**Maths Coverage**

**Year 6 2022-2023**

AUTUMN Term

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|  | **Term 1** | | | | | | | | | **Term 2** | | | | | | | | |
|  | **Week 1** | **Week 2** | | **Week 3** | **Week 4** | **Week 5** | **Week 6** | **Week 7** | **Week 1** | **Week 2** | **Week 3** | **Week 4** | **Week 5** | | | **Week 6** | | **Week 7** |
| **NC Focus** | **Number: Place value** | | **Number: Addition, Subtraction, Multiplication and Division** | | | | | | | **Fractions A** | | **Fractions B** | | | **Converting Units** | | | |
| **NC Objectives** | * 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 the above. | | * Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why. * Multiply multi-digit number up to 4-digits by a 2-digit number using the formal written method of long multiplication. * 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. * Divide numbers up to 4-digits by a 2-digit number using the formal written method of short division, interpreting remainders according to context. * Perform mental calculations, including with mixed operations and large numbers. * Identify common factors, common multiples and prime numbers. * Use their knowledge of the order of operations to carry out calculations involving the four operations. * Solve problems involving addition, subtraction, multiplication and division. * Use estimation to check answers to calculations and determine in the context of a problem, an appropriate degree of accuracy. | | | | | | | * Use common factors to simplify fractions; use common multiples to express fractions in the same denomination. * Compare and order fractions, including fractions > 1. * Generate and describe linear number sequences (with fractions). * Add and subtract fractions with different denominations and mixed numbers, using the concept of equivalent fractions. | | * Multiply simple pairs of proper fractions, writing the answer in its simplest form [for example ¼ x ½ = 1/8 ] * Divide proper fractions by whole numbers. * Associate a fraction with division and calculate decimal fraction equivalents for a simple fraction. Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts. | | * 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 3dp.   Convert between miles and kilometres   * . | | | | |
| **Ready To Progress Criteria** | * 6NPV–2 Recognise the place value of each digit in numbers up to 10 million, including decimal fractions, and compose and decompose numbers up to 10 million using standard and nonstandard partitioning. * 6NPV–3 Reason about the location of any number up to 10 million, including decimal fractions, in the linear number system, and round numbers, as appropriate, including in contexts. | | * 6NPV–1 Understand the relationship between powers of 10 from 1 hundredth to 10 million, and use this to make a given number 10, 100, 1,000, 1 tenth, 1 hundredth or 1 thousandth times the size (multiply and divide by 10, 100 and 1,000). * 6NPV–4 Divide powers of 10, from 1 hundredth to 10 million, into 2, 4, 5 and 10 equal parts, and read scales/number lines with labelled intervals divided into 2, 4, 5 and 10 equal parts. * 6AS/MD–1 Understand that 2 numbers can be related additively or multiplicatively, and quantify additive and multiplicative relationships (multiplicative relationships restricted to multiplication by a whole number). * 6AS/MD–2 Use a given additive or multiplicative calculation to derive or complete a related calculation, using arithmetic properties, inverse relationships, and place-value understanding. | | | | | | | * 6F–1 Recognise when fractions can be simplified, and use common factors to simplify fractions. * 6F–2 Express fractions in a common denomination and use this to compare fractions that are similar in value. * 6F–3 Compare fractions with different denominators, including fractions greater than 1, using reasoning, and choose between reasoning and common denomination as a comparison strategy. | | * 6F–1 Recognise when fractions can be simplified, and use common factors to simplify fractions. * 6F–2 Express fractions in a common denomination and use this to compare fractions that are similar in value. | | 6NPV-1  Understand the relationship between powers of 10 from 1 hundredth to 10 million, and use this to make a given number 10, 100, 1,000, 1 tenth, 1 hundredth or 1 thousandth times the size (multiply and divide by 10, 100 and 1,000). | | | | |
| **White Rose Small Steps** | Step 1 Numbers to 1,000,000  Step 2 Numbers to 10,000,000  Step 3 Read and write numbers to 10,000,000  Step 4 Powers of 10  Step 5 Number line to 10,000,000  Step 6 Compare and order any integers  Step 7 Round any integer  Step 8 Negative numbers | | Step 1 Add and subtract integers  Step 2 Common factors  Step 3 Common multiples  Step 4 Rules of divisibility  Step 5 Primes to 100  Step 6 Square and cube numbers  Step 7 Multiply up to a 4-digit number by a 2-digit number  Step 8 Solve problems with multiplication  Step 9 Short division  Step 10 Division using factors  Step 11 Introduction to long division  Step 12 Long division with remainders  Step 13 Solve problems with division  Step 14 Solve multi-step problems  Step 15 Order of operations  Step 16 Mental calculations and estimation  Step 17 Reason from known facts | | | | | | | Step 1 Equivalent fractions and simplifying  Step 2 Equivalent fractions on a number line  Step 3 Compare and order (denominator)  Step 4 Compare and order (numerator)  Step 5 Add and subtract simple fractions  Step 6 Add and subtract any two fractions  Step 7 Add mixed numbers  Step 8 Subtract mixed numbers  Step 9 Multi-step problems | | Step 1 Multiply fractions by integers  Step 2 Multiply fractions by fractions  Step 3 Divide a fraction by an integer  Step 4 Divide any fraction by an integer  Step 5 Mixed questions with fractions  Step 6 Fraction of an amount  Step 7 Fraction of an amount – find the whole | | Step 1 Metric measures  Step 2 Convert metric measures  Step 3 Calculate with metric measures  Step 4 Miles and kilometres  Step 5 Imperial measures | | |  | |
| **Yr 5 Revisit**  (potential gaps in learning from previous year) |  | |  | | | | | | |  | |  | |  | | |  | |
| **Consolidation Required**  (based on End of Block Assessments) |  | |  | | | | | | |  | |  | |  | | |  | |

**Maths Coverage**

**Year 6 2022-2023**

SPRING Term

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|  | **Term 3** | | | | | | | **Term 4** | | | | | | | | |
|  | **Week 1**  **(4 days)** | **Week 2** | | | **Week 3** | **Week 4** | **Week 5** | **Week 1** | **Week 2** | **Week 3** | | **Week 4** | **Week 5** | | **Week 6** | |
| **NC Focus** | Ratio | | **Algebra** | | **Decimals** | | **Fractions, Decimals and Percentages** | | **Area Perimeter, Volume** | | **Statistics** | | | | | **Shape** |
| **NC Objectives** | * 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 | | * Use simple formulae * Generate and describe linear number sequences. * Express missing number problems algebraically * Find pairs of numbers that satisfy an equation with two unknowns. * Enumerate possibilities of combinations of two variables. | | * Identify the value of each digit in numbers given to 3 decimal places and multiply numbers by 10, 100 and 1000, giving answers up to 3 decimal places. * Multiply one-digit numbers with up to 2 decimal places by whole numbers. * Use written division methods in cases where the answer has up to 2 decimal places. * Solve problems which require answers to be rounded to specified degrees of accuracy. | | * Solve problems involving the calculation of percentages [for example, of measures and such as 15% of 360] and the use of percentages for comparison. * Recall and use equivalences between simple fractions, decimals and percentages including in different contexts. | | * 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 cm3, m3 and extending to other units (mm3, km3) * . | | * Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius. * Interpret and construct pie charts and line graphs and use these to solve problems. * Calculate the mean as an average | | | | | * Draw 2-D shapes using given dimensions and angles. * 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. |
| **Ready to Progress Criteria** | * 6AS/MD–3 Solve problems involving ratio relationships | * 6AS/MD–4 Solve problems with 2 unknowns. | | * 6NPV–1 Understand the relationship between powers of 10 from 1 hundredth to 10 million, and use this to make a given number 10, 100, 1,000, 1 tenth, 1 hundredth or 1 thousandth times the size (multiply and divide by 10, 100 and 1,000 * 6NPV–2 Recognise the place value of each digit in numbers up to 10 million**, including decimal fractions**, and compose and decompose numbers up to 10 million using standard and nonstandard partitioning. * 6NPV–3 Reason about the location of any number up to 10 million, **including decimal fractions**, in the linear number system, and round numbers, as appropriate, including in contexts. | | |  | | * 6NPV–1 Understand the relationship between powers of 10 from 1 hundredth to 10 million, and use this to make a given number 10, 100, 1,000, 1 tenth, 1 hundredth or 1 thousandth times the size (multiply and divide by 10, 100 and 1,000 * 6NPV–4 Divide powers of 10, from 1 hundredth to 10 million, into 2, 4, 5 and 10 equal parts, and read scales/number lines with labelled intervals divided into 2, 4, 5 and 10 equal parts. | |  | | | | | * . 6G–1 Draw, compose, and decompose shapes according to given properties, including dimensions, angles and area, and solve related problems |
| **White Rose Small Steps** | Step 1 Add or multiply?  Step 2 Use ratio language  Step 3 Introduction to the ratio symbol  Step 4 Ratio and fractions  Step 5 Scale drawing  Step 6 Use scale factors  Step 7 Similar shapes  Step 8 Ratio problems  Step 9 Proportion problems  Step 10 Recipes | Step 1 1-step function machines  Step 2 2-step function machines  Step 3 Form expressions  download  Step 4 Substitution  download  Step 5 Formulae  Step 6 Form equations  Step 7 Solve 1-step equations  Step 8 Solve 2-step equations  Step 9 Find pairs of values  Step 10 Solve problems with two unknowns | | Step 1 Place value within 1  Step 2 Place value – integers and decimals  Step 3 Round decimals  Step 4 Add and subtract decimals  Step 5 Multiply by 10, 100 and 1,000  Step 6 Divide by 10, 100 and 1,000  Step 7 Multiply decimals by integers  Step 8 Divide decimals by integers  Step 9 Multiply and divide decimals in context | | | Step 1 Decimal and fraction equivalents  Step 2 Fractions as division  Step 3 Understand percentages  Step 4 Fractions to percentages  Step 5 Equivalent fractions, decimals and percentages  Step 6 Order fractions, decimals and percentages  Step 7 Percentage of an amount – one step  Step 8 Percentage of an amount – multi-step  Step 9 Percentages – missing values | | Step 1 Shapes - same area  Step 2 Area and perimeter  Step 3 Area of a triangle – counting squares  Step 4 Area of a right-angled triangle  Step 5 Area of any triangle  Step 6 Area of a parallelogram  Step 7 Volume - counting cubes  Step 8 Volume of a cuboid | | Step 1 Line graphs  Step 2 Dual bar charts  Step 3 Read and interpret pie charts  Step 4 Pie charts with percentages  Step 5 Draw pie charts  Step 6 The mean | | | * Measure with a protractor. * Introduce angles. * Calculate angles. * Vertically opposite angles. * Angles in a triangle. * Angles in a triangle – special cases. * Angles in a triangle – missing angles. * Angles in special quadrilaterals. * Angles in regular polygons. * Draw shapes accurately.   Nets of 3D shapes. | | |
| **Yr 5 Revisit**  (potential gaps in learning from previous year) |  | | |  | | |  | |  | |  | | |  | | |
| **Consolidation Required**  (based on End of Block Assessments) |  | | |  | | |  | |  | |  | | |  | | |

**Maths Coverage**

**Year 6 2021-2022**

SUMMER Term

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|  | **Term 5** | | | | | | | | | | | | | **Term 6** | | | | | | | | | | | | |
|  | **Week 1**  **(4 days)** | **Week 2** | | | **Week 3**  **(4 days)** | | **Week 4**  **SATS WEEK** | **Week 5**  **Residential** | | | | **Week 6** | | **Week 1** | | **Week 2** | | | **Week 3** | **Week 4** | **Week 5** | | **Week 6** | | | **Week 7**  **(3 days)** |
| **NC Focus** | **Geometry: Properties of Shapes** | | | **Geometry: Position and Direction** | | |  |  | | | **Consolidation and themed investigations** | | | | | | | | | | | | | | | |
| **NC Objectives** | * Draw 2-D shapes using given dimensions and angles. * 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. | | | | |  |  | |  | |  | | |  | |  | |  | |  |  | |  | | |  |
| **Ready to Progress Criteria** | * 6G–1 Draw, compose, and decompose shapes according to given properties, including dimensions, angles and area, and solve related problems. | |  | | | |  | | |  |  | | |  | |  | |  | |  |  | |  | | |  |
| **White Rose Small Steps** | * Measure with a protractor. * Introduce angles. * Calculate angles. * Vertically opposite angles. * Angles in a triangle. * Angles in a triangle – special cases. * Angles in a triangle – missing angles. * Angles in special quadrilaterals. * Angles in regular polygons. * Draw shapes accurately. * Nets of 3D shapes. | | | * Coordinates in the first quadrant. * Coordinate in four quadrants. * Translations * Reflections. | | |  | | |  |  | |  | |  | |  | | |  | |  | |  |  | |
| **Yr 5 Revisit**  (potential gaps in learning from previous year) |  | | |  | | |  | | |  |  | |  | |  | |  | | |  | |  | |  |  | |
| **Consolidation Required**  (based on End of Block Assessments) |  | | | | | |  | | |  |  | |  | |  | |  | | |  | |  | |  |  | |