Objectives for the children to achieve by the end of year 6.

Number Place Value	
I can round a whole number as requested - for example to the nearest 10 or 1000 or 100000.	I can work with numbers up to 10 000 000 and know what each digit represents.
I understand and use negative numbers in my work, for example - working out how much is between -7 and +8.	I can solve number and practical problems that involve large numbers, rounding and negative numbers.
Addition, Subtraction, Multiplication Division	
I can multiply 4 digit numbers by a two-digit number (for example 4307 x 34) using the written method of long multiplication.	I can multiply, divide, add and subtract large numbers in my head.
I can choose to divide 4 digit numbers by a two-digit number using the written method of short division if this is possible.	I identify common factors, common multiples and prime numbers.
I can solve addition and subtraction multi-step problems, deciding where to add or subtract	I know that addition, subtraction, multiplication and division should be carried out in a specific order when looking at problems.
I always estimate my answer before I begin calculating - this helps me to check at the end to make sure I am correct	I can solve problems involving addition, subtraction, multiplication and division.
I can divide 4 digit numbers by a two-digit number using the written method of long division - and tell you the remainder.	
Fractions	
I use written division methods in cases where the answer has up to two decimal places.	I can multiply fractions such as 1/4 × 1/2 = 1/8.
I can solve problems which include rounding to a required accuracy such as the nearest 10, 100 or 10000.	I know how to divide proper fractions by whole numbers [for example, 1/3 ÷ 2 = 1/6].
I know the decimal value, percentage and fraction of a range of values - such as 0.5, 50 per cent and 1/2.	I can change a fraction into a decimal - for example, I can change 3/8 to 0.375 by dividing 1 by 8 and multiplying by 3.
I can use common factors to simplify fractions and use common multiples to express fractions in the same denomination.	I can multiply and divide numbers by 10, 100 and 1000 and know what each digit means up to three decimal places.
I can compare and order fractions, including fractions greater than 1.	I can multiply numbers such as 1.45 by a one digit number - for example 1.45 x 7.
I add and subtract fractions with different denominators and mixed numbers.	
Ratio	
I can find the percentage of an amount - such as finding 15 per cent of 360.	I can solve problems about relative sizes (ratio).
I can solve problems about unequal sharing - such as 'I need four eggs and for every egg I need three spoonful's of flour. How much flour do I need?'.	I can solve similar shape problems.

Algebra	
I know how to use simple formulae such as n - 10 = 2.	I can find pairs of numbers that satisfy an equation with two unknowns.
I can create a sequence of numbers that follow a rule.	I can list possible answers to missing numbers such as listing the possible answers of a and b in a + 6 = b - 10.
I can use a letter (such as n or x) to show a missing number - such as 10 - x = 5.	
Measurement	
I can convert measurements of length, weight, volume and time up to three decimal places in length (for example 0.345kg = 345g).	I know that even though shapes may have the same area, the perimeter may be different - or a shapes with the same perimeter may have a different areas.
I solve problems about different units of measures with three decimal places.	I can use a formulae for area and volume of shapes.
I can convert between miles and kilometres.	I can calculate the area of parallelograms and triangles.
I can work with the volume of cubes and cuboids using cubic centimetres (cm3) and cubic metres (m3), and other units too such as mm3 and km3.	
Shape	
I can classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons.	I can recognise, describe and build 3-D shapes, including making nets.
I accurately draw 2-D shapes using given dimensions and angles.	I know the parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius.
I can work with angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles	
Position	
I can draw and translate shapes using coordinates or reflect a shape on the grid.	I can use the four quadrants in a coordinate grid.
Statistics	
I can use and construct pie charts and line graphs and use these to solve problems.	I can calculate the mean as an average.