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| **Term** | **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** | **Week 8** |
| **Autumn 1 – 6 Weeks & 4 days** | | | | | | | | | | **Autumn 2 – 8 Weeks** | | | | | | | | | |
| **Autumn** | **Number: Place Value**  **2 Weeks**  **Small Steps: 8** | | **Number: Addition, Subtraction, Multiplication & Division**  **5 Weeks**  **Small Steps: 17** | | | | | **Consolidation/**  **Assessment** | | **Number: Addition, Subtraction, Multiplication & Division**  **5 Weeks**  **Small Steps: 17** | | **Number: Fractions A**  **2 Weeks**  **Small Steps: 9** | | | **Number: Fractions B**  **2 Weeks**  **Small Steps: 7** | | **Converting Units**  **1 Week**  **Small Steps:** | **Consolidation/**  **Assessment** | |
| **Spring 1 – 6 Weeks & 3 days** | | | | | | | |  |  | | **Spring 2 – 5 Weeks** | | | | | | |
| **Spring** | **Ratio**  **2 Weeks**  **Small Steps:** | | **Number: Algebra**  **2 Weeks**  **Small Steps:** | | | **Number: Decimals**  **2 Weeks**  **Small Steps:** | **Consolidation/**  **Assessment** | **Number: Decimals**  **2 Weeks**  **Small Steps:** | | **Number: Fractions, decimals and percentages**  **2 weeks**  **Small Steps:** | | | **Measurement: Area, perimeter and volume**  **2 weeks**  **Small Steps:** | |
| **Summer 1 – 5 Weeks** | | | | | | |  |  | **Summer 2 – 5 Weeks & 4 days** | | | | | | |
| **Summer** | **Statistics**  **1 Week**  **Small Steps:** | **Geometry: Properties of Shape**  **3 Weeks**  **Small Steps:** | | | **Geometry: Position & direction**  **1 Week**  **Small Steps:** | |  | | |  | **Themed projects, consolidation and problem solving** | | | | | | |

YEAR 6 – KS2 Mathematics Curriculum Map 2022 -23

**Year 6 National Curriculum Objectives, White Rose Small Steps & NCTEM Spine Teaching Points**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Autumn** | **Number: Place Value – 2 Weeks** | | **Number: Addition, Subtraction, Multiplication & Division – 5 Weeks** | | **Number: Fractions A - 2 Weeks** | | **Number: Fractions B - 2 Weeks** | **Measurement: Converting Units – 1 Week** |
| **National Curriculum 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 0 * solve number and practical problems that involve all of the above | | * multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication * 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 * 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 4 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, 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 * 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, 1/4 × 1/2 = 1/8 ] * divide proper fractions by whole numbers [for example, 1/3 ÷ 2 = 1/6 ] * associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, 3/8 ] * identify the value of each digit in numbers given to 3 decimal places and multiply and divide numbers by 10, 100 and 1,000 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 * recall and use equivalences between simple fractions, decimals and percentages, including in different contexts | | * 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, 1/4 × 1/2 = 1/8 ] * divide proper fractions by whole numbers [for example, 1/3 ÷ 2 = 1/6 ] * associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, 3/8 ] * identify the value of each digit in numbers given to 3 decimal places and multiply and divide numbers by 10, 100 and 1,000 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 * 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 3 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 3 decimal places * convert between miles and kilometres * 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 cubic centimetres  (cm³) and cubic metres (m³), and extending to other units  [for example, mm³ and km³] |
| **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 |
| **Spring** | **Number: Ratio – 2 Weeks** | **Number: Algebra – 2 Weeks** | | | | **Number: Decimals - 2 Weeks** | **Number: Fractions, decimals & percentages – 2 Weeks** | **Measurement: Perimeter, Area and Volume – 2 Weeks** |
| **National Curriculum Objectives** | * solve problems involving the relative sizes of 2 quantities where missing values can be found by using integer multiplication and division facts * solve problems involving the calculation of percentages [for example, of measures and such as 15% of 360] and the use of percentages for comparison * 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 2 unknowns * enumerate possibilities of combinations of 2 variables | | | | * associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, ] * identify the value of each digit in numbers given to 3 decimal places and multiply and divide numbers by 10, 100 and 1,000 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 * recall and use equivalences between simple fractions, decimals and percentages, including in different contexts | * identify the value of each digit in numbers given to 3 decimal places and multiply and divide numbers by 10, 100 and 1,000 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 * 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 3 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 3 decimal places * convert between miles and kilometres * 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 cubic centimetres (cm³) and cubic metres (m³), and extending to other units [for example, mm³ and km³] |
| **White Rose Small steps** | * Released November 2022 | * Released November 2022 | | | | * Released November 2022 | * Released November 2022 | * Released November 2022 |
| **Summer** | **Statistics – 1 Week** | | | **Geometry: Properties of Shape – 3 Weeks** | | | **Geometry: Position & Direction – 1 Week** | **Themed projects, consolidation and problem solving** |
| **National Curriculum Objectives** | * interpret and construct pie charts and line graphs and use these to solve problems * calculate and interpret the mean as an average | | | * solve problems involving the calculation and conversion of units of measure, using decimal notation up to 3 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 3 decimal places * convert between miles and kilometres * 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 cubic centimetres (cm³) and cubic metres (m³), and extending to other units [for example, mm³ and km³] | | | * describe positions on the full coordinate grid (all 4 quadrants) * draw and translate simple shapes on the coordinate plane, and reflect them in the axes |  |
| **White Rose Small steps** | * Released March 2023 | | | * Released March 2023 | | | * Released March 2023 |  |