



## Year 4 Spring 1

### Starter suggestions for Number

- Read and write numbers with one decimal place.
- Count on and back in 0.1s, 1s, 10s or 100s from any number up to 10,000.
- Count forwards and backwards in equal steps and describe any patterns in the sequence.
- Order a set of random numbers to at least 10,000 including amounts of money and measures involving decimals.
- Recall addition and subtraction facts for 100.
- Recall multiplication facts for 2, 3, 4, 5, 6, 8 and 9x tables and derive associated division facts.
- Identify patterns of similar calculations, e.g. *if I know  $7 \times 8$ , I also know  $0.7 \times 0.8$ ,  $70 \times 8$ ,  $70 \times 80$  etc.*
- Multiply and divide numbers by 10, including those which have answers to one decimal place.
- Double any multiple of 10 or 100.
- Count in fraction steps, e.g.  $\frac{1}{5}, \frac{2}{5}, \frac{3}{5}, \dots$

### Starter suggestions for Measurement, Geometry and Statistics

- Recognise 2-D and 3-D shapes in different orientations and describe them.
- Use a variety of sorting diagrams to compare and classify numbers and geometric shapes based on their properties.
- Identify right angles and obtuse angles.
- Estimate and compare lengths, volumes/capacities and masses.
- Read measuring scales to an appropriate degree of accuracy.
- Convert between different units of measure.
- Describe positions on a square grid labelled with letters and numbers.
- Tell and write the time from an analogue clock and 12 and 24-hour clocks.
- Calculate time durations in minutes, hours and days.
- Interpret data in bar charts, pictograms and tables.

	Main learning	Rationale
<b>Week 1</b> <b>Place value and counting (including negative numbers)</b>	<ul style="list-style-type: none"> <li>Read Roman numerals to 100 (I to C) and know that, over time, the numeral system changed to include the concept of zero and place value.</li> <li>Count in multiples of 6, 8, 25 and 1000.</li> <li>Count backwards through zero to include negative numbers.</li> <li><i>Order temperatures including those below 0°C.</i></li> <li><i>Describe and extend number sequences involving counting on or back in different steps, including sequences with multiplication and division steps.</i></li> </ul>	<p>Children learn about an alternative number system (Roman numerals) and relate this to our Base 10 system, appreciating the efficiency of place value and the concept of zero, including its use as a place holder.</p> <p>Children's understanding of the number system is extended to include negative numbers. It is useful to introduce these in ways children can easily identify, such as floors below ground level in a building or steps into a swimming pool some above and some below the surface of the water. This understanding can then be applied to more abstract concepts such as temperature.</p>
<b>Week 2</b> <b>Fractions</b>	<ul style="list-style-type: none"> <li><i>Understand that a fraction is one whole number divided by another (for example, <math>\frac{3}{4}</math> can be interpreted as <math>3 \div 4</math>).</i></li> <li>Add and subtract fractions with the same denominator.</li> <li>Recognise and show, using diagrams, families of common equivalent fractions.</li> <li>Recognise and write decimal equivalents of any number of tenths or hundredths.</li> <li>Recognise and write decimal equivalents to <math>\frac{1}{4}; \frac{1}{2}; \frac{3}{4}</math>.</li> <li><i>Count on and back in steps of unit fractions.</i></li> <li><i>Compare and order unit fractions and fractions with the same denominator (including on a number line). (Year 3 objective)</i></li> </ul>	<p>The learning of fractions is an extension in understanding of the number system. Equivalent fractions should be learned through practical experiences and using pictorial representations. Children should use factors and multiples to recognise equivalent fractions and simplify where appropriate. Children learn that to convert a fraction into a decimal, an equivalent fraction with a denominator of 10 or 100 is required. Children relate the fractions tenths and hundredths to our Base 10 number system.</p>
<b>Week 3</b> <b>Fractions and division</b>	<ul style="list-style-type: none"> <li><i>Recognise, find and write fractions of a discrete set of objects including those with a range of numerators and denominators.</i></li> <li><i>Select a mental strategy appropriate for the numbers involved in the calculation.</i></li> <li><i>Use estimation and inverse to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.</i></li> <li>Solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number.</li> <li>Solve simple measure and money problems involving fractions and decimals to two decimal places.</li> </ul>	<p>Children build on their understanding of fractions of shapes, using these shapes when sharing items into equal groups. The link between finding fractions of amounts and division is made. When children are calculating fractions of amounts, this should be in a context e.g. length, money, time to consolidate previous learning. Children should learn that finding fractions is division by sharing and the activities should reflect this. Later, children should learn that grouping is a more efficient method of performing written division, even in contexts of sharing. When calculating, children should learn which methods suit the numbers involved and why. Written methods should be agreed by the school and shared in the progression in written calculations policy. Efficient written methods are required to be taught by the end of Key Stage 2.</p>
<b>Week 4</b> <b>Position and direction</b>	<ul style="list-style-type: none"> <li>Describe positions on a 2-D grid as coordinates in the first quadrant.</li> <li>Describe movements between positions as translations of a given unit to the left/right and up/down.</li> <li>Plot specified points and draw sides to complete a given polygon.</li> <li>Complete a simple symmetric figure with respect to a specific line of symmetry.</li> </ul>	<p>Children are introduced to coordinate grids and apply their knowledge of 2-D shapes when completing partly drawn polygons. Translations are introduced and children's learning of symmetry is extended from identifying lines of symmetry in shapes to completing symmetric figures using a specific line of symmetry. This could be vertical, horizontal or oblique, depending on children's ability.</p>



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<b>Week 5</b> <b>Area and multiplication</b>	<ul style="list-style-type: none"><li>▪ <i>Understand that area is a measure of surface within a given boundary.</i></li><li>▪ Find the area of rectilinear shapes by counting squares.</li></ul>	Children are introduced to area as a measure of surface within a given boundary. They count the number of squares within rectilinear shapes, utilising their skills of counting in equal steps. NB –rectilinear shapes are ones made up of sides meeting at right angles. Children should relate area to arrays and multiplication.
<b>Week 6</b> <b>Written addition and subtraction using money and measures</b>	<ul style="list-style-type: none"><li>▪ Add and subtract numbers with up to 4 digits and decimals with one decimal place using the formal written methods of columnar addition and subtraction where appropriate.</li><li>▪ <i>Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting, written method).</i></li><li>▪ Estimate and use inverse operations to check answers to a calculation.</li><li>▪ Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.</li></ul>	Children develop and rehearse the processes involved in written addition and subtraction. Practical and visual resources may be used to support understanding of these processes. Calculations are presented in different contexts of money and measures to consolidate these areas and support children in understanding when to use their calculation skills. When calculating, children should learn which methods suit the numbers involved and why. Written methods should be agreed by the school and shared in the progression in written calculations policy. Efficient written methods are required to be taught by the end of Key Stage 2.