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| **Term and Approximate Week** | **Year 6 Unit and National Curriculum Objectives**  |
| **Autumn 1** |  |
| **Week 1, 2**  | **Place Value*** 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
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| **Week 3,4,5,6 and 7** | **Addition, Subtraction, Multiplication and Division*** perform mental calculations, including with mixed operations and large numbers
* use their knowledge of the order of operations to carry out calculations involving the four operations
* solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why
* solve problems involving addition, subtraction, multiplication and division
* use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy
* solve problems which require answers to be rounded to specified degrees of accuracy (*Fractions)*
* solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate *(Measurement)*
* multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication
* multiply one-digit numbers with up to two decimal places by whole numbers
* 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
* 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
* use written division methods in cases where the answer has up to two decimal places calculate and interpret the mean as an average
* identify common factors, common multiples and prime numbers
* perform mental calculations, including with mixed operations and large numbers
* express missing number problems algebraically
* find pairs of numbers that satisfy an equation with two unknowns
* solve problems involving addition, subtraction, multiplication and division
* use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy
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| **Autumn 2** |  |
| **Week 1.2.3 and 4** | **Fractions*** use common factors to simplify fractions; use common multiples to express fractions in the same denomination
* compare and order fractions, including fractions > 1
* add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions
* multiply simple pairs of proper fractions, writing the answer in its simplest form [for example, $\frac{1}{4}$ × $\frac{1}{2}$ = $\frac{1}{8}$]
* divide proper fractions by whole numbers [for example, $\frac{1}{3}$ ÷ 2 = $\frac{1}{6}$ ]
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| **Week 5** | **Measurement Converting Units*** 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 three decimal places
* convert between miles and kilometres
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| **Week 6 and 7**  | **Ratio and Proportion** * solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts
* solve problems involving similar shapes where the scale factor is known or can be found
* solve problems involving unequal sharing and grouping using knowledge of fractions and multiples
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| **Spring 1** |  |
| **Week 1 and 2** | **Algebra*** express missing number problems algebraically
* use simple formulae expressed in words
* generate and describe linear number sequences
* find pairs of numbers that satisfy an equation with two unknowns
* enumerate possibilities of combinations of two variables
* convert between miles and kilometres (*Measurement)*
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| **Week 3 and 4** | **Decimals*** identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places
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| **Week 5 and 6** | **Fractions, Decimals and Percentages*** associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, $\frac{3}{8}$]
* recall and use equivalences between simple fractions and decimals, including in different contexts
* solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison (*Ratio and Proportion)*
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| **Spring 2** |  |
| **Week 1 and 2** | **Area, Perimeter and Volume** * 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 centimetre cubed (cm3) and cubic metres (m3), and extending to other units such as mm3 and km3
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| **Week 3 and 4** | **Statistics*** interpret and construct pie charts and line graphs and use these to solve problems
* calculate and interpret the mean as an average
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| **Week 5 and 6** | **Shape*** draw 2-D shapes using given dimensions and angles
* recognise, describe and build simple 3-D shapes, including making nets
* 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
* illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius
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| **Summer 1** |  |
| **Week 1** | **Shape*** draw 2-D shapes using given dimensions and angles
* recognise, describe and build simple 3-D shapes, including making nets
* 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
* illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius
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| **Week 2** | **Position and Direction*** 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
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| **Week 3,4,5,6 and 7** | **Themed Projects, Consolidation and Problem Solving** |
| **Summer 2** | **Themed Projects, Consolidation and Problem Solving** |