Curriculum Overview – Maths Small Steps – Year 6

Number of Weeks	Curriculum Area	National Curriculum Objective	Small step objectives
Weeks 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	1. Numbers to 1,000,000 2. Numbers to 10,000,000 3. Read and write numbers to ten million 4. Powers of 10 5. Number line to 10,000,000 6. Compare and order any integers 7. Round any integers
Weeks 3-4	Addition and Subtraction	• Use negative numbers in context, and calculate intervals across zero • Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why	1. Negative numbers 2. Add and subtract integers 3. Common factors 4. Common multiples 5. Rules of divisibility 6. Primes to 100 7. Square and cube numbers
Weeks 5-7	Multiplication and Division	• 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	1. Multiply up to a 4-digit number by a 2-digit number 2. Solve problems with multiplication 3. Short division 4. Division using factors 5. Introduction to long division 6. Long division with remainders 7. Solve problems with division 8. Solve multistep problems 9. Order of operations 10. Mental calculations and estimation 11. Reason from known facts
Weeks 8-11	Fractions	• Use common factors to simplify fractions; use common multiples to express fractions in the same denomination • Compare and order fractions, including fractions >1	1. Equivalent fractions and simplifying 2. Equivalent fractions on a number line 3. Compare and order (denominator) 4. Compare and order (numerator) 5. Add and subtract simple fractions 6. Add and subtract any two fractions

		• 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, $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$] • Divide proper fractions by whole numbers [for example, $\frac{1}{3} \div 2 = \frac{1}{6}$]	7. Add mixed numbers 8. Subtract mixed numbers 9. Multi-step problems 10. Multiply fractions by integers 11. Multiply fractions by fractions 12. Divide a fraction by an integer 13. Divide any fraction by an integer 14. Mixed questions with fractions 15. Fraction of amount 16. Fraction of an amount – find the whole
Week 12	Converting units	• Convert between miles and kilometres	1. Metric measures 2. Convert metric measures 3. Calculate with metric measures 4. Miles and kilometres 5. Imperial measures
Weeks 13-14	Ratio	• 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	1. Add or multiply? 2. Use ratio language 3. Introduction to the ratio symbol 4. Ratio and fractions 5. Scale drawing 6. Use scale factors 7. Similar shapes 8. Ratio problems 9. Proportion problems 10. Recipes
Weeks 15-16	Algebra	• Use simple formulae • Generate and describe linear number sequences • Express missing number problems algebraically	1. 1-step function machines 2. 2-step function machines 3. Form expressions 4. Substitution 5. Formulae 6. Form equations

		• Find pairs of numbers that satisfy an equation with 2 unknowns • Enumerate possibilities of combinations of 2 variables	7. Solve 1-step equations 8. Solve 2-step equations 9. Find pairs of values 10. Solve problems with two unknowns
Weeks 17-18	Decimals	• Associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, $\frac{3}{8}$] • 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	1. Place value within 1 2. Place value – integers and decimals 3. Round decimals 4. Add and subtract decimals 5. Multiply by 10, 100 and 1000 6. Divide by 10, 100 and 1000 7. Multiply decimals by integers 8. Divide decimals by integers 9. Multiply and divide decimals in context
Weeks 19-20	Fractions, decimals and percentages	• Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts	1. Decimal and fraction equivalents 2. Fractions as division 3. Understand percentages 4. Fractions to percentages 5. Equivalent fractions, decimals and percentages 6. Order fractions, decimals and percentages 7. Percentage of an amount – one step 8. Percentage of an amount – multi-step 9. Percentages – missing values
Weeks 21-22	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	1. Shapes – same area 2. Area and perimeter 3. Area of a triangle – counting squares 4. Area of a right-angled triangle 5. Area of any triangle 6. Area of a parallelogram

		• 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]	7. Volume – counting cubes 8. Volume of a cuboid
Weeks 23-24	Statistics	• Interpret and construct pie charts and line graphs and use these to solve problems • Calculate and interpret the mean as an average	1. Line graphs 2. Dual bar charts 3. Read and interpret pie charts 4. Pie charts with percentages 5. Draw pie charts 6. The mean
Weeks 25-27	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 • Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius • Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles	1. Measure and classify angles 2. Calculate angles 3. Vertically opposite angles 4. Angles in a triangle 5. Angles in a triangle – special cases 6. Angles in a triangle – missing angles 7. Angles in a quadrilateral 8. Angles in polygons 9. Circles 10. Draw shapes accurately 11. Nets of 3-D shapes
Week 28	Position and Direction	• 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	1. The first quadrant 2. Read and plot points in four quadrants 3. Solve problems with coordinates 4. Translations 5. Reflections
Weeks 29-36	Theme projects, consolidation and problem solving		