

South Stoke Primary School KS2 Long Term Plan

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
3	Place value 3.5 Addition and subtraction 3	Addition and subtraction 1 Multiplication and Division 6	Perimeter and length 3 Fractions 2	Fractions 3 Time 2	Time 2 Shape 2 Money 1	Money 1 Statistics 2 Mass and capacity 2/3
4	Place value 3.5 Addition and subtraction 3	Multiplication and division 7	Perimeter and length 3 Fractions 2	Fractions 5	FDP 2 Shape 2 Money 1	Money 1 Statistics 2 Position and direction 2
5	Place value 4.5 addition and subtraction 2	Multiplication and division 7	Area, perimeter and volume 3 Fractions 2	Fractions 5	FDP 2 Shape 2 Convert units 1	Convert units 1 Statistics 2 Position and direction 2
6	Place value 4.5 Addition and subtraction 2	Multiplication and division 5 Convert units 2	Area, perimeter and volume 2 Fractions 3	FDP 5	Ratio 2 Shape 2 Algebra 1	Algebra 1 Statistics 2 Position and direction 2

Year 3	National curriculum objectives
Autumn 1	<p><u>Place value</u> recognise the place value of each digit in a 3-digit number (100s, 10s, 1s) read and write numbers up to 1,000 in numerals and in words count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number identify, represent and estimate numbers using different representations compare and order numbers up to 1,000 solve number problems and practical problems involving these ideas</p> <p><u>Addition and subtraction</u> add and subtract numbers mentally, including: a three-digit number and 1s a three-digit number and 10s a three-digit number and 100s add and subtract numbers with up to 3 digits, using formal written methods of columnar addition and subtraction solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction</p>
Autumn 2	<p><u>Addition and subtraction</u> 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> <p><u>Multiplication and division</u> 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>

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<b>Spring 1</b>	<p><u>Length and perimeter</u> measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) measure the perimeter of simple 2-D shapes</p> <p><u>Fractions</u> 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 compare and order unit fractions, and fractions with the same denominators</p>
<b>Spring 2</b>	<p><u>Fractions</u> add and subtract fractions with the same denominator within one whole [for example, <math>\frac{5}{7}</math> <math>+\frac{1}{7} = \frac{6}{7}</math> ] 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</p> <p><u>Time</u> 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, am/pm, morning, afternoon, noon and midnight</p>
<b>Summer 1</b>	<p><u>Time</u> know the number of seconds in a minute and the number of days in each month, year and leap year compare durations of events</p> <p><u>Shape</u> draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them identify horizontal and vertical lines and pairs of perpendicular and parallel lines recognise angles as a property of shape or a description of a turn 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</p> <p><u>Money</u> add and subtract amounts of money to give change, using both £ and p in practical contexts</p>
<b>Summer 2</b>	<p><u>Money</u> add and subtract amounts of money to give change, using both £ and p in practical contexts</p> <p><u>Statistics</u> 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> <p><u>Mass and capacity</u> measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)</p>
<b>Year 4</b>	<b>National curriculum objectives</b>

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Autumn 1	<p><u>Place value (including decimals)</u>          recognise the place value of each digit in a four-digit number (1,000s, 100s, 10s, and 1s)          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          count in multiples of 6, 7, 9, 25 and 1,000          find 1,000 more or less than a given number          count backwards through 0 to include negative numbers          identify, represent and estimate numbers using different representations          order and compare numbers beyond 1,000          round any number to the nearest 10, 100 or 1,000          solve number and practical problems that involve all of the above with increasingly large positive numbers          count up and down in hundredths; recognise that hundredths arise when dividing an object by 100 and dividing tenths by 10          round decimals with 1 decimal place to the nearest whole number          compare numbers with the same number of decimal places up to 2 decimal places</p> <p><u>Addition and subtraction</u>          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>
Autumn 2	<p><u>Multiplication and division (including decimals)</u>          recall multiplication and division facts for multiplication tables up to <math>12 \times 12</math>          recognise and use factor pairs and commutativity in mental calculations          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          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 1 digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects          find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths</p>
Spring 1	<p><u>Perimeter and length</u>          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</p> <p><u>Fractions</u>          count up and down in hundredths; recognise that hundredths arise when dividing an object by 100 and dividing tenths by 10          round decimals with 1 decimal place to the nearest whole number          compare numbers with the same number of decimal places up to 2 decimal places          recognise and write decimal equivalents of any number of tenths or hundreds          recognise and write decimal equivalents to <math>\frac{1}{4}</math> <math>\frac{1}{2}</math> <math>\frac{3}{4}</math>          solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number</p>
Spring 2	<p><u>Fractions (and revise decimals)</u>          recognise and show, using diagrams, families of common equivalent fractions          add and subtract fractions with the same denominator          solve simple measure and money problems involving fractions and decimals to 2 decimal places</p> <p><u>Time</u>          read, write and convert time between analogue and digital 12- and 24-hour clocks          convert between different units of measure [for example, kilometre to metre; hour to minute]          solve problems involving converting from hours to minutes, minutes to seconds, years to months, weeks to days</p>

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<p style="writing-mode: vertical-rl; transform: rotate(180deg);"><b>Summer 1</b></p>	<p><u>Time</u> 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> <p><u>Shape</u> compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes identify lines of symmetry in 2-D shapes presented in different orientations complete a simple symmetric figure with respect to a specific line of symmetry identify acute and obtuse angles and compare and order angles up to 2 right angles by size</p> <p><u>Money</u> estimate, compare and calculate different measures, including money in pounds and pence</p>
<p style="writing-mode: vertical-rl; transform: rotate(180deg);"><b>Summer 2</b></p>	<p><u>Money</u> estimate, compare and calculate different measures, including money in pounds and pence</p> <p>Statistics 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> <p><u>Position and direction</u> 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>
<p><b>Year 5</b></p>	<p><b>National curriculum objectives</b></p>
<p style="writing-mode: vertical-rl; transform: rotate(180deg);"><b>Autumn 1</b></p>	<p><u>Place value including decimals</u> read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit read Roman numerals to 1,000 (M) and recognise years written in Roman numerals round any number up to 1,000,000 to the nearest 10, 100, 1,000, 10,000 and 100,000 solve number problems and practical problems that involve all of the above recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents round decimals with 2 decimal places to the nearest whole number and to 1 decimal place read, write, order and compare numbers with up to 3 decimal places</p> <p><u>Addition and subtraction including decimals</u> add and subtract numbers mentally with increasingly large numbers add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) 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>

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<b>Autumn 2</b>	<p><u>Addition and subtraction including decimals</u>  recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents  solve problems involving number up to 3 decimal places</p> <p><u>Multiplication and division</u>  identify multiples and factors, including finding all factor pairs of a number, and common factors of 2 numbers  know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers  establish whether a number up to 100 is prime and recall prime numbers up to 19  recognise and use square numbers and cube numbers, and the notation for squared (<sup>2</sup>) and cubed (<sup>3</sup>)  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 1,000  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>
<b>Spring 1</b>	<p><u>Perimeter, area and volume</u>  measure and calculate the perimeter of composite rectilinear shapes in cm and m  calculate and compare the area of rectangles (including squares), including using standard units cm<sup>2</sup> and m<sup>2</sup>, and estimate the area of irregular shapes  estimate volume [for example, using 1 cm<sup>3</sup> blocks to build cuboids (including cubes)] and capacity [for example, using water]</p> <p><u>Fractions</u>  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 &gt; 1 as a mixed number [for example, <math>\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}</math>]  add and subtract fractions with the same denominator, and denominators that are multiples of the same number</p>
<b>Spring 2</b>	<p><u>FDP</u>  multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams  recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements &gt; 1 as a mixed number [for example, <math>\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}</math>]  read and write decimal numbers as fractions [for example, <math>0.71 = \frac{71}{100}</math>]  recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents  round decimals with 2 decimal places to the nearest whole number and to 1 decimal place  read, write, order and compare numbers with up to 3 decimal places  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  solve problems involving number up to 3 decimal places  solve problems which require knowing percentage and decimal equivalents of <math>\frac{1}{2}</math> <math>\frac{1}{4}</math> <math>1/5</math> <math>2/5</math> <math>4/5</math> , and those fractions with a denominator of a multiple of 10 or 25</p>

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<b>Summer 1</b>	<p><u>Negative numbers</u>  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 0</p> <p><u>Shape</u>  identify 3-D shapes, including cubes and other cuboids, from 2-D representations  distinguish between regular and irregular polygons based on reasoning about equal sides and angles  know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles  draw given angles, and measure them in degrees (°)  identify:  angles at a point and 1 whole turn (total 360°)  angles at a point on a straight line and half a turn (total 180°)  other multiples of 90°  use the properties of rectangles to deduce related facts and find missing lengths and angles</p> <p><u>Convert units</u>  convert between different units of metric measure [e.g. km and m; cm and m; cm and mm; g and kg; l and ml]  understand and use approximate equivalences between metric units and common imperial units such as ins, lbs and pts</p>
<b>Summer 2</b>	<p><u>Convert units</u>  convert between different units of metric measure [e.g. km and m; cm and m; cm and mm; g and kg; l and ml]  understand and use approximate equivalences between metric units and common imperial units such as ins, lbs and pts</p> <p><u>Statistics</u>  solve comparison, sum and difference problems using information presented in a line graph  complete, read and interpret information in tables, including timetables</p> <p><u>Position and direction</u>  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>

<b>Year</b>	<b>National curriculum objectives</b>
<b>Autumn 1</b>	<p><u>Place value including decimals</u>  read, write, order and compare numbers up to 10,000,000 and determine the value of each digit  use negative numbers in context, and calculate intervals across 0  round any whole number to a required degree of accuracy  solve number and practical problems that involve all of the above  identify the value of each digit in numbers given to 3 decimal places</p> <p><u>Addition and subtraction including decimals</u>  perform mental calculations, including with mixed operations and large numbers  use their knowledge of the order of operations to carry out calculations involving the 4 operations  use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy  solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why</p>

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<p style="writing-mode: vertical-rl; transform: rotate(180deg);"><b>Autumn 2</b></p>	<p><u>Multiplication and division including decimals</u>          identify common factors, common multiples and prime numbers          perform mental calculations, including with mixed operations and large numbers          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          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          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          multiply one-digit numbers with up to 2 decimal places by whole numbers          use written division methods in cases where the answer has up to 2 decimal places</p> <p><u>Convert units</u>          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          convert between miles and kilometres</p>
<p style="writing-mode: vertical-rl; transform: rotate(180deg);"><b>Spring 1</b></p>	<p><u>Area, perimeter and volume</u>          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 (cm<sup>3</sup>) and cubic metres (m<sup>3</sup>), and extending to other units [for example, mm<sup>3</sup> and km<sup>3</sup> ]</p> <p><u>Fractions</u>          use common factors to simplify fractions; use common multiples to express fractions in the same denomination          compare and order fractions, including fractions &gt;1          add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions</p>
<p style="writing-mode: vertical-rl; transform: rotate(180deg);"><b>Spring 2</b></p>	<p><u>FDP</u>          multiply simple pairs of proper fractions, writing the answer in its simplest form [for example, <math>\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}</math>]          divide proper fractions by whole numbers [for example, <math>1/3 \div 2 = 1/6</math>]          associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, 3/8]          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>

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<b>Summer 1</b>	<p><u>Ratio</u>  solve problems involving the relative sizes of 2 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> <p><u>Shape</u>  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> <p><u>Algebra</u>  use simple formulae  generate and describe linear number sequences  express missing number problems algebraically  find pairs of numbers that satisfy an equation with 2 unknowns  enumerate possibilities of combinations of 2 variables</p>
<b>Summer 2</b>	<p><u>Algebra</u>  use simple formulae  generate and describe linear number sequences  express missing number problems algebraically  find pairs of numbers that satisfy an equation with 2 unknowns  enumerate possibilities of combinations of 2 variables</p> <p><u>Statistics</u>  interpret and construct pie charts and line graphs and use these to solve problems  calculate and interpret the mean as an average</p> <p><u>Position and direction</u>  describe positions on the full coordinate grid (all 4 quadrants)  draw and translate simple shapes on the coordinate plane, and reflect them in the axes</p>