# Time Zone Maths Long Term Plan 2022-23

| | Week 1 | Week 2 | Week 3 | Week 4 | Week 5 | Week 6 | Week 7 | Week 8 | Week 9 | Week 10 | Week 11 | Week 12 | Week 13 | Week 14 |
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| **Autumn Year 5** | **Place Value**<br>Read, write, order and compare numbers to 10,000, 100,000, 1,000,000. Powers of 10. 10/100/1,000/10,000/100,000 more or less. Partition numbers to 1,000,000. Round to the nearest 10, 100, 1,000. Round within 100,000. Round within 1,000,000. Negative numbers. Roman numerals to 1,000. | | | **Addition and Subtraction**<br>Mental strategies. Add whole numbers with more than four digits (column addition). Subtract whole numbers with more than four digits (column subtraction). Round to check answers. Use inverse operations. Multi-step addition and subtraction problems. Compare calculations. Find missing numbers. | | **Multiplication and Division**<br>Multiples. Common multiples. Factors. Common factors. Prime, square and cube numbers. Multiply by 10, 100, 1,000. Divide by 10, 100, 1,000. Multiples of 10, 100, 1,000.<br>Multiply 4 digit numbers by 1 digit numbers (short multiplication). Multiply 2 numbers (grid method). Multiply 2, 3, 4 digit numbers by 2 digit numbers (long multiplication).<br>Divide 4 digit numbers by 1 digit numbers (short division). Divide with remainders. | | | | **Fractions**<br>Find fractions equivalent to a unit fraction. Find fractions equivalent to a non-unit fraction. Recognise equivalent fractions. Convert improper fractions to mixed numbers. Convert mixed numbers to improper fractions. Compare and order fractions less than 1. Compare and order fractions greater than 1. Add and subtract fractions with the same denominator. Add fractions with different denominators within 1 and with a total of more than 1. Add fractions to a mixed number. Add two mixed numbers. Subtract fractions with different denominators. Subtract from a mixed number. Subtract from a mixed number, breaking the whole. Subtract two mixed numbers. | | | | **Assess-ment** |
| **Autumn Year 6** | **Place Value**<br>Read, write, order and compare numbers to 1.000.000, 10,000,000. Powers of 10. Round any integer. Negative numbers. Roman numerals. | | **Four Operations: Addition, Subtraction, Multiplication, Division**<br>Add and subtract integers (column addition and subtraction). Solve problems with addition and subtraction.<br>Common factors. Common multiples. Rules of divisibility. Primes to 100, Square and cube numbers.<br>Multiply 4 or more digit numbers by 2 digit numbers (long multiplication). Solve problems with multiplication.<br>Short division. Division using factors. Long division. Long division with remainders. Solve problems with division.<br>Solve multi-step problems. Order of operations. Mental calculations and estimation. Reason from known facts. | | | | **Fractions**<br>Equivalent fractions and simplifying. Compare and order using denominator/numerator. Add and subtract fractions with different denominators. Add and subtract mixed numbers. Solve multi-step problems. Multiply fractions by integers. Multiply fractions by fractions. Divide fractions by integers. Mixed problem solving. Finding a fraction of an amount. Finding a fraction of an amount, finding the whole. | | | | **Assess-ment** |
| **Spring Year 5** | **Fractions**<br>Multiply fractions by integers. Multiply non-unit fractions by integers. Multiply mixed numbers by integers. Finding a fraction of an amount. Using fractions as operators. Fraction problems solving. | | **Fractions, Decimals and Percentages**<br>Decimals to 2 decimal places. Understanding thousandths. Thousandths as decimals. Ordering and comparing decimals. Rounding decimals.<br>Adding and subtracting decimals within 1. Complements to 1. Adding and subtracting decimals greater than 1. Adding and subtracting decimals with the same and different numbers of decimal places. Multiplying and dividing decimals by 10, 100, 1,000. Decimals problem solving. Decimals as fractions. Understanding percentages. Percentages as decimals and fractions. Equivalent fractions, decimals and percentages. | | **Measurement: Converting Units**<br>Kilograms and kilometres. Milligrams and millimetres. Metric units. Imperial units. Converting units of time. Solving problems with timetables. | | **Measurement: Area, Perimeter, Volume**<br>Measure perimeter. Calculate perimeter. Areas of rectangles. Areas of compound shapes. Areas of irregular shapes. Investigate volume. Compare volume. Estimate volume. Estimate capacity. | | **Geometry: Position and Direction**<br>Position in the first quadrant. Translation. Translation with coordinates. Reflection. Reflection with coordinates. | **Geometry: Properties of Shapes**<br>Measuring angles in degrees. Measuring with a protractor. Drawing lines and angels accurately. | | |

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| **Spring Year 6** | **Ratio**<br>Use the language of ratio. Ratio and fractions. The ratio symbol. Calculating ratio. Using scale factors. Calculating scale factors. Ratio and proportion problems. | | **Fractions, Decimals and Percentages**<br>Decimals to 3 decimal places. Multiply and divide decimals by 10, 100, 1,000. Multiply decimals by integers. Divide decimals by integers. Decimal problem solving. Decimals as fractions. Fractions to decimals. Fractions to percentages. Equivalent fractions, decimals and percentages. Ordering fractions, decimals and percentages. Finding percentages of an amount. Finding missing values with percentages. | | **Measurement: Converting Units**<br>Metric measures. Converting metric measures. Calculating with metric measures. Miles and kilometres. Imperial measures. | **Measurement: Area, Perimeter, Volume**<br>Area and perimeter. Area of different types of triangles. Area of parallelograms. Volume – counting cubes. Volume of a cuboid. | **Geometry: Position and Direction**<br>Position in the first quadrant. All four quadrants. Reflections. Translations. | **Geometry: Properties of Shapes**<br>Measure with a protractor. Angles on a straight line/ around a point. Vertically opposite angles. Calculate angles. Angles in a triangle. | |
| **Summer Year 5** | **Geometry: Properties of Shapes**<br>Calculating angles on a straight line. Calculating angles around a point. Calculating lengths and angles in shapes. Triangles and quadrilaterals. Regular and irregular polygons. Reasoning about 3-D shapes. | | **Statistics**<br>Interpreting charts: comparison, sum and difference. Read and interpret line graphs. Draw line graphs. Solve problems using line graphs. Read and interpret tables. Two=way tables. Timetables. | | | **Projects, Consolidation and Problem Solving**<br>Focus on revision and consolidation of learning from earlier in the year, particularly the four operations and fractions, in preparation for learning in Year 6. | | | |
| **Summer Year 6** | **Geometry: Properties of Shapes**<br>Angles in a triangle: special cases. Angles in special quadrilaterals. Angles in regular polygons. Draw shapes accurately. Draw nets of 3-D shapes. | **Statistics**<br>Read and interpret line graphs. Draw line graphs. Solve problems using line graphs. Circles. The mean. | **SATs Revision** | **SATs** | **Statistics**<br>Read and interpret pie charts. Pie charts with percentages. Draw pie charts. | **Algebra**<br>Find a rule – one step. Find a rule – two steps. Forming expressions. Substitution. Formulae. Forming equations. Solving one-step equations. Solving two-step equations. Finding pairs of values. | **Projects, Consolidation and Problem Solving**<br>Focus on revision and consolidation of learning from earlier in the year, particularly the four operations and fractions, in preparation for learning in Year 7. | | |