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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 |
| **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 |
| **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, × = ] * divide proper fractions by whole numbers [for example, ÷ 2 = ] |
| **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 |
| **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 |
| **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)* |
| **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 |
| **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, ] * 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)* |
| **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 |
| **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 |
| **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 |
| **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 |
| **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 |
| **Week 3,4,5,6 and 7** | **Themed Projects, Consolidation and Problem Solving** |
| **Summer 2** | **Themed Projects, Consolidation and Problem Solving** |