Year 6 Maths Objectives

1. Number (Year 6)	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name
6.1.1 Read, write, order and compare numbers up to 10,000,000 and determine the value of each digit.																															
6.1.2 Round any whole number to the required degree of accuracy																															
6.1.3 Use negative numbers in context and calculate intervals across zero																															
6.1.4 Solve number and practical problems that involve rounding, negative numbers and comparing numbers up to 10 000 000																															
6.1.5 Solve addidition and subtraction multi step problems in contexts, deciding which operations and methods to use and why																															
6.1.6 Multiply multi-digit numbers up to 4-digits by a 2-digit whole number using the formal written method of long multiplication.																															
6.1.7 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.																															
6.1.8 Divide numbers up to 4-digits by a 2-digit number using the formal written method of short division, where appropriate, interpreting remainders according to the context.																															
6.1.9 Perform mental calculations, including mixed numbers and large numbers in multiplication and division																															
6.1.10 Identify common factors, common multiples and prime numbers.																															
6.1.11 Use their knowledge of the order of operations to carry out calculations involving the four operations																															
6.1.12 Consolidate all learning in relation to the four operations using formal efficient methods at all times																															
6.1.13 Use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy.																															
6.1.14 Use common factors to simplify fractions; use common multiples to express fractions in the same denomination.																															
6.1.15 Compare and order fractions, including fractions >1.																															
6.1.16 Generate and describe linear number sequences.																															
6.1.17 Add fractions with different denominators and mixed numbers, using the concept of equivalent fractions.																															
6.1.18 Subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions.																															
6.1.19 Divide proper fractions by whole numbers.																															
6.1.20 Associate a fraction with division and calculate decimal fraction equivalents (for example 0.375) for a simple fraction (for example 3/8)																															
6.1.21 Recall and use equivalences between simple fractions, decimals and percentages, including different contexts																															
6.1.22 Identify the value of each digit in numbers given to 3 decimal places and mulriply numbers by 10, 100 and 1000 giving answers up to 3 decimal places.																															
6.1.23 Multiply one digit numbers with up to 2 decial places by whole numbers																															
6.1.24 Use written division methods in cases where the answer has up to 2 decimal places																															

6.1.25 Solve problems which require answers to be rounded to specifies degrees of accuracy																															
6.1.26 Solve problems involving the calculation of percentages of whole numbers or measures such as 15% of 360 and the use of percentages for comparison.																															
6.1.27 Use simple formulae to solve problems																															
6.1.28 Express missing number problems algebraically.																															
6.1.29 Find pairs of numbers that satisfy an equation with two unknowns																															
6.1.30 Enumerate possibilities of combinations of two variables																															
6.1.31 Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts.																															
6.1.32 Solve problems involving similar shapes where the scale factor is unknown or can be found																															
6.1.33 Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples																															
6.1.34 Perform mental calculations, including with mixed operations and large numbers using efficient strategies such as manipulating expressions using commutative and distributive properties to simplify the calculation																															
6.1.35 Multiply simple pairs of proper fractions, writing the answer in the simplest form.																															
6.1.36 To deomonstrate an understanding of place value, including large numbers and decimals																															
2. Measure	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name
6.2.1 Solve problems involving the calculation and conversion of units of measure, using decimal notation to three decimal places where appropriate.																															
6.2.2 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 three decimal places.																															
6.2.3 Convert between miles & km.																															
6.2.4 Recognise that shapes with the same areas can have different perimeters and vice versa.																															
6.2.5 Recognise when it is possible to use the formulae for area & volume of shapes.																															
6.2.6 Calculate the area of parallelograms and triangles.																															
6.2.7 Calculate, estimate and compare volume of cubes and cuboids using standard units, including cm^3 and m^3, and extending to other units such as mm^3 and km^3.																															
6.2.8 Recognise when it is possible to use formulae for area & volume of shapes.																															
6.2.9 To calculate with measure																															
3. Geometry, position and direction	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name
6.3.1 Describe positions on the full coordinate grid, all four quadrants																															
6.3.2 Draw and translate simple shapes on the coordinate plane and reflect them in the axes																															

6.3.3 Draw 2D shapes (triangles, quadrilaterals, pentagons, hexagons) using given dimensions and angles.																														
6.3.4 Compare and classify geometric shapes based on their properties and sizes																														
6.3.5 To find unknown angles in any triangles, quadrilaterals, and regular polygons.																														
6.3.6 Recognise, describe and build simple 3D shapes, including making nets.																														
6.3.7 Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.																														
4. Statistics	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name
6.4.1 Interpret and construct: Pie charts, line graphs and use these to solve problems																														
6.4.2 Calculate and interpret the mean as an average (Mean,mode and median, range)																														
6.4.3 Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius.																														
5. Greater Depth Statements	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name	name
6.5.1 Compare, order and convert between fractions, decimals and percentages in contexts related to science, history or geography learning																														
6.5.2 Move beyond squared and cubed numbers to calculate problems such as X x 10n where n is positive																														
6.5.3 Use =, ≠, <, >, ≤, ≥ correctly																														
6.5.4 Multiply all integers, (using efficient written methods) including mixed numbers and negative numbers																														
6.5.5. Recognise an arithmetic progression, and find the nth term																														
6.5.6 Use formula for measuring area of shape, such as cuboid and triangle to work out area of irregular shape in the school environment																														
6.5.7 Use four operations with mass, length, time, money and other measures, including with decimal quantities																														
6.5.8 Create a scaled model of a historical or geographical structure showing an acceptable degree of accuracy using known measurements																														
6.5.9 Calculate costs and time involved to visit a destination in another part of the world relating to on-going learning in history or geography																														
6.5.10 Collect own data on personal project and present information in formats of their choosing, charts, graphs and tables and answer specific questions related to their research																														