	Mathematics Curriculum – Year 6 Autumn			
Unit:	**Number: Place Value**	**Number- addition subtraction, multiplication + division**	**Number: Fractions**	**Geometry: Position and direction**
Term:	**Autumn 1: 2 Weeks**	**Autumn 1: 4 Weeks**	**Autumn 2: 6 Weeks**	
What We Will Learn	Pupils will focus on numbers up to 100,000. They will practice ordering whole numbers up to ten million using number presented in different ways.	Pupils will learn how to build upon prior knowledge of column addition. They will look at numbers with more than four digits they will use their place knowledge to line up numbers accurately.	Pupils will explore fractions in different representations. They will further explore and recap the rules of fractions, combine the four operations when calculating with fractions. Pupils explore equivalent fractions using models and concrete representations. Pupils then apply the abstract method to find equivalent fractions.	
What We Will Do	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.	Solve addition and subtraction multi step problems in contexts, deciding which operations and methods to use and why. Multiply multi-digit number up to 4 digits by a 2 digit number using the formal written method of long multiplication. Divide numbers up to 4 digits by a 2 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 2 digit number using the formal written method of short division, interpreting remainders according to 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 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.	Use common factors to simplify fractions; use common multiples to express fractions in the same denomination. Compare and order fractions, including fractions > 1 Generate and describe linear number sequences (with fractions) Add and subtract fractions with different denominations and mixed numbers, using the concept of equivalent fractions. Multiply simple pairs of proper fractions, writing the answer in its simplest form [for example x =] Divide proper fractions by whole numbers [for example ÷ 2 =] Associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example] Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.	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
Skills Learned	Pupils build on their prior knowledge of rounding to be able to identify the two numbers the numbers they are rounding sits between.	Pupils will learn how to solve multi step problems in addition, subtraction, multiplication and division.	Pupils will be able to transfer their knowledge of all four operations to be able to calculate equations with and without brackets.	

Mathematics Curriculum – Year 6 Spring						
Unit:	**Number: Decimals**	**Number: Percentages**	**Number: Algebra**	**Measurement: converting units**	**Measurement: Perimeter area and volume**	**Number: Ratio**
Term:	**Spring 1: 2 Weeks**	**Spring 1:1 Week**	**Spring 1: 3 Weeks**	**Spring 2: 2 Weeks**	**Spring 2: 2 Weeks**	**Spring 2: 1 Week**
What We Will Learn	Pupils use concrete resources to investigate exchanging between columns e.g. 3 tenths is the same as 30 hundredths. They will multiply numbers with up to three decimal places by 10, 100 and 1,000	Pupils will recap converting some common fractions from their work in Year 5 They learn to convert fractions to equivalent fractions where the denominator is 100 in order to find the percentage equivalent.	Pupils will be taught one- step functions on the earlier step of forming expressions, they will now use algebraic notation to form one-step equations. They will understand the difference between an expression like x + 5, which can take different values depending on the value of x, and an equation like x + 5 = 11.2 where x is a specific unknown value. They will use concrete materials e.g. cubes, can be used to represent the unknown values with counters being used to represent known numbers.	Pupils will read, write and recognise all metric measures for length, mass and capacity. They will be reminded the difference between capacity (the amount an object can contain) and volume (the amount actually in an object).	Pupils will learn how to build on their knowledge of area and perimeter to explore the area of a triangles and parallelograms. Pupils will find and draw rectilinear shapes that have the same area. They will use their knowledge of factors to draw rectangles with different areas. They will make connections between side lengths and factors.	Pupils will learn that a ratio shows the relationship between two values and can describe how one is related to another. They will start by making simple comparisons between two different quantities. For example, they may compare the number of boys to girls in the class and write statements such as, “For every one girl, there are two boys”.
What We Will Do	Identify the value of each digit in numbers given to three decimal places and multiply numbers by 10, 100 and 1000 giving answers up to 3dp. Multiply one digit numbers with up to 2dp 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.	Solve problems involving the calculation of percentages [for example, of measures and such as 15% of 360] and the use of percentages for comparison. Recall and use equivalence s between simple FDP including in different contexts	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.	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 3dp. 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 cm3 , m3 and extending to other units (mm3 , km3)	Shapes – same area Area and perimeter Area of a triangle (1) Area of a triangle (2) Area of a triangle (3) Area of parallelogram What is volume? Volume – counting cubes Volume of a cuboid	Use ratio language Ratio and fractions Introducing the ratio symbol Calculating ratio Using scale factors Calculating scale factors Ratio and proportion problems
Skills Learned	Pupils will develop and transfer their knowledge of multiplying by 10, 100 and 1,000, to investigate multiplying by decimals.	Pupils will further develop their skills of converting between fractions, decimals and percentages to enable them to order and compare them.	Pupils will need develop their understanding that the same expression can have different values depending on what has been substituted.	Pupils will develop their estimation skills in context and decide when it is appropriate to use different metric units of measure	Pupils will use their knowledge of factors to draw rectangles with different areas. They will make connections between side lengths and factors.	Pupils build on their knowledge of ratios and begin to use a range of skills to be able to calculate ratios.

	Mathematics Curriculum – Year 6 Summer		
Unit:	**Statistics**	**Geometry - Properties of Shapes**	**Consolidation**
Term:	**Summer 1: 2 Weeks**	**Summer 1: 3 Weeks**	**Summer 2**
What We Will Learn	Pupils will use their knowledge of scales to read information accurately. They will be exposed to graphs that show more than one set of data.	Pupils will recap how to line up the protractor accurately, and identify which side of the scale to read. They link this to their understanding of angle sizes. Children read the measurement and practise measuring angles given in different orientations.	
What We Will Do	Read and interpret line graphs Draw line graphs Use line graphs to solve problems. They will illustrate and name parts of circles, using the words radius, diameter, centre and circumference confidently. They will build on their understanding of circles to start interpreting and read pie charts. Pupils will apply their addition and division skills to calculate the mean average in a variety of contexts.	Draw 2D shapes using given dimensions and angles. Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals and regular polygons. Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles	Themed Projects - consolidation
Skills Learned	Pupils will build on their experience of reading and interpreting data in a range of graphs graphs.	Pupils will learn and identify name and describe the 4 different types of angles? (right angle, obtuse, acute, reflex	