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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 andcuboids 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
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 |
| **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
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