Year 6 mid and short term - year overview

Year 6	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	**Number: Place Value** **...all children should be able to:** • read and write numbers up to 1 000 000; • identify the value of each digit in a number up to 1 000 000; • identify the value of a digit in numbers with two decimal places; • order numbers up to 1 000 000; • compare numbers using the greater-than and less-than symbols; • round numbers to a required degree of accuracy using a number line; • calculate intervals across zero using a number line; • compare and order negative numbers; • solve simple problems involving negative numbers in context; • solve simple reasoning problems **most children will be able to:** • read and write numbers up to 10 000 000; • identify the value of each digit in a number up to 10 000 000; • identify the value of a digit in numbers with three decimal places; • order numbers up to 10 000 000; • compare numbers by working out calculations; • round numbers to a required degree of accuracy; • calculate intervals across zero; • solve problems involving negative numbers in context; • solve reasoning problems using **some children will be able to:** • solve calculations to read and write numbers up to 10 000 000; • compare and order numbers, explaining the difference between numbers; • solve trickier reasoning problems involving place value, rounding and negative numbers.		**Number: Addition, Subtraction, Multiplication and Division** **...all children should be able to**: • multiply numbers by a one-digit number using long multiplication; • solve reasoning questions using the formal method of long multiplication; • divide numbers by a two-digit number using long division; • solve one-step division problems, rounding the answer depending on the context; • divide four-digit numbers by a two-digit number using short division without remainders; • perform one-step mental calculations with increasingly large numbers; • solve reasoning questions involving mental addition, subtraction, multiplication and division; • add and subtract whole numbers using a formal written method; • correctly use the order of operations to carry out calculations; • explore the order of operations using brackets; • find missing numbers using the inverse; • select the correct operation/s to use and solve a problem, checking the answer using estimation; • solve one-step problems and check their answer using estimation; • round numbers to a specified degree of accuracy; • use rounding to check answers to problems; • sort one-step problems in a sorting diagram; • solve two-step problems involving addition and subtraction. **...some children will be able to**: • solve missing digit problems involving long multiplication; • divide using a formal written method and use rounding depending on the context in multi-step calculations; • solve missing digit problems involving long division; • create comparison sentences involving long division calculations; • create their own word problems involving addition, subtraction, multiplication and division; • solve multi-step problems and check their answer using estimation; • sort and solve one, two and multi-step problems in a Venn diagram; • solve complex multi-step problems.			**Fractions** **...all children should be able to:** • compare and order fractions using a fraction wall to support them; • add and subtract fractions with unlike denominators using resources to support them; • multiply proper fractions or mixed numbers by whole numbers using resources to support; • divide a fraction by a whole number that is a divisor of the numerator; •understand per cent and give percentage and decimal equivalents for half, quarters, fifths, tenths, twentieths, twenty-fifths, fiftieths and hundredths fractions. **..most children will be able to**: • compare and order fractions using the method of finding a common denominator; • add and subtract fractions with unlike denominators using the method of finding a common denominator; • multiply pairs of proper fractions using resources to support; • divide a fraction by any whole number; • use fraction, percentage and decimal equivalents to solve problems. ... **some children will be able to**: • compare and order fractions using the method of finding a common numerator; • subtract fractions with unlike denominators using regrouping; • divide a proper fraction by another proper fraction; • use written methods of division to calculate decimal equivalents of fractions			**Geometry: Position and Direction** **all children should be able to**: • describe coordinate positions in the first quadrant; • translate shapes on a 2D grid using the vocabulary left, right, up and down; • reflect and draw shapes over mirror lines. **...some children will be able to:** • describe coordinate positions in all four quadrants, including using decimal half coordinates; • translate shapes on coordinate axes using coordinate translation, and identify missing vertices; • reflect and draw shapes on coordinate axes, and identify missing vertices. **most children will be able to:** • describe coordinate positions in all four quadrants; • translate shapes on coordinate axes using coordinate translation; • reflect and draw shapes on coordinate axes.	1 week to complete termly assessments

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Spring	**Number: Decimals** • round a number with three decimal places to a specified degree of accuracy using a number line to support; • round a number with three decimal places to a specified degree of accuracy;		**Number: Percentages** **...all children should be able to:** • calculate 5%, 10% and multiples of 10% of quantities **...most children will be able to:** • calculate any percentage of a numbers including money up to 10 000; • convert percentages to numbers in a pie chart. **...some children will be able to:** • calculate any percentage of a numbers including money over 1 000 000.		**Number: Algebra**		**Measurement: Converting Unit** **Measurement: Perimeter, Area and Volume** **...all children should be able to**: • convert from larger to smaller metric units of length, mass and volume, up to two decimal places; • convert from smaller to larger metric units of length, mass and volume, up to two decimal places; • convert units of time – whole and half units; • solve simple problems involving conversion and calculation of metric units of length, mass and volume; • calculate the difference between negative and positive temperatures within a range of 15˚; • convert between miles and kilometres (whole units); • use conversion graphs to convert between miles and kilometres (multiple of five units);			**Number: Ratio** **...all children should be able to:** • enlarge a simple shape by a given whole number scale factor; • solve simple fraction problems either with fractions in the problem or using fractions to solve the problem, where the numerators of fractions are 1; • write a ratio statement to compare two values; • solve simple problems involving calculating ratio; • solve simple problems involving calculating proportion; **...most children will be able to:** • enlarge a simple shape by a given whole and fractional number scale factor; • calculate the length of missing sides after enlargement on simple shapes; • enlarge a cuboid to a given scale factor;	1 week to complete termly assessments

				• find all possible rectangles and squares with a given area by counting squares, using cm2; • find all possible rectangles and squares with a given perimeter, using cm; • use a formula to calculate the area of triangles up to 75cm2; • use a formula to calculate the area of parallelograms up to 150cm2; • identify shapes which have enough information to use a formula to calculate the area of squares, rectangles and composite shapes; • calculate the volume of cubes and cuboids, using measurements of cubic centimetres and cubic metres (whole units); • estimate the volume of cuboids; • identify shapes and nets of shapes which have enough information to use a formula to calculate the volume. ... **most children will be able to:** • convert from larger to smaller metric units of length, mass and volume, up to three decimal places; • convert from smaller to larger metric units of length, mass and volume, up to three decimal places; • convert units of time – whole, half, quarter and three-quarter units; • solve reasoning style problems involving conversion and calculation of metric units of length, mass and volume; • calculate the difference between negative and positive temperatures within a range of 40˚; • create and use conversion graphs to convert between miles and kilometres (multiples of five units); • find all possible rectangles and squares with a given area using mm2; • find all possible rectangles and squares with a given perimeter, using cm and mm; • use a formula to calculate the area of triangles up to 200cm2; • use a formula to calculate the area of parallelograms up to 600cm2; • subdivide two composite rectilinear shapes to calculate area, some with unknown side measurements; • calculate the volume of a composite shape made up of two cuboids; • find the measurement of an unknown dimension of a cuboid, given the surface area of one face and the volume. .. **.some children will be able to:**	• solve fraction problems either with fractions in the problem or using fractions to solve the problem, where there are several steps required to answer the problem; • solve two-step problems involving calculating ratio; • solve two-step problems involving calculating proportion; • write a ratio in its simplest form; • recognise and write equivalent ratios; **...some children will be able to:** • calculate the length of missing sides after enlargement on simple and composite shapes; • calculate the surface area of an enlarged cuboid; • solve fraction problems either with fractions in the problem or using fractions to solve the problem, using a higher level of reasoning to answer the problem; • solve multi-step problems involving calculating ratio; • solve multi-step problems involving calculating proportion; • compare sets of data on two pie charts;	

						• solve more complex problems involving conversion and calculation of metric units of length, mass and volume; • calculate the difference between negative and positive temperatures within a range of 60˚; • create and use conversion graphs to convert between miles and kilometres (multiples of one units); • find all possible rectangles and squares with a given perimeter, using m and mm; • use a formula to calculate the area of triangles over 200cm2, including half units; • use a formula to calculate the area of parallelograms up to 3000cm2, including half units; • calculate the volume of cubes and cuboids, using measurements of cubic centimetres and cubic metres (up to one decimal place).			

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Summer	**Geometry: Properties of Shapes** **...all children should be able to:** • use a ruler to draw a 2D shape to a given measurement; • construct a 3D shape from a given shape net; • compare and classify geometric shapes; • recognise different types of angle; • draw circle using a pair of compasses. **...some children will be able to:** • confidently use a protractor to accurately draw 2D shapes to within 1° of the given dimension; • draw their own net of more complex 3D shapes including construction tabs; • use more complex reasoning to work out missing angles in 2D shapes and around a point or on a straight line; • understand the relationship between radius and diameter using algebraic representation. **...most children will be able to:** • draw 2D shapes to given dimensions of length and angle; • draw their own net of a simple 3D shape including construction tabs; • measure and calculate unknown angles in 2D shapes and around a point or on a straight line; • label the parts of a circle including radius and diameter.		**Problem Solving**			**Statistics**		**Investigations**				1 week to complete termly assessments