



Claycots Maths Overview

2021 - 2022

Reception

<u>Autumn 1</u>	<u>Autumn 2</u>	<u>Spring 1</u>	<u>Spring 2</u>	<u>Summer 1</u>	<u>Summer 2</u>
<p><u>Numbers</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Cardinality , counting Numbers 1, 2, 3 <input type="checkbox"/> Rote counting up to 5 <input type="checkbox"/> Comparison – more / fewer <input type="checkbox"/> Composition: numbers to be formed in a different ways using partitioning. (1, 2, 3) <input type="checkbox"/> Subitising up to 3 <p><u>Patterns</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Continue copy and make AB/ ABC pattern <p><u>Shape, space and measure</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Compare and measure size, mass, capacity using continuous quantities <input type="checkbox"/> developing the spatial awareness- in, on, under, up, down <input type="checkbox"/> Identifying the 2d shapes and describing the properties of the shapes - circle, triangle. 	<p><u>Numbers</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Cardinality , counting Numbers 1 to 5 <input type="checkbox"/> Rote counting up to 10 <input type="checkbox"/> Comparison – 1 more / 1 less <input type="checkbox"/> Composition: numbers to be formed in a different ways using partitioning. (up to 5) <input type="checkbox"/> Subitising up to 5 <p><u>Shape, space and measure</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Introducing 4 sided shapes - square, rectangle. <input type="checkbox"/> Positional language: describe position of objects <input type="checkbox"/> use time to sequence events <input type="checkbox"/> beginning to experience specific time duration : e.g. advent calendar 	<p><u>Numbers</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Cardinality , counting Numbers 1 to 10 <input type="checkbox"/> Rote counting up to 15 <input type="checkbox"/> Comparison and estimating – 1 more / 1 less and same <input type="checkbox"/> Composition: numbers to be formed in a different ways using partitioning. (up to 10) <input type="checkbox"/> Subitising up to 5 <input type="checkbox"/> adding up to 10 <p><u>Shape, space and measure</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Comparing indirectly using two others put things/objects in order <input type="checkbox"/> Relationship between shapes <p><u>Patterns</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Continue copy and make ABB/ ABBC pattern <input type="checkbox"/> spotting pattern around us 	<p><u>Numbers</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Cardinality , counting Numbers 1 to 10 <input type="checkbox"/> Rote counting up to 20 <input type="checkbox"/> Comparison and estimating – more / less and same <input type="checkbox"/> Composition: applying the partitioning skills using number stories (up to 10) <input type="checkbox"/> Partitioning number in more than 2 ways <input type="checkbox"/> taking away objects from group <input type="checkbox"/> Doubling up to 10 <p><u>Shape, space and measure</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Comparing indirectly using two others put things/objects in order <input type="checkbox"/> talk about specific time duration : how many times you can hop in 1 minute? 	<p><u>Numbers</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Cardinality , counting Numbers 1 to 10 <input type="checkbox"/> Rote counting up to 30 <input type="checkbox"/> Number bonds: Knowing which pair makes a given number (part -part -whole) up to 10 <input type="checkbox"/> Halving: Sharing objects to make equal groups <input type="checkbox"/> Odd and even: Putting objects in groups <input type="checkbox"/> Taking away objects from groups by counting back <p><u>Measure</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Time- o' clock <input type="checkbox"/> exploring using rulers and measuring tapes 	<p><u>Numbers</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Number bond- deepening the understanding by application, oral number problems. <input type="checkbox"/> Adding large groups of numbers by counting on. <input type="checkbox"/> Adding and taking away stories <p><u>Shape, space and measure</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> introduce basic 3d shapes – cube, sphere, pyramid. <input type="checkbox"/> Explore basic difference between 2d shapes and 3d shapes. <p><u>Pattern</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Making their own ABBC pattern <input type="checkbox"/> Spotting an error in the pattern.

Year 1

<u>Autumn 1</u>	<u>Autumn 2</u>	<u>Spring 1</u>	<u>Spring 2</u>	<u>Summer 1</u>	<u>Summer 2</u>
<p><u>Place value within 10</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Count to 10, forwards and backwards, beginning with 0 or 1, or from any given number <input type="checkbox"/> Count, read and write numbers to 10 <input type="checkbox"/> Given a number, identify 1 more and less <input type="checkbox"/> 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 <p><u>Addition within 10</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> read, write and interpret mathematical statements involving addition (+) and equals (=) signs <input type="checkbox"/> represent and use number bonds to 10 <input type="checkbox"/> add and subtract one-digit numbers to 10, including 0 <input type="checkbox"/> solve one-step problems that involve addition, using concrete objects and pictorial representations, and missing number problems such as $7 = ? + 2$ 	<p><u>Subtraction within 10</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> read, write and interpret mathematical statements involving subtraction (-) and equals (=) signs <input type="checkbox"/> subtract one-digit numbers to 10, including 0 <input type="checkbox"/> solve one-step problems that involve addition, using concrete objects and pictorial representations, and missing number problems such as $7 = ? - 9$ <p><u>Place value within 20</u></p> <ul style="list-style-type: none"> - Count to 20, forwards and backwards, beginning with 0 or 1, or from any given number - Count, read and write numbers to 20 - Given a number, identify 1 more and 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 <p><u>Geometry</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> 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><u>Addition & subtraction (within 20)</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs <input type="checkbox"/> represent and use number bonds and related subtraction facts within 20 <input type="checkbox"/> add and subtract one-digit and two-digit numbers to 20, including 0 <input type="checkbox"/> solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = ? - 9$ <p><u>Place value (within 50)</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Count to 50, forwards and backwards, beginning with 0 or 1, or from any given number <input type="checkbox"/> Count, read and write numbers to 50, <input type="checkbox"/> Given a number, identify 1 more and less <input type="checkbox"/> 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 	<p><u>Length & Height</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> compare, describe and solve practical problems for lengths and heights [for example, long/short, longer/shorter, tall/short, double/half] <input type="checkbox"/> Measure and begin to record lengths and heights <p><u>Mass/Weight & volume</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> compare, describe and solve practical problems for: <ul style="list-style-type: none"> <input type="checkbox"/> - 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] <input type="checkbox"/> Measure and begin to record mass/weight & capacity and volume <p><u>Consolidation</u></p>	<p><u>Multiplication & division</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> To count in multiples of 2s, 5s & 10s <input type="checkbox"/> 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><u>Fractions</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> recognise, find and name a half as 1 of 2 equal parts of an object, shape or quantity <input type="checkbox"/> recognise, find and name a quarter as 1 of 4 equal parts of an object, shape or quantity 	<p><u>Position & direction</u></p> <ul style="list-style-type: none"> - describe position, direction and movement, including whole, half, quarter and three-quarter turns <p><u>Place value within 100</u></p> <p>Count to 100, forwards and backwards, beginning with 0 or 1, or from any given number</p> <ul style="list-style-type: none"> - Count, read and write numbers to 100, - Given a number, identify 1 more and 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 <p><u>Money</u></p> <p>Recognise and know the value of different denominations of coins & notes</p> <p><u>Time</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> compare, describe and solve practical problems for time [for example, quicker, slower, earlier, later] <input type="checkbox"/> Measure and begin to record time (hours, minutes and seconds) <input type="checkbox"/> Sequence events in chronological order using language such as: before, after, first, next, yesterday, tomorrow etc. <input type="checkbox"/> Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times <input type="checkbox"/> Recognise and use language relating to dates, including days of the week, weeks, months and years

Year 2

<u>Autumn 1</u>	<u>Autumn 2</u>	<u>Spring 1</u>	<u>Spring 2</u>	<u>Summer 1</u>	<u>Summer 2</u>
<p><u>Place Value</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> count in steps of 2, 3, and 5 from 0, and in 10s from any number, forward and backward <input type="checkbox"/> recognise the place value of each digit in a two-digit number (10s, 1s) <input type="checkbox"/> identify, represent and estimate numbers using different representations, including the number line <input type="checkbox"/> compare and order numbers from 0 up to 100; use <, > and = signs <input type="checkbox"/> read and write numbers to at least 100 in numerals and in words <input type="checkbox"/> use place value and number facts to solve problems <p><u>Addition & Subtraction</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> solve problems with addition and subtraction using concrete objects and pictorial representations, including those involving numbers, quantities and measures • applying their increasing knowledge of mental and written methods <input type="checkbox"/> recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 <input type="checkbox"/> add and subtract numbers using concrete objects, pictorial representations, and mentally, including: <ul style="list-style-type: none"> • a two-digit number and 1s • a two-digit number and 10s • 2 two-digit numbers • adding 3 one-digit numbers <input type="checkbox"/> show that addition of 2 numbers can be done in any order (commutative) and subtraction of 1 number from another cannot <input type="checkbox"/> recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems 	<p><u>Money</u></p> <p>Addition & subtraction involving money 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</p> <p>solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change</p> <p><u>Multiplication & division</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers <input type="checkbox"/> calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (x), division (÷) and equals (=) signs <input type="checkbox"/> show that multiplication of 2 numbers can be done in any order (commutative) and division of 1 number by another cannot <input type="checkbox"/> solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts 	<p><u>Statistics</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> interpret and construct simple pictograms, tally charts, block diagrams and tables <input type="checkbox"/> ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity <input type="checkbox"/> ask-and-answer questions about totaling and comparing categorical data <p><u>Shape & Space</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> identify and describe the properties of 2-D shapes, including the number of sides, and line symmetry in a vertical line <input type="checkbox"/> identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces <input type="checkbox"/> identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid] <input type="checkbox"/> compare and sort common 2-D and 3-D shapes and everyday objects <p><u>Fractions</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> 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 <input type="checkbox"/> write simple fractions, for example $\frac{1}{2}$ of $6 = 3$ and recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$ 	<p><u>Measurement (including addition and subtraction)</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> 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 <input type="checkbox"/> compare and order lengths, mass, volume/capacity and record the results using >, < and = <p><u>Position & direction</u></p> <p>order and arrange combinations of mathematical objects in patterns and sequences</p> <p>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> <p><u>Time</u></p> <p>compare and sequence intervals of time</p> <ul style="list-style-type: none"> <input type="checkbox"/> 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 <input type="checkbox"/> know the number of minutes in an hour and the number of hours in a day <p><u>Capacity & temperature (including addition and subtraction)</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> choose and use appropriate standard units to estimate and measure temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using thermometers and measuring vessels <input type="checkbox"/> compare and order and record the results using >, < and = 	<p><u>Consolidation and problem solving</u></p> <p><u>Review / Testing</u></p> <p><u>Addition & Subtraction</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> solve problems with addition and subtraction using concrete objects and pictorial representations, including those involving numbers, quantities and measures • applying their increasing knowledge of mental and written methods <input type="checkbox"/> recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 <input type="checkbox"/> add and subtract numbers using concrete objects, pictorial representations, and mentally, including: <ul style="list-style-type: none"> • a two-digit number and 1s • a two-digit number and 10s • 2 two-digit numbers • adding 3 one-digit numbers <input type="checkbox"/> show that addition of 2 numbers can be done in any order (commutative) and subtraction of 1 number from another cannot <input type="checkbox"/> recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems 	<p><u>REVIEW</u></p> <p><u>Multiplication & division</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers <input type="checkbox"/> calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (x), division (÷) and equals (=) signs <input type="checkbox"/> show that multiplication of 2 numbers can be done in any order (commutative) and division of 1 number by another cannot <input type="checkbox"/> solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts

Year 3

<u>Autumn 1</u>	<u>Autumn 2</u>	<u>Spring 1</u>	<u>Spring 2</u>	<u>Summer 1</u>	<u>Summer 2</u>
<p><u>Place Value</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number <input type="checkbox"/> recognise the place value of each digit in a 3-digit number (100s, 10s, 1s) <input type="checkbox"/> compare and order numbers up to 1,000 <input type="checkbox"/> identify, represent and estimate numbers using different representations <input type="checkbox"/> read and write numbers up to 1,000 in numerals and in words <input type="checkbox"/> solve number problems and practical problems involving these ideas <p><u>Addition & subtraction</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> add and subtract numbers mentally, including: <ul style="list-style-type: none"> a three-digit number and 1s a three-digit number and 10s a three-digit number and 100s <input type="checkbox"/> add and subtract numbers with up to 3 digits, using formal written methods of columnar addition and subtraction <input type="checkbox"/> solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction 	<p><u>Addition & subtraction</u></p> <p>estimate the answer to a calculation and use inverse operations to check answers</p> <p>- Recap on rounding to the nearest ten and hundred.</p> <p><u>Multiplication & division</u></p> <p>recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables</p> <ul style="list-style-type: none"> <input type="checkbox"/> 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 <input type="checkbox"/> solve problems, including missing number problems, involving multiplication and division, 	<p><u>Multiplication & division</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Multiply and divide 2-digit by 1-digit numbers with and without exchanging. <input type="checkbox"/> - solve problems including positive integer scaling problems and correspondence problems in which n objects are connected to m objects <p><u>Measurement – Money</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> add and subtract amounts of money to give change, using both £ and p in practical contexts <p><u>Statistics</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> interpret and present data using bar charts, pictograms and tables <input type="checkbox"/> 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><u>Measurement: Length and Perimeter</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) <input type="checkbox"/> measure the perimeter of simple 2-D shapes <p><u>Fractions</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Recap of Year 2 fractions work: <input type="checkbox"/> Recognising and using half, quarter and third. <input type="checkbox"/> Recognising and using unit and non-unit fractions. <input type="checkbox"/> Counting in fractions. 	<p><u>Fractions</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> 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 <input type="checkbox"/> recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators <input type="checkbox"/> recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators <input type="checkbox"/> recognise and show, using diagrams, equivalent fractions with small denominators <input type="checkbox"/> add and subtract fractions with the same denominator within one whole [for example, $5/7 + 1/7 = 6/7$] <input type="checkbox"/> compare and order unit fractions, and fractions with the same denominators <input type="checkbox"/> solve problems that involve all of the above <p><u>Measurement: Time</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks <input type="checkbox"/> 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, am/pm, morning, afternoon, noon and midnight <input type="checkbox"/> know the number of seconds in a minute and the number of days in each month, year and leap year <input type="checkbox"/> compare durations of events [for example, to calculate the time taken by particular events or tasks] 	<p><u>Geometry: Properties of Shape</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them <input type="checkbox"/> recognise angles as a property of shape or a description of a turn <input type="checkbox"/> identify right angles, recognise that 2 right angles make a half-turn, 3 make three-quarters of a turn and 4 a complete turn; identify whether angles are greater than or less than a right angle <input type="checkbox"/> identify horizontal and vertical lines and pairs of perpendicular and parallel lines <p><u>Measurement: Mass & Capacity</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> measure, compare, add and subtract: mass (kg/g); volume/capacity (l/ml)

Year 4

<u>Autumn 1</u>	<u>Autumn 2</u>	<u>Spring 1</u>	<u>Spring 2</u>	<u>Summer 1</u>	<u>Summer 2</u>
<p>Place Value</p> <ul style="list-style-type: none"> <input type="checkbox"/> count in multiples of 6, 7, 9, 25 and 1,000 <input type="checkbox"/> find 1,000 more or less than a given number <input type="checkbox"/> count backwards through 0 to include negative numbers <input type="checkbox"/> recognise the place value of each digit in a four-digit number (1,000s, 100s, 10s, and 1s) <input type="checkbox"/> order and compare numbers beyond 1,000 <input type="checkbox"/> identify, represent and estimate numbers using different representations <input type="checkbox"/> round any number to the nearest 10, 100 or 1,000 <input type="checkbox"/> solve number and practical problems that involve all of the above and with increasingly large positive numbers <input type="checkbox"/> read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of 0 and place value <p>Addition & subtraction</p> <ul style="list-style-type: none"> <input type="checkbox"/> add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate <input type="checkbox"/> estimate and use inverse operations to check answers to a calculation <input type="checkbox"/> solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why 	<p>Multiplication & Division</p> <ul style="list-style-type: none"> <input type="checkbox"/> recall multiplication and division facts for multiplication tables up to 12×12 <input type="checkbox"/> use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together 3 numbers <input type="checkbox"/> recognise and use factor pairs and commutativity in mental calculations <input type="checkbox"/> multiply two-digit and three-digit numbers by a one-digit number using formal written layout <input type="checkbox"/> solve problems involving multiplying and adding, including using the distributive law to multiply two-digit numbers by 1 digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects <p>Measurement: Length and Perimeter</p> <p>convert between different units of measure [for example, kilometre to metre;</p> <ul style="list-style-type: none"> <input type="checkbox"/> measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres <input type="checkbox"/> estimate, compare and calculate different measures <input type="checkbox"/> read, write and convert time between analogue and digital 12- and 24-hour clocks 	<p>Place Value</p> <ul style="list-style-type: none"> <input type="checkbox"/> round any number to the nearest 10, 100 or 1,000 <input type="checkbox"/> solve number and practical problems that involve all of the above and with increasingly large positive numbers <p>Multiplication & division</p> <ul style="list-style-type: none"> <input type="checkbox"/> multiply two-digit and three-digit numbers by a one-digit number using formal written layout <input type="checkbox"/> solve problems involving multiplying and adding, including using the distributive law to multiply two-digit numbers by 1 digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects <p>Measurement: Area</p> <p>find the area of rectilinear shapes by counting squares</p> <p>Fractions</p> <ul style="list-style-type: none"> <input type="checkbox"/> recognise and show, using diagrams, families of common equivalent fractions <input type="checkbox"/> count up and down in hundredths; recognise that hundredths arise when dividing an object by 100 and dividing tenths by 10 <input type="checkbox"/> 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 <input type="checkbox"/> add and subtract fractions with the same denominator 	<p>Revision of 4 operations</p> <ul style="list-style-type: none"> <input type="checkbox"/> solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why <input type="checkbox"/> solve problems involving multiplying and adding, including using the distributive law to multiply two-digit numbers by 1 digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects <p>Fractions</p> <ul style="list-style-type: none"> <input type="checkbox"/> 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 <input type="checkbox"/> add and subtract fractions with the same denominator <p>Decimals</p> <ul style="list-style-type: none"> <input type="checkbox"/> recognise and write decimal equivalents of any number of tenths or hundredths <input type="checkbox"/> recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$ <input type="checkbox"/> 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 <input type="checkbox"/> round decimals with 1 decimal place to the nearest whole number <input type="checkbox"/> compare numbers with the same number of decimal places up to 2 decimal places <input type="checkbox"/> solve simple measure and money problems involving fractions and decimals to 2 decimal places 	<p>Revision of 4 operations</p> <ul style="list-style-type: none"> <input type="checkbox"/> solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why <input type="checkbox"/> solve problems involving multiplying and adding, including using the distributive law to multiply two-digit numbers by 1 digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects <p>Measurement: Money</p> <ul style="list-style-type: none"> <input type="checkbox"/> estimate, compare and calculate different measures, including money in pounds and pence <p>Measurement: Time</p> <ul style="list-style-type: none"> <input type="checkbox"/> convert between different units of measure [for example; hour to minute] <input type="checkbox"/> read, write and convert time between analogue and digital 12- and 24-hour clocks <input type="checkbox"/> solve problems involving converting from hours to minutes, minutes to seconds, years to months, weeks to days 	<p>Statistics</p> <ul style="list-style-type: none"> <input type="checkbox"/> interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs <input type="checkbox"/> solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs <p>Geometry: Properties of Shape</p> <ul style="list-style-type: none"> <input type="checkbox"/> compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes <input type="checkbox"/> identify acute and obtuse angles and compare and order angles up to 2 right angles by size <input type="checkbox"/> identify lines of symmetry in 2-D shapes presented in different orientations <input type="checkbox"/> complete a simple symmetric figure with respect to a specific line of symmetry <p>Geometry: Position and Direction</p> <ul style="list-style-type: none"> <input type="checkbox"/> describe positions on a 2-D grid as coordinates in the first quadrant <input type="checkbox"/> describe movements between positions as translations of a given unit to the left/right and up/down <input type="checkbox"/> plot specified points and draw sides to complete a given polygon

Year 5

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<p>Place value</p> <ul style="list-style-type: none"> <input type="checkbox"/> read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit <input type="checkbox"/> count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000 <input type="checkbox"/> interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through 0 <input type="checkbox"/> round any number up to 1,000,000 to the nearest 10, 100, 1,000, 10,000 and 100,000 <input type="checkbox"/> solve number problems and practical problems that involve all of the above <input type="checkbox"/> read Roman numerals to 1,000 (M) and recognise years written in Roman numerals <p>Addition and subtraction</p> <ul style="list-style-type: none"> <input type="checkbox"/> add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) <input type="checkbox"/> add and subtract numbers mentally with increasingly large numbers <input type="checkbox"/> use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy <input type="checkbox"/> solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why 	<p>Recap: Addition and subtraction</p> <ul style="list-style-type: none"> <input type="checkbox"/> add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) <input type="checkbox"/> solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why <p>Multiplication and division</p> <ul style="list-style-type: none"> <input type="checkbox"/> identify multiples and factors, including finding all factor pairs of a number, and common factors of 2 numbers <input type="checkbox"/> know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers <input type="checkbox"/> establish whether a number up to 100 is prime and recall prime numbers up to 19 <input type="checkbox"/> 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 <input type="checkbox"/> multiply and divide numbers mentally, drawing upon known facts <input type="checkbox"/> 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 <input type="checkbox"/> multiply and divide whole numbers and those involving decimals by 10, 100 and 1,000 <input type="checkbox"/> recognise and use square numbers and cube numbers, and the notation for squared (²) and cubed (³) <input type="checkbox"/> solve problems involving multiplication and division, including using their knowledge of factors and multiples, squares and cubes <input type="checkbox"/> solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates <p>Statistics</p> <ul style="list-style-type: none"> <input type="checkbox"/> solve comparison, sum and difference problems using information presented in a line graph <input type="checkbox"/> complete, read and interpret information in tables, including timetables 	<p>Recap: Addition, Subtraction, multiplication and division</p> <ul style="list-style-type: none"> <input type="checkbox"/> solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign <p>Fractions – including decimals and percentages</p> <ul style="list-style-type: none"> <input type="checkbox"/> compare and order fractions whose denominators are all multiples of the same number <input type="checkbox"/> identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths <input type="checkbox"/> 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, $2/5 + 4/5 = 6/5 = 1 \frac{1}{5}$] <input type="checkbox"/> add and subtract fractions with the same denominator, and denominators that are multiples of the same number <input type="checkbox"/> multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams <input type="checkbox"/> read and write decimal numbers as fractions [for example, $0.71 = 71/100$] <input type="checkbox"/> recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents <input type="checkbox"/> round decimals with 2 decimal places to the nearest whole number and to 1 decimal place <input type="checkbox"/> read, write, order and compare numbers with up to 3 decimal places <input type="checkbox"/> solve problems involving number up to 3 decimal places <input type="checkbox"/> recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per 100', and write percentages as a fraction with denominator 100, and as a decimal fraction <input type="checkbox"/> solve problems which require knowing percentage and decimal equivalents of $1/2, 1/4, 1/5, 2/5, 4/5$, and those fractions with a denominator of a multiple of 10 or 25 	<p>Recap: Addition, Subtraction, multiplication and division</p> <ul style="list-style-type: none"> <input type="checkbox"/> solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign <p>Measurement:</p> <ul style="list-style-type: none"> <input type="checkbox"/> convert between different units of metric measure [for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre] <input type="checkbox"/> understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints <input type="checkbox"/> measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres <input type="checkbox"/> calculate and compare the area of rectangles (including squares), including using standard units, square centimetres (cm²) and square metres (m²), and estimate the area of irregular shapes <input type="checkbox"/> estimate volume [for example, using 1 cm³ blocks to build cuboids (including cubes)] and capacity [for example, using water] <input type="checkbox"/> solve problems involving converting between units of time <input type="checkbox"/> use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling <p>Geometry: Shape know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles</p> <ul style="list-style-type: none"> • draw given angles, and measure them in degrees (°) • Identify: <ul style="list-style-type: none"> - angles at a point and 1 whole turn (total 360°) - angles at a point on a straight line and half a turn (total 180°) 	<p>Recap: Addition, Subtraction, multiplication and division</p> <ul style="list-style-type: none"> <input type="checkbox"/> solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign <p>Geometry: Position & direction</p> <ul style="list-style-type: none"> <input type="checkbox"/> 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>Recap: Multiplication & Division</p> <ul style="list-style-type: none"> <input type="checkbox"/> 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 <input type="checkbox"/> 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 <p>Geometry: Shape identify 3-D shapes, including cubes and other cuboids, from 2-D representations</p> <ul style="list-style-type: none"> - Angles - To identify 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>Recap: Addition, Subtraction, multiplication and division</p> <ul style="list-style-type: none"> <input type="checkbox"/> solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign <p>Recap: Fractions – including decimals and percentages</p> <ul style="list-style-type: none"> <input type="checkbox"/> 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, $2/5 + 4/5 = 6/5 = 1 \frac{1}{5}$] <input type="checkbox"/> add and subtract fractions with the same denominator, and denominators that are multiples of the same number <input type="checkbox"/> multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams <p>Recap: Measurement</p> <ul style="list-style-type: none"> <input type="checkbox"/> convert between different units of metric measure [for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre] <input type="checkbox"/> solve problems involving converting between units of time

Year 6

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<p>Place Value</p> <ul style="list-style-type: none"> <input type="checkbox"/> read, write, order and compare numbers up to 10,000,000 and determine the value of each digit <input type="checkbox"/> round any whole number to a required degree of accuracy <input type="checkbox"/> use negative numbers in context, and calculate intervals across 0 <input type="checkbox"/> solve number and practical problems that involve all of the above <p>Addition, subtraction, Multiplication & division</p> <ul style="list-style-type: none"> <input type="checkbox"/> multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication <input type="checkbox"/> 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 <input type="checkbox"/> 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 <input type="checkbox"/> perform mental calculations, including with mixed operations and large numbers <input type="checkbox"/> common multiples and prime numbers <input type="checkbox"/> use their knowledge of the order of operations to carry out calculations involving the 4 operations <input type="checkbox"/> solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why <input type="checkbox"/> 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>Multiplication</p> <ul style="list-style-type: none"> <input type="checkbox"/> identify common factors <input type="checkbox"/> Order of operations <input type="checkbox"/> Prime and square numbers <p>Fractions</p> <ul style="list-style-type: none"> <input type="checkbox"/> use common factors to simplify fractions; use common multiples to express fractions in the same denomination <input type="checkbox"/> compare and order fractions, including fractions >1 <input type="checkbox"/> add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions <input type="checkbox"/> multiply simple pairs of proper fractions, writing the answer in its simplest form [for example, $1/4 \times 1/2 = 1/8$] <input type="checkbox"/> divide proper fractions by whole numbers [for example, $1/3 \div 2 = 1/6$] <input type="checkbox"/> multiply one-digit numbers with up to 2 decimal places by whole numbers <input type="checkbox"/> use written division methods in cases where the answer has up to 2 decimal places <input type="checkbox"/> recall and use equivalences between simple fractions, decimals and percentages, including in different contexts <p>Multiplying & dividing by 10, 100, 1000</p> <ul style="list-style-type: none"> <input type="checkbox"/> identify the value of each digit in numbers given to 3 decimal places and multiply and divide numbers by 10, 100 and 1,000 giving answers up to 3 decimal places <p>Fractions – decimals</p> <ul style="list-style-type: none"> <input type="checkbox"/> associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, 3/8] <p>Number – rounding</p> <ul style="list-style-type: none"> <input type="checkbox"/> solve problems which require answers to be rounded to specified degrees of accuracy <p>Area & perimeter</p> <ul style="list-style-type: none"> <input type="checkbox"/> recognise that shapes with the same areas can have different perimeters and vice versa <input type="checkbox"/> recognise when it is possible to use formulae for area and volume of shapes <input type="checkbox"/> calculate the area of parallelograms and triangles <p>Volume</p> <ul style="list-style-type: none"> <input type="checkbox"/> calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimeters (cm³) and cubic meters (m³), and extending to other units [for example, mm³ and km³] 	<p>Decimals</p> <ul style="list-style-type: none"> <input type="checkbox"/> Decimals up to 2 D.P <input type="checkbox"/> Understand thousandths <input type="checkbox"/> Three decimal places <input type="checkbox"/> Multiply by 10, 100 and 1000 <input type="checkbox"/> Divide by 10, 100, 1000 <input type="checkbox"/> Multiply decimals by integers <input type="checkbox"/> Divide decimals by integers <input type="checkbox"/> Division decimals by integers <input type="checkbox"/> Division to solve problems <input type="checkbox"/> Decimals as fractions <input type="checkbox"/> Fractions to decimals <p>Percentages</p> <ul style="list-style-type: none"> <input type="checkbox"/> Understand Percentages <input type="checkbox"/> Fractions to percentages <input type="checkbox"/> Equivalent FDP <input type="checkbox"/> Order FDP <input type="checkbox"/> Percentage of an amount <input type="checkbox"/> Percentages (Missing Values) <p>measurement</p> <ul style="list-style-type: none"> <input type="checkbox"/> solve problems involving the calculation and conversion of units of measure, using decimal notation up to 3 decimal places where appropriate <input type="checkbox"/> 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 3 decimal places <input type="checkbox"/> convert between miles and kilometres 	<p>Recap</p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Addition</i> <input type="checkbox"/> <i>subtraction</i> <input type="checkbox"/> <i>Multiplication and division</i> <input type="checkbox"/> <i>Fractions</i> <input type="checkbox"/> <i>Decimals</i> <p align="center"><i>SATs W/C 9th May</i></p>	<p>Algebra</p> <ul style="list-style-type: none"> <input type="checkbox"/> use simple formulae <input type="checkbox"/> generate and describe linear number sequences <input type="checkbox"/> express missing number problems algebraically <input type="checkbox"/> find pairs of numbers that satisfy an equation with 2 unknowns <input type="checkbox"/> enumerate possibilities of combinations of 2 variables <p>Ratio and proportion</p> <ul style="list-style-type: none"> <input type="checkbox"/> solve problems involving the relative sizes of 2 quantities where missing values can be found by using integer multiplication and division facts <input type="checkbox"/> solve problems involving the calculation of percentages [for example, of measures and such as 15% of 360] and the use of percentages for comparison <input type="checkbox"/> solve problems involving similar shapes where the scale factor is known or can be found <input type="checkbox"/> solve problems involving unequal sharing and grouping using knowledge of fractions and multiples <p>Geometry – properties of shapes</p> <ul style="list-style-type: none"> <input type="checkbox"/> draw 2-D shapes using given dimensions and angles <input type="checkbox"/> recognise, describe and build simple 3-D shapes, including making nets <input type="checkbox"/> compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons <input type="checkbox"/> illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius <input type="checkbox"/> recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles 	<p>Geometry – position & direction</p> <ul style="list-style-type: none"> <input type="checkbox"/> describe positions on the full coordinate grid (all 4 quadrants) <input type="checkbox"/> draw and translate simple shapes on the coordinate plane, and reflect them in the axes <p>Statistics</p> <p>interpret and construct pie charts and line graphs and use these to solve problems calculate and interpret the mean as an average</p> <p>Consolidation and Themed Projects</p>