**Key place value objectives:** (Focus for starter activities. Objectives should underpin all mathematical skills.)
- 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 all of the above.
- Identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places.

| Autumn | Spring | Summer |
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| **Wk1-** Read, write, order and compare numbers up to 10 000 000 and determine the value of each digit<br><br>**Wk2**- Round any whole number to a required degree of accuracy<br>Use negative numbers in context<br>perform mental calculations, including with mixed operations and large numbers<br><br>**Wk3**- Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why<br>Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy<br><br>**Wk4**- Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication<br><br>**Wk5**- Divide numbers up to 4 digits by a two-digit number using the formal written method | **Wk1**- Identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places<br>Multiply one-digit numbers with up to two decimal places by whole numbers<br><br>**Wk2**- Associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, 8 3]<br><br>**Wk3**- Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.<br><br>**Wk4**- Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.<br><br>**Wk5**- Solve problems involving the calculation of percentages [for example, of measures, and such | **Wk1**-Draw 2-D shapes using given dimensions and angles<br>Recognise, describe and build simple 3-D shapes, including making nets<br><br>**Wk2**- Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons<br>Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius<br><br>**Wk3**-Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.<br><br>**Wk4**-Interpret and construct pie charts and line graphs and use these to solve problems<br>Calculate and interpret the mean as an average |

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| of short division where appropriate, interpreting remainders according to the context<br>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<br>Use written division methods in cases where the answer has up to two decimal places<br>Solve problems which require answers to be rounded to specified degrees of accuracy<br><br>**Wk6**- Identify common factors, common multiples and prime numbers<br>Perform mental calculations, including with mixed operations and large numbers<br><br>**Wk7**- Use their knowledge of the order of operations to carry out calculations involving the four operations<br>Solve problems involving addition, subtraction, multiplication and division | as 15% of 360] and the use of percentages for comparison<br><br>**Wk6**- Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate<br>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 three decimal places<br>Convert between miles and kilometres | |
| **Wk1**- Use common factors to simplify fractions; use common multiples to express fractions in the same denomination<br><br>**Wk2**- Compare and order fractions, including fractions > 1 | **Wk1**- Use simple formulae<br>Generate and describe linear number sequences<br>Express missing number problems algebraically<br><br>**Wk2**- Find pairs of numbers that satisfy an equation with two unknowns<br>Enumerate possibilities of combinations of two variables. | |

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| **Wk3**- Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions<br><br>**Wk4**- Multiply simple pairs of proper fractions, writing the answer in its simplest form [for example, 4 1 × 2 1 = 8 1]<br><br>**Wk5**-Divide proper fractions by whole numbers [for example, 3 1 ÷ 2 = 6 1]<br><br>**Wk6**- Describe positions on the full coordinate grid (all four quadrants)<br>Draw and translate simple shapes on the coordinate plane, and reflect them in the axes | **Wk3**- Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts<br>Solve problems involving similar shapes where the scale factor is known or can be found<br>Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.<br><br>**Wk4**- Recognise when it is possible to use formulae for area and volume of shapes<br>Recognise that shapes with the same areas can have different perimeters and vice versa<br>Calculate the area of parallelograms and triangles<br><br>**Wk5**- 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 $km3$]. | |