case letters in the correct direction, starting and finishing in the right place ▪ form capital letters ▪ form digits 0-9 ▪ understand which letters belong to which handwriting ‘families’ (i.e. letters that are formed in similar ways) and to practise these. 	<p>Pupils will:</p> <ul style="list-style-type: none"> ▪ form lower-case letters of the correct size relative to one another ▪ starting to use some of the diagonal and horizontal strokes needed to join letters and understand which letters, when adjacent to one another, are best left un-joined ▪ write capital letters and digits of the correct size, orientation and relationship to one another and to lower case letters ▪ use spacing between words that reflects the size of the letters. 	<p>Pupils will:</p> <ul style="list-style-type: none"> ▪ use the diagonal and horizontal strokes that are needed to join letters and understand which letters, when adjacent to one another, are best left un-joined ▪ increasing the legibility, consistency and quality of their handwriting [for example, by ensuring that the down strokes of letters are parallel and equidistant; that lines of writing are spaced sufficiently so that the ascenders and descenders of letters do not touch]. 	<p>Pupils will:</p> <p>write legibly, fluently and with increasing speed by:</p> <ul style="list-style-type: none"> ▪ choosing which shape of a letter to use when given choices and deciding whether or not to join specific letters ▪ choosing the writing implement that is best suited for a task. 	<p>Pupils will:</p> <ul style="list-style-type: none"> ▪ There is no specified statutory requirements for handwriting in KS3

	Year 1	Year 2	Year 3 & 4	Year 5 & 6	KS3
Composition	<p>Pupils will:</p> <p>write sentences by:</p> <ul style="list-style-type: none"> ▪ saying out loud what they are going to write about ▪ composing a sentence orally before writing it 	<p>Pupils will:</p> <p>develop positive attitudes towards and stamina for writing by:</p> <ul style="list-style-type: none"> ▪ writing narratives about personal experiences and those of others (real and fictional) ▪ writing about real events 	<p>Pupils will:</p>	<p>Pupils will:</p> <p>plan my writing by:</p> <ul style="list-style-type: none"> ▪ identifying the audience for and purpose of the writing, selecting the appropriate form and using other similar writing as models for their own 	<p>Pupils will:</p> <ul style="list-style-type: none"> • write accurately, fluently, effectively and at length for pleasure and information through:

	<ul style="list-style-type: none"> ▪ sequencing sentences to form short narratives ▪ re-reading what they have written to check that it makes sense ▪ discuss what they have written with the teacher or other pupils ▪ read aloud their writing clearly enough to be heard by their peers and the teacher. 	<ul style="list-style-type: none"> ▪ writing poetry ▪ writing for different purposes <p>consider what they are going to write before beginning by:</p> <ul style="list-style-type: none"> ▪ planning or saying out loud what they are going to write about ▪ writing down ideas and/or key words, including new vocabulary ▪ encapsulating what they want to say, sentence by sentence <p>make simple additions, revisions and corrections to my own writing by:</p> <ul style="list-style-type: none"> ▪ Evaluating their writing with the teacher and other pupils ▪ re-reading to check that their writing makes sense and that verbs to indicate time are used correctly and consistently, including verbs in the continuous form ▪ proof-reading to check for errors in spelling, grammar and punctuation [for example, ends of sentences punctuated correctly] <ul style="list-style-type: none"> ▪ read aloud what they have written with appropriate intonation to make the meaning clear. 	<p>plan their writing by:</p> <ul style="list-style-type: none"> ▪ discussing writing similar to that which they are planning to write in order to understand and learn from its structure, vocabulary and grammar ▪ discussing and recording ideas <p>draft and write by:</p> <ul style="list-style-type: none"> ▪ composing and rehearsing sentences orally (including dialogue), progressively building a varied and rich vocabulary and an increasing range of sentence structures (English Appendix 2) ▪ organising paragraphs around a theme ▪ in narratives, creating settings, characters and plot ▪ in non-narrative material, using simple organisational devices [for example, headings and sub-headings] <p>evaluate and edit by:</p> <ul style="list-style-type: none"> ▪ assessing the effectiveness of their own and others' writing and suggesting improvements ▪ proposing changes to grammar and vocabulary to improve consistency, including the accurate use of pronouns in sentences ▪ proof-read for spelling and punctuation errors ▪ read aloud their own writing, to a group or the whole class, using appropriate intonation and controlling the tone and volume so that the meaning is clear. 	<ul style="list-style-type: none"> ▪ noting and developing initial ideas, drawing on reading and research where necessary ▪ in writing narratives, considering how authors have developed characters and settings in what pupils have read, listened to or seen performed <p>draft and write by:</p> <ul style="list-style-type: none"> ▪ selecting appropriate grammar and vocabulary, understanding how such choices can change and enhance meaning ▪ in narratives, describing settings, characters and atmosphere and integrating dialogue to convey character and advance the action ▪ précisising longer passages ▪ using a wide range of devices to build cohesion within and across paragraphs ▪ using further organisational and presentational devices to structure text and to guide the reader [for example, headings, bullet points, underlining] <p>evaluate and edit by:</p> <ul style="list-style-type: none"> ▪ assessing the effectiveness of their own and others' writing ▪ proposing changes to vocabulary, grammar and punctuation to enhance effects and clarify meaning ▪ ensuring the consistent and correct use of tense throughout a piece of writing ▪ ensuring correct subject and verb agreement when using singular and plural, distinguishing between the language of speech and writing and choosing the appropriate register ▪ proof-read for spelling and punctuation errors ▪ perform their own compositions, using appropriate intonation, volume, and movement so that meaning is clear. 	<ul style="list-style-type: none"> • writing for a wide range of purposes and audiences, including: • well-structured formal expository and narrative essays • stories, scripts, poetry and other imaginative writing • notes and polished scripts for talks and presentations • a range of other narrative and non-narrative texts, including arguments, and personal and formal letters • summarising and organising material, and supporting ideas and arguments with any necessary factual detail • applying their growing knowledge of vocabulary, grammar and text structure to their writing and selecting the appropriate form • drawing on knowledge of literary and rhetorical devices from their reading and listening to enhance the impact of their writing • plan, draft, edit and proof-read through: • considering how their writing reflects the audiences and purposes for which it was intended • amending the vocabulary, grammar and structure of their writing to improve its coherence and overall effectiveness
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	Year 1	Year 2	Year 3 & 4	Year 5 & 6	KS3
Vocabulary, Grammar and Punctuation	<p>Pupils will:</p> <p>develop understanding of the concepts set out in English Appendix 2 by:</p> <ul style="list-style-type: none"> ▪ leaving spaces between words ▪ joining words and joining clauses using and 	<p>Pupils will:</p> <p>develop their understanding of the concepts set out in English Appendix 2 by:</p> <ul style="list-style-type: none"> ▪ learning how to use both familiar and new punctuation correctly (see English Appendix 2), including full 	<p>Pupils will:</p> <p>developing my understanding of the concepts set out in English Appendix 2 by:</p> <ul style="list-style-type: none"> ▪ extending the range of sentences with more than one clause by using a wider range of conjunctions, including when, if, because, although 	<p>Pupils will:</p>	<p>Pupils will:</p> <p>consolidate and build on their knowledge of grammar and vocabulary through:</p> <ul style="list-style-type: none"> ▪ extending and applying the grammatical knowledge set out in English Appendix 2 to the key stage

	<ul style="list-style-type: none"> ▪ beginning to punctuate sentences using a capital letter and a full stop, question mark or exclamation mark ▪ using a capital letter for names of people, places, the days of the week, and the personal pronoun 'I' ▪ learning the grammar for year 1 in English Appendix 2 ▪ using the grammatical terminology in English Appendix 2 when discussing my writing. 	<p>stops, capital letters, exclamation marks, question marks, commas for lists and apostrophes for contracted forms and the possessive (singular)</p> <p>Able to use:</p> <ul style="list-style-type: none"> ▪ sentences with different forms: statement, question, exclamation, command ▪ expanded noun phrases to describe and specify [for example, the blue butterfly] ▪ the present and past tenses correctly and consistently including the progressive form ▪ subordination (using when, if, that, or because) and co-ordination (using or, and, or but) ▪ the grammar for year 2 in English Appendix 2 ▪ some features of written Standard English <p>▪ use and understand the grammatical terminology in English Appendix 2 when discussing my writing.</p>	<ul style="list-style-type: none"> ▪ using the present perfect form of verbs in contrast to the past tense ▪ choosing nouns or pronouns appropriately for clarity and cohesion and to avoid repetition ▪ using conjunctions, adverbs and prepositions to express time and cause ▪ using fronted adverbials ▪ learning the grammar for years 3 and 4 in English Appendix 2 <p>indicate grammatical and other features by:</p> <ul style="list-style-type: none"> ▪ using commas after fronted adverbials ▪ indicating possession by using the possessive apostrophe with plural nouns ▪ using and punctuating direct speech <p>▪ use and understand the grammatical terminology in English Appendix 2 accurately and appropriately when discussing their writing and reading.</p>	<p>develop an understanding of the concepts set out in English Appendix 2 by:</p> <ul style="list-style-type: none"> ▪ recognising vocabulary and structures that are appropriate for formal speech and writing, including subjunctive forms ▪ using passive verbs to affect the presentation of information in a sentence ▪ using the perfect form of verbs to mark relationships of time and cause ▪ using expanded noun phrases to convey complicated information concisely ▪ using modal verbs or adverbs to indicate degrees of possibility ▪ using relative clauses beginning with who, which, where, when, whose, that or with an implied (i.e. omitted) relative pronoun ▪ learning the grammar for years 5 and 6 in English Appendix 2 <p>indicate grammatical and other features by:</p> <ul style="list-style-type: none"> ▪ using commas to clarify meaning or avoid ambiguity in writing ▪ using hyphens to avoid ambiguity ▪ using brackets, dashes or commas to indicate parenthesis ▪ using semi-colons, colons or dashes to mark boundaries between independent clauses ▪ using a colon to introduce a list ▪ punctuating bullet points consistently <p>▪ use and understand the grammatical terminology in English Appendix 2 accurately and appropriately when discussing their writing and reading.</p>	<p>1 and 2 programmes of study to analyse more challenging texts</p> <ul style="list-style-type: none"> ▪ studying the effectiveness and impact of the grammatical features of the texts they read ▪ drawing on new vocabulary and grammatical constructions from their reading and listening, and using these consciously in their writing and speech to achieve particular effects ▪ knowing and understanding the differences between spoken and written language, including differences associated with formal and informal registers, and between Standard English and other varieties of English ▪ using Standard English confidently in their own writing and speech ▪ discussing reading, writing and spoken language with precise and confident use of linguistic and literary terminology ▪ paying attention to accurate grammar, punctuation and spelling; applying the spelling patterns and rules set out in English Appendix 1 to the key stage 1 and 2 programmes of study for English.
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Science

By Year Group

Science
Age Related Expectations
Year 1

Working Scientifically	Plants	Animals, including humans	Everyday materials	Seasonal changes
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<p>During years 1 and 2, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:</p> <ul style="list-style-type: none"> ▪ asking simple questions and recognising that they can be answered in different ways ▪ observing closely, using simple equipment ▪ performing simple tests ▪ identifying and classifying ▪ using their observations and ideas to suggest answers to questions ▪ gathering and recording data to help in answering questions. 	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ identify and name a variety of common wild and garden plants, including deciduous and evergreen trees ▪ identify and describe the basic structure of a variety of common flowering plants, including trees. 	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals ▪ identify and name a variety of common animals that are carnivores, herbivores and omnivores ▪ describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets) ▪ identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. 	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ distinguish between an object and the material from which it is made ▪ identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock ▪ describe the simple physical properties of a variety of everyday materials ▪ compare and group together a variety of everyday materials on the basis of their simple physical properties. 	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ observe changes across the four seasons ▪ observe and describe weather associated with the seasons and how day length varies.
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Science
Age Related Expectations
Year 2

Working Scientifically	Living things and their habitats	Plants	Animals, including humans	Use of everyday materials
<p>During years 1 and 2, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:</p> <ul style="list-style-type: none"> ▪ asking simple questions and recognising that they can be answered in different ways ▪ observing closely, using simple equipment ▪ performing simple tests ▪ identifying and classifying ▪ using their observations and ideas to suggest answers to questions ▪ gathering and recording data to help in answering questions. 	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ explore and compare the differences between things that are living, dead, and things that have never been alive ▪ identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other ▪ identify and name a variety of plants and animals in their habitats, including micro-habitats ▪ describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food. 	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ observe and describe how seeds and bulbs grow into mature plants ▪ find out and describe how plants need water, light and a suitable temperature to grow and stay healthy. 	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ notice that animals, including humans, have offspring which grow into adults ▪ find out about and describe the basic needs of animals, including humans, for survival (water, food and air) ▪ describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene. 	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses ▪ find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.

Science
Age Related Expectations
Year 3

Working Scientifically	Plants	Animals, including humans	Rocks	Light	Forces and magnets
<p>During years 3 and 4, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:</p> <ul style="list-style-type: none"> ▪ asking relevant questions and using different types of scientific enquiries to answer them ▪ setting up simple practical enquiries, comparative and fair tests ▪ making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers ▪ gathering, recording, classifying and presenting data in a variety of ways to help in answering questions ▪ recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables ▪ reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions ▪ using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions ▪ identifying differences, similarities or changes related to simple scientific ideas and processes ▪ using straightforward scientific evidence to answer questions or to support their findings. 	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers ▪ explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant ▪ investigate the way in which water is transported within plants ▪ explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal. 	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat ▪ identify that humans and some other animals have skeletons and muscles for support, protection and movement. 	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ compare and group together different kinds of rocks on the basis of their appearance and simple physical properties ▪ describe in simple terms how fossils are formed when things that have lived are trapped within rock ▪ recognise that soils are made from rocks and organic matter. 	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ recognise that they need light in order to see things and that dark is the absence of light ▪ notice that light is reflected from surfaces ▪ recognise that light from the sun can be dangerous and that there are ways to protect their eyes ▪ recognise that shadows are formed when the light from a light source is blocked by a solid object ▪ find patterns in the way that the size of shadows change. 	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ compare how things move on different surfaces ▪ notice that some forces need contact between two objects, but magnetic forces can act at a distance ▪ observe how magnets attract or repel each other and attract some materials and not others ▪ compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials ▪ describe magnets as having two poles ▪ predict whether two magnets will attract or repel each other, depending on which poles are facing.

Science
Age Related Expectations
Year 4

Working Scientifically	Living things and habitats	Animals, including humans	States of matter	Sound	Electricity
<p>During years 3 and 4, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:</p> <ul style="list-style-type: none"> ▪ asking relevant questions and using different types of scientific enquiries to answer them ▪ setting up simple practical enquiries, comparative and fair tests ▪ making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers ▪ gathering, recording, classifying and presenting data in a variety of ways to help in answering questions ▪ recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables ▪ reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions ▪ using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions ▪ identifying differences, similarities or changes related to simple scientific ideas and processes ▪ using straightforward scientific evidence to answer questions or to support their findings. 	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ recognise that living things can be grouped in a variety of ways ▪ explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment ▪ recognise that environments can change and that this can sometimes pose dangers to living things. 	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ describe the simple functions of the basic parts of the digestive system in humans ▪ identify the different types of teeth in humans and their simple functions ▪ construct and interpret a variety of food chains, identifying producers, predators and prey. 	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ compare and group materials together, according to whether they are solids, liquids or gases ▪ observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C) ▪ identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature. 	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ identify how sounds are made, associating some of them with something vibrating ▪ recognise that vibrations from sounds travel through a medium to the ear ▪ find patterns between the pitch of a sound and features of the object that produced it ▪ find patterns between the volume of a sound and the strength of the vibrations that produced it ▪ recognise that sounds get fainter as the distance from the sound source increases. 	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ identify common appliances that run on electricity ▪ construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers ▪ identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery ▪ recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit ▪ recognise some common conductors and insulators, and associate metals with being good conductors.

Science
Age Related Expectations
Year 5

Working Scientifically	Living things and habitats	Animals, including humans	Properties and changes of materials	Earth and space	Forces
<p>During years 5 and 6, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:</p> <ul style="list-style-type: none"> ▪ planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary ▪ taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate ▪ recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs ▪ using test results to make predictions to set up further comparative and fair tests ▪ reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations ▪ identifying scientific evidence that has been used to support or refute ideas or arguments. 	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird ▪ describe the life process of reproduction in some plants and animals. 	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ describe the changes as humans develop to old age. 	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets ▪ know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution ▪ use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating ▪ give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic ▪ demonstrate that dissolving, mixing and changes of state are reversible changes ▪ explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda. 	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ describe the movement of the Earth, and other planets, relative to the Sun in the solar system ▪ describe the movement of the Moon relative to the Earth ▪ describe the Sun, Earth and Moon as approximately spherical bodies ▪ use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky. 	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object ▪ identify the effects of air resistance, water resistance and friction, that act between moving surfaces ▪ recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.

Science
Age Related Expectations
Year 6

Working Scientifically	Living things and habitats	Animals, including humans	Evolution and inheritance	Light	Electricity
<p>During years 5 and 6, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:</p> <ul style="list-style-type: none"> ▪ planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary ▪ taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate ▪ recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs ▪ using test results to make predictions to set up further comparative and fair tests ▪ reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations ▪ identifying scientific evidence that has been used to support or refute ideas or arguments. ▪ 	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals ▪ give reasons for classifying plants and animals based on specific characteristics. 	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood ▪ recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function ▪ describe the ways in which nutrients and water are transported within animals, including humans. 	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago ▪ recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents ▪ identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution. 	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ recognise that light appears to travel in straight lines ▪ use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye ▪ explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes ▪ use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them. 	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit ▪ compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches ▪ use recognised symbols when representing a simple circuit in a diagram.

Science

Areas of Learning - Progression by Year

Science Curriculum progression

	Year 1 & 2	Year 3 & 4	Year 5 & 6	KS3
Working scientifically	<p>During years 1 and 2, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:</p> <ul style="list-style-type: none"> • asking simple questions and recognising that they can be answered in different ways • observing closely, using simple equipment • performing simple tests • identifying and classifying • using their observations and ideas to suggest answers to questions • gathering and recording data to help in answering questions. 	<p>During years 3 and 4, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:</p> <ul style="list-style-type: none"> • asking relevant questions and using different types of scientific enquiries to answer them • setting up simple practical enquiries, comparative and fair tests • making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers • gathering, recording, classifying and presenting data in a variety of ways to help in answering questions • recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables • reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions • using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions • identifying differences, similarities or changes related to simple scientific ideas and processes • using straightforward scientific evidence to answer questions or to support their findings. 	<p>During years 5 and 6, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:</p> <ul style="list-style-type: none"> ▪ planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary ▪ taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate ▪ recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs ▪ using test results to make predictions to set up further comparative and fair tests ▪ reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations ▪ identifying scientific evidence that has been used to support or refute ideas or arguments. 	<p>During KS3, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:</p> <p>pay attention to objectivity and concern for accuracy, precision, repeatability and reproducibility</p> <ul style="list-style-type: none"> • understand that scientific methods and theories develop as earlier explanations are modified to take account of new evidence and ideas, together with the importance of publishing results and peer review • evaluate risks. • ask questions and develop a line of enquiry based on observations of the real world, alongside prior knowledge and experience • make predictions using scientific knowledge and understanding • select, plan and carry out the most appropriate types of scientific enquiries to test predictions, including identifying independent, dependent and control variables, where appropriate • use appropriate techniques, apparatus, and materials during fieldwork and laboratory work, paying attention to health • apply mathematical concepts and calculate results • present observations and data using appropriate methods, including tables and graphs • interpret observations and data, including identifying patterns and using observations, measurements and data to draw conclusions • present reasoned explanations, including explaining data in relation to predictions and hypotheses • evaluate data, showing awareness of potential sources of random and systematic error • identify further questions arising from their results\and safety • make and record observations and measurements using a range of methods for different investigations; and evaluate the reliability of methods and suggest possible improvements • apply sampling techniques. • apply mathematical concepts and calculate results • present observations and data using appropriate methods, including tables and graphs • interpret observations and data, including identifying patterns and using observations, measurements and data to draw conclusions • present reasoned explanations, including explaining data in relation to predictions and hypotheses • evaluate data, showing awareness of potential sources of random and systematic error • identify further questions arising from their results.

	Year 1 & 2	Year 3 & 4	Year 5 & 6	KS3
Plants	<p>Year 1:</p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ identify and name a variety of common wild and garden plants, including deciduous and evergreen trees ▪ identify and describe the basic structure of a variety of common flowering plants, including trees. <p>Year 2:</p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ identify and name a variety of common wild and garden plants, including deciduous and evergreen trees ▪ identify and describe the basic structure of a variety of common flowering plants, including trees. 	<p>Year 3:</p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers ▪ explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant ▪ investigate the way in which water is transported within plants • explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal. 		<p>Children should be taught to:</p> <ul style="list-style-type: none"> • the reactants in, and products of, photosynthesis, and a word summary for photosynthesis • the dependence of almost all life on Earth on the ability of photosynthetic organisms, such as plants and algae, to use sunlight in photosynthesis to build organic molecules that are an essential energy store and to maintain levels of oxygen and carbon dioxide in the atmosphere • the adaptations of leaves for photosynthesis. • the importance of plant reproduction through insect pollination in human food security • reproduction in plants, including flower structure, wind and insect pollination, fertilisation, seed and fruit formation and dispersal, including quantitative investigation of some dispersal mechanisms.

	Year 1 & 2	Year 3 & 4	Year 5 & 6	Year 7
Seasonal Changes	<p>Year 1:</p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ observe changes across the four seasons ▪ observe and describe weather associated with the seasons and how day length varies. 			

	Year 1 & 2	Year 3 & 4	Year 5 & 6	KS3
Animals, including humans	<p>Year 1:</p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> identify and name a variety of common animals including fish, amphibians, reptiles, birds and mammals identify and name a variety of common animals that are carnivores, herbivores and omnivores describe and compare the structure of a variety of common animals (fish, amphibians, reptiles, birds and mammals, including pets) identify, name, draw and label the basic parts of the human body and say which part of the body is associated with each sense. PSH 1.19, PSH 2.19 <p>Year 2:</p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> notice that animals, including humans, have offspring which grow into adults find out about and describe the basic needs of animals, including humans, for survival (water, food and air) PSH 1.10, PSH 2.10 describe the importance for humans of exercise, eating the right amounts of different types of food, and hygiene. PSH 1.15, PSH 2.15, PSH 1.16, PSH 2.16 	<p>Year 3:</p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat PSH 3.19, PSH 4.19 identify that humans and some other animals have skeletons and muscles for support, protection and movement. <p>Year 4:</p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> describe the simple functions of the basic parts of the digestive system in humans identify the different types of teeth in humans and their simple functions construct and interpret a variety of food chains, identifying producers, predators and prey. 	<p>Year 5:</p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> describe the changes as humans develop to old age. PSH 1.18, PSH 2.18 <p>Year 6:</p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> identify and name the main parts of the human circulatory system, and describe the functions of the heart, blood vessels and blood recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function PSH 4.19, PSH 5.19 describe the ways in which nutrients and water are transported within animals, including humans. 	<p>Children should be taught to:</p> <p>The skeletal and muscular systems</p> <p>the structure and functions of the human skeleton, to include support, protection, movement and making blood cells</p> <p>biomechanics – the interaction between skeleton and muscles, including the measurement of force exerted by different muscles</p> <p>the function of muscles and examples of antagonistic muscles.</p> <p>Nutrition and digestion</p> <p>content of a healthy human diet: carbohydrates, lipids (fats and oils), proteins, vitamins, minerals, dietary fibre and water, and why each is needed</p> <p>calculations of energy requirements in a healthy daily diet</p> <p>the consequences of imbalances in the diet, including obesity, starvation and deficiency diseases</p>

	Year 1 & 2	Year 3 & 4	Year 5 & 6	KS3
Everyday materials and states of matter	<p>Year 1:</p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ distinguish between an object and the material from which it is made ▪ identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock ▪ describe the simple physical properties of a variety of everyday materials ▪ compare and group together a variety of everyday materials on the basis of their simple physical properties. <p>Year 2:</p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses ▪ find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching. 	<p>Year 4:</p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ compare and group materials together, according to whether they are solids, liquids or gases ▪ observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C) ▪ identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature. 	<p>Year 5:</p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets ▪ know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution ▪ use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating ▪ give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic ▪ demonstrate that dissolving, mixing and changes of state are reversible changes ▪ explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda. 	<p>Children should be taught to:</p> <p>The particulate nature of matter</p> <p>the properties of the different states of matter (solid, liquid and gas) in terms of the particle model, including gas pressure</p> <p>changes of state in terms of the particle model.</p> <p>Atoms, elements and compounds</p> <p>a simple (Dalton) atomic model</p> <p>differences between atoms, elements and compounds</p> <p>chemical symbols and formulae for elements and compounds</p> <p>conservation of mass changes of state and chemical reactions.</p>

	Year 1 & 2	Year 3 & 4	Year 5 & 6	KS3
Living things and habitats	<p>Year 2:</p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> explore and compare the differences between things that are living, dead, and things that have never been alive identify that most living things live in habitats to which they are suited and describe how different habitats provide for the basic needs of different kinds of animals and plants, and how they depend on each other PSH 1.10, PSH 2.10 identify and name a variety of plants and animals in their habitats, including micro-habitats describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food. 	<p>Year 4:</p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> recognise that living things can be grouped in a variety of ways explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment recognise that environments can change and that this can sometimes pose dangers to living things. PSH 1.12, PSH 2.12 	<p>Year 5:</p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird describe the life process of reproduction in some plants and animals. <p>Year 6:</p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals give reasons for classifying plants and animals based on specific characteristics. 	<p>Children should be taught to:</p> <p>Relationships in an ecosystem</p> <p>the interdependence of organisms in an ecosystem, including food webs and insect pollinated crops</p> <p>the importance of plant reproduction through insect pollination in human food security</p> <p>how organisms affect, and are affected by, their environment, including the accumulation of toxic materials.</p>

	Year 1 & 2	Year 3 & 4	Year 5 & 6	KS3
Rocks	<ul style="list-style-type: none"> 	<p>Year 3:</p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> compare and group together different kinds of rocks on the basis of their appearance and simple physical properties describe in simple terms how fossils are formed when things that have lived are trapped within rock recognise that soils are made from rocks and organic matter. 	<ul style="list-style-type: none"> 	

Light and sound	Year 1 & 2	Year 3 & 4	Year 5 & 6	KS3
		<p>Year 3: light</p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ recognise that they need light in order to see things and that dark is the absence of light ▪ notice that light is reflected from surfaces ▪ recognise that light from the sun can be dangerous and that there are ways to protect their eyes ▪ recognise that shadows are formed when the light from a light source is blocked by a solid object ▪ find patterns in the way that the size of shadows change. <p>Year 4: sound</p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ identify how sounds are made, associating some of them with something vibrating ▪ recognise that vibrations from sounds travel through a medium to the ear ▪ find patterns between the pitch of a sound and features of the object that produced it ▪ find patterns between the volume of a sound and the strength of the vibrations that produced it ▪ recognise that sounds get fainter as the distance from the sound source increases. 	<p>Year 6: sound</p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ recognise that light appears to travel in straight lines ▪ use the idea that light travels in straight lines to explain that objects are seen because they give out or reflect light into the eye ▪ explain that we see things because light travels from light sources to our eyes or from light sources to objects and then to our eyes ▪ use the idea that light travels in straight lines to explain why shadows have the same shape as the objects that cast them. 	<p>Children should be taught to:</p> <p>Sound waves</p> <p>frequencies of sound waves, measured in hertz (Hz); echoes, reflection and absorption of sound</p> <p>sound needs a medium to travel, the speed of sound in air, in water, in solids</p> <p>sound produced by vibrations of objects, in loud speakers, detected by their effects on microphone diaphragm and the ear drum; sound waves are longitudinal</p> <p>auditory range of humans and animals.</p> <p>Light waves</p> <p>the similarities and differences between light waves and waves in matter</p> <p>light waves travelling through a vacuum; speed of light</p> <p>the transmission of light through materials: absorption, diffuse scattering and specular reflection at a surface</p> <p>use of ray model to explain imaging in mirrors, the pinhole camera, the refraction of light and action of convex lens in focusing (qualitative); the human eye</p> <p>light transferring energy from source to absorber leading to chemical and electrical effects; photo-sensitive material in the retina and in cameras</p> <p>colours and the different frequencies of light, white light and prisms (qualitative only); differential colour effects in absorption and diffuse reflection.</p>

Year 1 & 2	Year 3 & 4	Year 5 & 6	KS3
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Forces and magnets		<p>Year 3:</p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ compare how things move on different surfaces ▪ notice that some forces need contact between two objects, but magnetic forces can act at a distance ▪ observe how magnets attract or repel each other and attract some materials and not others ▪ compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials ▪ describe magnets as having two poles ▪ predict whether two magnets will attract or repel each other, depending on which poles are facing. 	<p>Year 5:</p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object ▪ identify the effects of air resistance, water resistance and friction, that act between moving surfaces ▪ recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect. 	<p>Children should be taught to:</p> <p>Forces</p> <p>forces as pushes or pulls, arising from the interaction between two objects</p> <p>using force arrows in diagrams, adding forces in one dimension, balanced and unbalanced forces</p> <p>moment as the turning effect of a force</p> <p>forces: associated with deforming objects; stretching and squashing – springs; with rubbing and friction between surfaces, with pushing things out of the way; resistance to motion of air and water</p> <p>forces measured in newtons, measurements of stretch or compression as force is changed</p> <p>force-extension linear relation; Hooke’s Law as a special case</p> <p>work done and energy changes on deformation</p> <p>non-contact forces: gravity forces acting at a distance on Earth and in space, forces between magnets and forces due to static electricity.</p> <p>Balanced forces</p> <p>opposing forces and equilibrium: weight held by stretched spring or supported on a compressed surface.</p> <p>Forces and motion</p> <p>forces being needed to cause objects to stop or start moving, or to change their speed or direction of motion (qualitative only)</p> <p>change depending on direction of force and its size.</p> <p>Magnetism</p> <p>magnetic poles, attraction and repulsion</p> <p>magnetic fields by plotting with compass, representation by field lines</p> <p>Earth’s magnetism, compass and navigation</p> <p>the magnetic effect of a current, electromagnets, D.C. motors (principles only).</p>

Year 1 & 2	Year 3 & 4	Year 5 & 6	KS3
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Electricity	Year 4:	Year 6:	Children should be taught to:
	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> identify common appliances that run on electricity construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit recognise some common conductors and insulators, and associate metals with being good conductors. 	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> associate the brightness of a lamp or the volume of a buzzer with the number and voltage of cells used in the circuit compare and give reasons for variations in how components function, including the brightness of bulbs, the loudness of buzzers and the on/off position of switches use recognised symbols when representing a simple circuit in a diagram. 	<p>Current electricity</p> <p>electric current, measured in amperes, in circuits, series and parallel circuits, currents add where branches meet and current as flow of charge</p> <p>potential difference, measured in volts, battery and bulb ratings; resistance, measured in ohms, as the ratio of potential difference (p.d.) to current</p> <p>differences in resistance between conducting and insulating components (quantitative).</p> <p>Static electricity</p> <p>separation of positive or negative charges when objects are rubbed together: transfer of electrons, forces between charged objects</p> <p>the idea of electric field, forces acting across the space between objects not in contact.</p>

	Year 1 & 2	Year 3 & 4	Year 5 & 6	KS3
Evolution and inheritance			<p>Year 6:</p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> recognise that living things have changed over time and that fossils provide information about living things that inhabited the Earth millions of years ago recognise that living things produce offspring of the same kind, but normally offspring vary and are not identical to their parents identify how animals and plants are adapted to suit their environment in different ways and that adaptation may lead to evolution. PSH 3.14, PSH 4.14, PSH 5.14 	<p>Children should be taught to:</p> <p>heredity as the process by which genetic information is transmitted from one generation to the next</p> <p>a simple model of chromosomes, genes and DNA in heredity, including the part played by Watson, Crick, Wilkins and Franklin in the development of the DNA model</p> <p>differences between species</p> <p>the variation between individuals within a species being continuous or discontinuous, to include measurement and graphical representation of variation</p> <p>the variation between species and between individuals of the same species means some organisms compete more successfully, which can drive natural selection</p> <p>changes in the environment may leave individuals within a species, and some entire species, less well adapted to compete successfully and reproduce, which in turn may lead to extinction</p> <p>the importance of maintaining biodiversity and the use of gene banks to preserve hereditary material.</p>

Computing

Art

Design & Technology

Geography

History

MFL

Music

P.E.

**Computing Key Stage 1
Age Related Expectations**

Computing	
Key Stage 1	<p>A high-quality computing education equips pupils to use computational thinking and creativity to understand and change the world. Computing has deep links with mathematics, science, and design and technology, and provides insights into both natural and artificial systems. The core of computing is computer science, in which pupils are taught the principles of information and computation, how digital systems work, and how to put this knowledge to use through programming. Building on this knowledge and understanding, pupils are equipped to use information technology to create programs, systems and a range of content. Computing also ensures that pupils become digitally literate – able to use, and express themselves and develop their ideas through, information and communication technology – at a level suitable for the future workplace and as active participants in a digital world.</p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> • understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions • create and debug simple programs • use logical reasoning to predict the behaviour of simple programs Sit1.2 Sit2.2 • use technology purposefully to create, organise, store, manipulate and retrieve digital content Git1.2, Hit1.1, Ait2.1, Ait2.2, Sit2.1 • recognise common uses of information technology beyond school Dit2.1, Hit1.1, ▪ use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies. Git1.1, Git2.1, Hit1.2, Hit1.3, Hit1.4, Hit2.1, Hit2.2

**Computing Key Stage 2
Age Related Expectations**

Computing	
Key stage 2	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> • design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts • use sequence, selection, and repetition in programs; work with variables and various forms of input and output Ait5.2 • use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs • understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration Hit4.3, Ait4.3, Dit3.1, Dit4.2, Dit5.1, Sit4.4, Sit5.3 • use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content Git3.1, Git3.2, Hit3.2, Hit3.3 Hit4.1, Ait3.1 Ait4.2, Dit4.2, Dit5.3 Sit5.2 • select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information Git4.1 Git4.2, Git5.1, Git5.2, Hit3.1, Hit5.2, Dit3.2, Dit3.3, Dit4.1, Dit4.3, Dit4.4 Sit3.1 Sit4.1, Sit4.2 ▪ use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

**Art Key Stage 1
Age Related Expectations**

Art	
Key Stage 1	<p>Art, craft and design embody some of the highest forms of human creativity. A high-quality art and design education should engage, inspire and challenge pupils, equipping them with the knowledge and skills to experiment, invent and create their own works of art, craft and design. As pupils progress, they should be able to think critically and develop a more rigorous understanding of art and design. They should also know how art and design both reflect and shape our history, and contribute to the culture, creativity and wealth of our nation. PSH 1.26, PSH 2.26</p> <p>Pupils should be taught about:</p> <ul style="list-style-type: none"> ▪ to use a range of materials creatively to design and make products AIS1:1 ▪ to use drawing, painting and sculpture to develop and share their ideas, experiences and imagination AIS 1:2 ▪ to develop a wide range of art and design techniques in using colour, pattern, texture, line, shape, form and space ANS 1:1, AIT 1:1, AIT 1:2, AIT 1:3, AIS 2:1, ALT 2:3 ▪ about the work of a range of artists, craft makers and designers, describing the differences and similarities between different practices and disciplines, and making links to their own work. APS 2:4, ASS 2:3, ASS 2:2, APS 2:4

**Art Key Stage 2
Age Related Expectations**

Art	
Key stage 2	<p>Pupils should be taught to develop their techniques, including their control and their use of materials, with creativity, experimentation and an increasing awareness of different kinds of art, craft and design. ACS 2:2 & 2:3, PSH 3.11, PSH 4.11, PSH 5.11, PSH 3.26, PSH 4.26, PSH 5.26, PSH 3.30, PSH 4.30, PSH 5.30</p> <p>Pupils should be taught:</p> <ul style="list-style-type: none"> ▪ to create sketch books to record their observations and use them to review and revisit ideas APS 3:1, APS 3:2, APS 3:3, AIS 3:3, APS 4:2, APS 5:2, APS 5:3 ▪ to improve their mastery of art and design techniques, including drawing, painting and sculpture with a range of materials [for example, pencil, charcoal, paint, clay] AIS 3:3, ALT 3:2, ALS 4:2, AIS 4:3, AIS 5:2, AIT 5:3, ALT 5:1 ▪ about great artists, architects and designers in history. AIT 3:1, ASS 3:3, ANS 5:3, AIT 4:3

Design and Technology Key Stage 1

Age Related Expectations

Design and Technology	
Key Stage 1	<p>Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home and school, gardens and playgrounds, the local community, industry and the wider environment].</p> <p>When designing and making, pupils should be taught to:</p> <p>Design</p> <ul style="list-style-type: none"> ▪ design purposeful, functional, appealing products for themselves and other users based on design criteria Dcs1.2, Dam1.1, Dcs2.1, Dwo1.1 ▪ generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology Dcs1.3, Dit1.1, Dit1.2, Dip1.1, Dcs2.1, Dam2.3, Dit2.1, Dit2.2, Dwo1.1 <p>Make</p> <ul style="list-style-type: none"> ▪ select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing Dcs1.5, Dlp1.4, Dps1.2 ▪ select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics Dlp1.2 <p>Evaluate</p> <ul style="list-style-type: none"> ▪ explore and evaluate a range of existing products Dlp1.5, Dlp1.5, Dcs2.2, Dlp2.3 ▪ evaluate their ideas and products against design criteria Dcs1.4, Dcs2.3, Dcs2.5, Dlp2.1, Dlp2.2 <p>Technical knowledge</p> <ul style="list-style-type: none"> ▪ build structures, exploring how they can be made stronger, stiffer and more stable Dlp1.4, Dps1.3, Dcs2.4 ▪ explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products Dcs1.1 <p>Cooking and nutrition</p> <p>As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life.</p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ use the basic principles of a healthy and varied diet to prepare dishes Dam1.2, Dam1.4, Dwo1.1, Dlp1.3, Dps1.1, Dam2.1, Dam2.2, Dam2.4 ▪ understand where food comes from PSH 1.15, PSH 2.15, PSH 1.17, PSH 2.17

Design and Technology Key Stage 2
Age Related Expectations

Design and Technology	
Key stage 2	<p>Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home, school, leisure, culture, enterprise, industry and the wider environment].</p> <p>When designing and making, pupils should be taught to:</p> <p>Design</p> <ul style="list-style-type: none"> ▪ use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups Dcs3.3, Dcs3.4, Dam3.1, Dwo3.2, Dps3.2, DCs4.4, Dit4.2, Dwo4.1, Dwo4.2, Dps4.1, Dit5.3, Dwo5.1 ▪ generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design Dcs3.1, Dcs3.2, Dam3.4, Dit3.2, Dam3.3, Dwo3.1, Dps3.3, DCs4.1 DCs4.2, DCs4.3, Dam4.1, Dit4.1, Dit4.3, Dlp4.2, Dcs5.1, Dit5.2 <p>Make</p> <ul style="list-style-type: none"> ▪ select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately Dam3.1 Dlp3.3, Dlp3.1, Dps3.4, Dam4.3, b Dps4.2, Dlp5.2 ▪ select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities Dps3.1 <p>Evaluate</p> <ul style="list-style-type: none"> ▪ investigate and analyse a range of existing products Dlp3.4, Dlp4.3, Dps4.3, Dcs5.2, Dcs5.3 ▪ evaluate their ideas and products against their own design criteria and consider the views of others to improve their work Dlp3.1, Dlp3.2, Dlp3.3, Dit4.3, Dlp4.1, Dlp4.2, Dlp5.1, Dlp5.3, Dlp5.4 ▪ understand how key events and individuals in design and technology have helped shape the world <p>Technical knowledge</p> <ul style="list-style-type: none"> ▪ apply their understanding of how to strengthen, stiffen and reinforce more complex structures ▪ understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages Dps4.4, Dam5.1, Dcs5.2 ▪ understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] ▪ apply their understanding of computing to program, monitor and control their products Dps3.5, Dit4.4, Dwo4.3, Dit5.1 <p>Cooking and nutrition</p> <p>As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life.</p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ understand and apply the principles of a healthy and varied diet ▪ prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques Dam3.2, Dam3.3, Dam4.2 ▪ understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed. PSH 3.18, PSH 4.18, PSH 5.18, PSH 3.20, PSH 4.20, PSH 5.20, PSH 3.24, PSH 4.24, PSH 5.24

Geography Key Stage 1
Age Related Expectations

Geography	
Key Stage 1	<p>Pupils should develop knowledge about the world, the United Kingdom and their locality. They should understand basic subject-specific vocabulary relating to human and physical geography and begin to use geographical skills, including first-hand observation, to enhance their locational awareness.</p> <p>Pupils should be taught to: Glt-all, Gss-all, Gps-all</p> <p>Locational knowledge</p> <ul style="list-style-type: none"> ▪ name and locate the world's seven continents and five oceans Gls2.4 ▪ name, locate and identify characteristics of the four countries and capital cities of the United Kingdom and its surrounding seas Gls1.1,1.3 Gls2.4 <p>Place knowledge</p> <ul style="list-style-type: none"> ▪ understand geographical similarities and differences through studying the human and physical geography of a small area of the United Kingdom, and of a small area in a contrasting non-European country Gls2.4 <p>Human and physical geography</p> <ul style="list-style-type: none"> ▪ identify seasonal and daily weather patterns in the United Kingdom and the location of hot and cold areas of the world in relation to the Equator and the North and South Poles Gls2.1,2.3,2.4 Gns2.4 ▪ use basic geographical vocabulary to refer to: <ul style="list-style-type: none"> ▪ key physical features, including: beach, cliff, coast, forest, hill, mountain, sea, ocean, river, soil, valley, vegetation, season and weather ▪ key human features, including: city, town, village, factory, farm, house, office, port, harbour and shop <p>Geographical skills and fieldwork</p> <ul style="list-style-type: none"> ▪ use world maps, atlases and globes to identify the United Kingdom and its countries, as well as the countries, continents and oceans studied at this key stage Gls1.3 ▪ use simple compass directions (North, South, East and West) and locational and directional language [for example, near and far; left and right], to describe the location of features and routes on a map Glt2 ▪ use aerial photographs and plan perspectives to recognise landmarks and basic human and physical features; devise a simple map; and use and construct basic symbols in a key Glt 1 Gls1.2 Glt 2 ▪ use simple fieldwork and observational skills to study the geography of their school and its grounds and the key human and physical features of its surrounding environment Gls1.3 Gls2.2 Gns1,2, PSH 1.11, PSH 2.11, PSH 1.12, PSH 2.12

**Geography Key Stage 2
Age Related Expectations**

Geography	
Key stage 2	<p>Pupils should extend their knowledge and understanding beyond the local area to include the United Kingdom and Europe, North and South America. This will include the location and characteristics of a range of the world’s most significant human and physical features. They should develop their use of geographical knowledge, understanding and skills to enhance their locational and place knowledge.</p> <p>Pupils should be taught to: Gns 3.4,4.1, Glt 3,4,5, Gss 3,4,5, Gps 3,4,5</p> <p>Locational knowledge</p> <ul style="list-style-type: none"> ▪ locate the world’s countries, using maps to focus on Europe (including the location of Russia) and North and South America, concentrating on their environmental regions, key physical and human characteristics, countries, and major cities Gls4.1,4.2 Gps4.2,5.1 ▪ name and locate counties and cities of the United Kingdom, geographical regions and their identifying human and physical characteristics, key topographical features (including hills, mountains, coasts and rivers), and land-use patterns; and understand how some of these aspects have changed over time Gls4.1 Gps3.1,3.2 ▪ identify the position and significance of latitude, longitude, Equator, Northern Hemisphere, Southern Hemisphere, the Tropics of Cancer and Capricorn, Arctic and Antarctic Circle, the Prime/Greenwich Meridian and time zones (including day and night) Gls4.2 Gps5.1,5.2 Glt4.3 <p>Place knowledge</p> <ul style="list-style-type: none"> ▪ understand geographical similarities and differences through the study of human and physical geography of a region of the United Kingdom, a region in a European country, and a region within North or South America Gps5.1 <p>Human and physical geography</p> <ul style="list-style-type: none"> ▪ describe and understand key aspects of: Gls3.2 <ul style="list-style-type: none"> ▪ physical geography, including: climate zones, biomes and vegetation belts, rivers, mountains, volcanoes and earthquakes, and the water cycle Gls4.3,5.3 Gps3.3,4.1 Gns 3.3,4.2 ▪ human geography, including: types of settlement and land use, economic activity including trade links, and the distribution of natural resources including energy, food, minerals and water Gls3.2,3.4,4.1,5.2,5.3 <p>Geographical skills and fieldwork</p> <ul style="list-style-type: none"> ▪ use maps, atlases, globes and digital/computer mapping to locate countries and describe features studied Gls3.3 Gns3.1,3.2 ▪ use the eight points of a compass, four and six-figure grid references, symbols and key (including the use of Ordnance Survey maps) to build their knowledge of the United Kingdom and the wider world ▪ use fieldwork to observe, measure, record and present the human and physical features in the local area using a range of methods, including sketch maps, plans and graphs, and digital technologies. Gls 5.1 Gns 4.3,5.1,5.3, PSH 3.26, PSH 4.26, PSH 5.26, PSH 3.15, PSH 4.15, PSH 5.15, PSH 3.16, PSH 4.16, PSH 5.16

**History Key Stage 1
Age Related Expectations**

	History
Key Stage 1	<p>Pupils should develop an awareness of the past, using common words and phrases relating to the passing of time. They should know where the people and events they study fit within a chronological framework and identify similarities and differences between ways of life in different periods. They should use a wide vocabulary of everyday historical terms. They should ask and answer questions, choosing and using parts of stories and other sources to show that they know and understand key features of events. They should understand some of the ways in which we find out about the past and identify different ways in which it is represented.</p> <p>In planning to ensure the progression described above through teaching about the people, events and changes outlined below, teachers are often introducing pupils to historical periods that they will study more fully at key stages 2 and 3.</p> <p>Pupils should be taught about: His 1,2, Hssl 1,2, Hpsl1,2, Hlts1,2</p> <ul style="list-style-type: none"> ▪ changes within living memory. Where appropriate, these should be used to reveal aspects of change in national life Hls1 ▪ events beyond living memory that are significant nationally or globally [for example, the Great Fire of London, the first aeroplane flight or events commemorated through festivals or anniversaries] Hls2 Hlt2 ▪ the lives of significant individuals in the past who have contributed to national and international achievements. Some should be used to compare aspects of life in different periods [for example, Elizabeth I and Queen Victoria, Christopher Columbus and Neil Armstrong, William Caxton and Tim Berners-Lee, Pieter Bruegel the Elder and LS Lowry, Rosa Parks and Emily Davison, Mary Seacole and/or Florence Nightingale and Edith Cavell] Hls2 Hns1 Hss2 Hlts2 ▪ significant historical events, people and places in their own locality Hns1,2 Hss2 Hlts1

History Key Stage 2 Age Related Expectations

History	
Key stage 2	<p>Pupils should continue to develop a chronologically secure knowledge and understanding of British, local and world history, establishing clear narratives within and across the periods they study. They should note connections, contrasts and trends over time and develop the appropriate use of historical terms. They should regularly address and sometimes devise historically valid questions about change, cause, similarity and difference, and significance. They should construct informed responses that involve thoughtful selection and organisation of relevant historical information. They should understand how our knowledge of the past is constructed from a range of sources.</p> <p>In planning to ensure the progression described above through teaching the British, local and world history outlined below, teachers should combine overview and depth studies to help pupils understand both the long arc of development and the complexity of specific aspects of the content.</p> <p>Pupils should be taught about:</p> <ul style="list-style-type: none"> ▪ changes in Britain from the Stone Age to the Iron Age HIts 5.1,5.3 Hps 4.2,4.3,5.1 HIs 3,4,5, Hns 3,4,5, His 3,4,5, Hss 3,4,5, Hpes 3,4,5, HIts 3,4,5 ▪ the Roman Empire and its impact on Britain HIts 5.1,5.3 Hps 4.2,4.3,5.1 HIs 3,4,5, Hns 3,4,5, His 3,4,5, Hss 3,4,5, Hpes 3,4,5, HIts 3,4,5 ▪ Britain’s settlement by Anglo-Saxons and Scots Hps3 HIs 3,4,5, Hns 3,4,5, His 3,4,5, Hss 3,4,5, Hpes 3,4,5, HIts 3,4,5 ▪ the Viking and Anglo-Saxon struggle for the Kingdom of England to the time of Edward the Confessor HIs 3,4,5, Hns 3,4,5, His 3,4,5, Hss 3,4,5, Hpes 3,4,5, HIts 3,4,5
	<p>This could include:</p> <ul style="list-style-type: none"> ▪ late Neolithic hunter-gatherers and early farmers, for example, Skara Brae ▪ Bronze Age religion, technology and travel, for example, Stonehenge ▪ Iron Age hill forts: tribal kingdoms, farming, art and culture
	<p>This could include:</p> <ul style="list-style-type: none"> ▪ Julius Caesar’s attempted invasion in 55-54 BC ▪ the Roman Empire by AD 42 and the power of its army ▪ successful invasion by Claudius and conquest, including Hadrian’s Wall ▪ British resistance, for example, Boudica ▪ ‘Romanisation’ of Britain: sites such as Caerwent and the impact of technology, culture and beliefs, including early Christianity
	<p>This could include:</p> <ul style="list-style-type: none"> ▪ Roman withdrawal from Britain in c. AD 410 and the fall of the western Roman Empire ▪ Scots invasions from Ireland to north Britain (now Scotland) ▪ Anglo-Saxon invasions, settlements and kingdoms: place names and village life ▪ Anglo-Saxon art and culture ▪ Christian conversion – Canterbury, Iona and Lindisfarne
	<p>This could include:</p> <ul style="list-style-type: none"> ▪ Viking raids and invasion ▪ resistance by Alfred the Great and Athelstan, first king of England ▪ further Viking invasions and Danegeld ▪ Anglo-Saxon laws and justice ▪ Edward the Confessor and his death in 1066

- a local history study

His 3,4,5, Hns 3,4,5, His 3,4,5, Hss 3,4,5, Hpes 3,4,5, HIts 3,4,5

This could include:

- a depth study linked to one of the British areas of study listed above
- a study over time tracing how several aspects of national history are reflected in the locality (this can go beyond 1066)
- a study of an aspect of history or a site dating from a period beyond 1066 that is significant in the locality.

- a study of an aspect or theme in British history that extends pupils' chronological knowledge beyond 1066

His 3,4,5, Hns 3,4,5, His 3,4,5, Hss 3,4,5, Hpes 3,4,5, HIts 3,4,5

This could include:

- the changing power of monarchs using case studies such as John, Anne and Victoria
- changes in an aspect of social history, such as crime and punishment from the Anglo-Saxons to the present or leisure and entertainment in the 20th Century
- the legacy of Greek or Roman culture (art, architecture or literature) on later periods in British history, including the present day
- a significant turning point in British history, for example, the first railways or the Battle of Britain

- the achievements of the earliest civilizations – an overview of where and when the first civilizations appeared and a depth study of one of the following: Ancient Sumer; The Indus Valley; Ancient Egypt; The Shang Dynasty of Ancient China
- Ancient Greece – a study of Greek life and achievements and their influence on the western world
- a non-European society that provides contrasts with British history – one study chosen from: early Islamic civilization, including a study of Baghdad c. AD 900; Mayan civilization c. AD 900; Benin (West Africa) c. AD 900-1300.

PSH 3.9, PSH 4.9, PSH 5.9, PSH 3.13, PSH 4.13, PSH 5.13, PSH 3.29, PSH 4.29, PSH 5.29

**Languages Key Stage 2
Age Related Expectations**

Languages	
Key stage 2	<p>Teaching may be of any modern or ancient foreign language and should focus on enabling pupils to make substantial progress in one language. The teaching should provide an appropriate balance of spoken and written language and should lay the foundations for further foreign language teaching at key stage 3. It should enable pupils to understand and communicate ideas, facts and feelings in speech and writing, focused on familiar and routine matters, using their knowledge of phonology, grammatical structures and vocabulary.</p> <p>The focus of study in modern languages will be on practical communication. If an ancient language is chosen the focus will be to provide a linguistic foundation for reading comprehension and an appreciation of classical civilisation. Pupils studying ancient languages may take part in simple oral exchanges, while discussion of what they read will be conducted in English. A linguistic foundation in ancient languages may support the study of modern languages at key stage 3.</p> <p>Pupils should be taught to:</p> <p>Key: O-Oracy, L-Literacy, IU-Intercultural Understanding, KAL-Knowledge about language, LLS-Language learning strategies</p> <ul style="list-style-type: none"> ▪ listen attentively to spoken language and show understanding by joining in and responding O/LLS ▪ explore the patterns and sounds of language through songs and rhymes and link the spelling, sound and meaning of words KAL/O/LLS ▪ engage in conversations; ask and answer questions; express opinions and respond to those of others; seek clarification and help* O/LLS ▪ speak in sentences, using familiar vocabulary, phrases and basic language structures O/LLS ▪ develop accurate pronunciation and intonation so that others understand when they are reading aloud or using familiar words and phrases* O/KAL/LLS ▪ present ideas and information orally to a range of audiences* O ▪ read carefully and show understanding of words, phrases and simple writing KAL/L ▪ appreciate stories, songs, poems and rhymes in the language O/L/IU/KAL/LLS ▪ broaden their vocabulary and develop their ability to understand new words that are introduced into familiar written material, including through using a dictionary L/KAL/LLS ▪ write phrases from memory, and adapt these to create new sentences, to express ideas clearly L ▪ describe people, places, things and actions orally* and in writing O/L/IU ▪ understand basic grammar appropriate to the language being studied, including (where relevant): feminine, masculine and neuter forms and the conjugation of high-frequency verbs; key features and patterns of the language; how to apply these, for instance, to build sentences; and how these differ from or are similar to English L/KAL/LLS <p>The starred (*) content above will not be applicable to ancient languages</p> <p>PSH 3.26, PSH 4.26, PSH 5.26, PSH 3.30, PSH 4.30, PSH 5.30</p>

Music Key Stage 1
Age Related Expectations

Music	
Key Stage 1	<p>Music is a universal language that embodies one of the highest forms of creativity. A high-quality music education should engage and inspire pupils to develop a love of music and their talent as musicians, and so increase their self-confidence, creativity and sense of achievement. As pupils progress, they should develop a critical engagement with music, allowing them to compose, and to listen with discrimination to the best in the musical canon.</p> <p>PSH 1.2, PSH 2.2</p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ use their voices expressively and creatively by singing songs and speaking chants and rhymes MPE:1:1, 2:1, 2:2, MAP 2:3 ▪ play tuned and untuned instruments musically MCO 2:6 ▪ listen with concentration and understanding to a range of high-quality live and recorded music MAP 1:1, 2:1, 2:2 ▪ experiment with, create, select and combine sounds using the inter-related dimensions of music MCO 1:1, 1:2, 1:3, 1:4, MPE 2:4, MCO 2:2, 2:3, MAP 1:2, 1:4, 2:4

Music Key Stage 2
Age Related Expectations

Music	
Key stage 2	<p>Pupils should be taught to sing and play musically with increasing confidence and control. They should develop an understanding of musical composition, organising and manipulating ideas within musical structures and reproducing sounds from aural memory. PSH 3.11, PSH 4.11, PSH 5.11</p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ play and perform in solo and ensemble contexts, using their voices and playing musical instruments with increasing accuracy, fluency, control and expression MPE 3:1, 3:2, 3:4, 3:5, 3:6, 3:7, MCO3:1, MPE4:1, 4:2, 4:3, 4:4, 4:5, 4:6, 4:8.4:9, MAP5:3, MPE5:1, 5:3, 5:4, 5:5, 5:6, 5:7 ▪ improvise and compose music for a range of purposes using the inter-related dimensions of music MCO3:1, 3:4, 4:4, 5:2, 5:3, MAP5:2 ▪ listen with attention to detail and recall sounds with increasing aural memory MPE3:6, MAP3:2, MPE4:7, MCO 4:7 ▪ use and understand staff and other musical notations MAP3:1, 5:5, MCO4:6, MAP 4:1, 4:2 ▪ appreciate and understand a wide range of high-quality live and recorded music drawn from different traditions and from great composers and musicians ▪ develop an understanding of the history of music.

**Physical Education Key Stage 1
Age Related Expectations**

Physical Education	
Key Stage 1	<p>Pupils should develop fundamental movement skills, become increasingly competent and confident and access a broad range of opportunities to extend their agility, balance and coordination, individually and with others. They should be able to engage in competitive (both against self and against others) and co-operative physical activities, in a range of increasingly challenging situations.</p> <p>PSH 1.9, PSH 2.9, PSH 1.15, PSH 2.15, PSH 1.23, PSH 2.23</p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ master basic movements including running, jumping, throwing and catching, as well as developing balance, agility and co-ordination, and begin to apply these in a range of activities Pga1.1, Pga1.2, Pga1.3 Pgy1.1, Pgy1.2, Pgy1.3, Pgy1.4, Pgy1.5, Pgy1.6, Pgy1.7, Pgy1.8, Pga2.1, Pga2.2, Pga2.3 Pgy2.1, Pgy2.2, Pgy2.3, Pgy2.4, Pgy2.5, Pgy2.6 ▪ participate in team games, developing simple tactics for attacking and defending Pga1.2, Pga1.3 Pga1.4, Pga1.5 Pga1.6, Pga1.7, Pga2.2, Pga2.3 Pga2.4, Pga2.5 Pga2.6 ▪ perform dances using simple movement patterns Pda 1.1, Pda1.2, Pda1.3, Pda1.4, Pda1.5, Pda1.6, Pda1.7, Pda1.8, Pda 2.1, Pda2.2, Pda2.3, Pda2.4, Pda2.5, Pda2.6, Pda2.7, Pda2.8 <p>Swimming and water safety</p> <p>All schools must provide swimming instruction either in key stage 1 or key stage 2.</p> <p>In particular, pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ swim competently, confidently and proficiently over a distance of at least 25 metres ▪ use a range of strokes effectively [for example, front crawl, backstroke and breaststroke] ▪ perform safe self-rescue in different water-based situations.

**Physical Education Key Stage 2
Age Related Expectations**

	Physical Education
Key stage 2	<p>Pupils should continue to apply and develop a broader range of skills, learning how to use them in different ways and to link them to make actions and sequences of movement. They should enjoy communicating, collaborating and competing with each other. They should develop an understanding of how to improve in different physical activities and sports and learn how to evaluate and recognise their own success.</p> <p>PSH 3.18, PSH 4.18, PSH 5.18</p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ use running, jumping, throwing and catching in isolation and in combination Pga4.1, Pga4.2, Pga4.3, Pga4.4, Pga4.5, Pga4.6, Pga4.7 ▪ play competitive games, modified where appropriate [for example, badminton, basketball, cricket, football, hockey, netball, rounders and tennis], and apply basic principles suitable for attacking and defending Pga4.1, Pga4.2, Pga4.3, Pga4.4, Pga4.5, Pga4.6, Pga4.7 ▪ develop flexibility, strength, technique, control and balance [for example, through athletics and gymnastics] Pgy4.1, Pgy4.2, Pgy4.3, Pgy4.4, Pgy4.5, Pgy4.6 ▪ perform dances using a range of movement patterns Pda4.1, Pda4.2, Pda4.3, Pda4.4, Pda4.5, Pda4.6, Pda4.7 ▪ take part in outdoor and adventurous activity challenges both individually and within a team Poa4.1, Poa4.2, Poa4.3, Poa4.4, Poa4.5, Poa4.6, Poa4.7 ▪ compare their performances with previous ones and demonstrate improvement to achieve their personal best PDa4.1, Pda4.2, Pda4.3, Pda4.4, Pda4.5, Pda4.6 <p>Swimming and water safety</p> <p>All schools must provide swimming instruction either in key stage 1 or key stage 2.</p> <p>In particular, pupils should be taught to:</p> <ul style="list-style-type: none"> ▪ swim competently, confidently and proficiently over a distance of at least 25 metres Psw3.1, Psw3.3, Psw3.4 ▪ use a range of strokes effectively [for example, front crawl, backstroke and breaststroke] Psw3.2 ▪ perform safe self-rescue in different water-based situations Psw3.5