

Year 6

Topic Area	Autumn	Spring	Summer
Number and place value	<ul style="list-style-type: none"> To read and write numbers up to 10 000 000. To determine the place value of each digit in numbers up to 10 000 000. To identify the value of each digit in numbers given to three decimal places. To order and compare numbers up to 10 000 000. Round any whole number to a required degree of accuracy. To count forwards and backwards in steps of powers of 10 for any given number up to 1 000 000. To identify common factors, common multiples and prime numbers. To recognise and use squared numbers and cubed numbers and the notation for squared and cubed. 	<ul style="list-style-type: none"> To count forwards and backwards in steps of powers of 10 for any given number up to 1 000 000. To identify common factors, common multiples and prime numbers. To recognise and use squared numbers and cubed numbers and the notation for squared and cubed. To solve problems involving place value, ordering and comparing numbers up to 10, 000 000. use negative numbers in context, and calculate intervals across zero To round any whole number to a required degree of accuracy. 	<ul style="list-style-type: none"> To determine the value of digits up to 10 000 000. To order and compare numbers to at least 10 000 000. To continue number sequences. Or revise other areas taught so far this year that children may be weaker on.
Addition and Subtraction	<ul style="list-style-type: none"> Perform mental calculations, including with mixed operations and large numbers (decimals for addition and subtraction). To add decimals in the context of measures. To subtract decimals in the context of measures. 	<ul style="list-style-type: none"> To add decimals in the context of money. To subtract decimals in the context of money. To solve addition and subtraction multi-step problems, deciding which operations to use and why. To solve problems which require answers to be rounded to specified degrees of accuracy. 	<ul style="list-style-type: none"> To identify common factors, common multiples and prime numbers. To perform mental calculations, including with mixed operations and large numbers. To use negative numbers in context and calculate across intervals of zero.
Multiplication and division	<ul style="list-style-type: none"> To multiply and divide whole numbers and decimals to three decimal places by 10, 100 and 1000, giving answers to three decimal places. To use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy. To solve problems which require answers to be rounded to a certain degree of accuracy. 	<ul style="list-style-type: none"> To multiply multi-digit numbers up to 4-digit by a two-digit whole number using the formal written method of long multiplication. To 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. 	<ul style="list-style-type: none"> To divide numbers up to 4 digits by a one digit number using the formal written method of long division. To interpret remainders after division. To represent remainders in different ways. To round remainders up or down depending on the context. To 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.

Fractions including decimals and ratio and proportion	<ul style="list-style-type: none"> To compare and order fractions including fractions < 1. To associate a fraction with division and calculate decimal fraction equivalent. 	<ul style="list-style-type: none"> To recall and use equivalences between simple fractions, decimals and percentages, including in different contexts. To solve problems involving the calculation of percentages (for example, of measures and such as 15% of 360) and the use of percentages for comparison. 	<ul style="list-style-type: none"> To add and subtract fractions with different denominators and mixed numbers using the concept of equivalent fractions. To multiply simple pairs of proper fractions. To divide proper fractions by whole numbers ($1/3 \div 2 = 1/6$). To compare and order fractions, including fractions <1. To add and subtract fractions with different denominators and mixed numbers using the concept of equivalent fractions.
Measurement	<ul style="list-style-type: none"> To read, write and convert units of time from a smaller unit of measure to a larger unit, and vice versa. To convert between units of time. Problem solving investigations. To convert measures of decimals up to three decimal places by multiplying and dividing by 10, 100 and 1000. To solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate. To convert between miles and kilometres. To solve addition and subtraction two-step problems in contexts (measures of length and height), deciding which operations and methods to use and why. 	<ul style="list-style-type: none"> To use, read, write and convert between standard units, converting measurements of mass from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places. To solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate (context of mass). To multiply one-digit numbers with up to two decimal places by whole numbers (in the contexts of mass and number). To solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts. To solve problems involving unequal sharing and grouping using knowledge of fractions and multiples. To use written division methods in cases where the answer has up to two decimal places. 	<ul style="list-style-type: none"> To calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres and cubic metres, and extending to other units. To convert between standard units, converting from the smaller unit of measure to the larger unit and vice versa, using decimal notation to up to three decimal places.

<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Geometry: properties of shapes and position and direction</p>	<ul style="list-style-type: none"> • Compare and classify geometric shapes based on their properties and sizes. • To recognise that shapes with the same areas can have different perimeters and vice versa. • To recognise when it is possible to use formulae for area and volume of shapes. To calculate the area of parallelograms and triangles. 	<ul style="list-style-type: none"> • To describe the positions on the full coordinate grid (all four quadrants). • To rotate 2D shape on a coordinate grid. • To recognise angles where they meet at a point are on a straight line, or are vertically opposite. • To solve problems involving angle. • To solve problems involving similar shapes where the scale factor is known or can be found. 	<ul style="list-style-type: none"> • To recognise when it is possible to use formulae for the volume of shapes. • To describe the positions on the full coordinate grid (all four quadrants). • To draw and translate simple shapes on the coordinate plane, and reflect them in the axes.
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Statistics</p>	<ul style="list-style-type: none"> • To interpret and construct pie charts and line graphs to solve problems. • To calculate and interpret the mean as an average. 	<ul style="list-style-type: none"> • To calculate and interpret the mean as an average. • To calculate and interpret the mean and average from a frequency table. 	<ul style="list-style-type: none"> • Be able to plot a line graph to solve conversion problem, given information in words. Be able to describe the importance of where it crosses on the y axis and how steep a graph is. • To use line graphs to solve problems (involving conversion).
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Algebra</p>	<ul style="list-style-type: none"> • To solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate. • To use simple formulae. • To express missing number problems algebraically. 	<ul style="list-style-type: none"> • To generate and describe linear number sequences. • To draw graphs relating two variables, arising from their own enquiry and in other subjects. 	<ul style="list-style-type: none"> • To find pairs of numbers that satisfies an equation with two unknowns. • To enumerate possibilities of combinations of two variables.