



Year 2 Autumn 1

Starter suggestions for Number

- Read and write numbers to 100 in figures and words.
- Count on and back in ones from any one or two-digit number.
- Count on and back in multiples of 2, 5 and 10.
- Order a set of random numbers to 100.
- Recall addition and subtraction facts for each number up to 20.
- Recall doubles of simple 2-digit numbers i.e. numbers in which the ones total less than 10.
- Recall halves of simple even numbers i.e. numbers in which the tens are even.
- Add a single digit number to any 2-digit number.
- Take away a single digit number from 2-digit number.
- Identify number patterns on number lines and hundred squares.

Starter suggestions for Measurement, Geometry and Statistics

- Identify 2-D shapes in different orientations and begin to describe them.
- Identify 3-D shapes in different orientations and begin to describe them.
- Compare and sort common 2-D and 3-D shapes and everyday objects.
- Order and arrange combinations of mathematical objects in patterns and sequences.
- Describe position, direction and movement, including whole, half, quarter and three-quarter turns.
- Estimate the length and height of familiar items using standard units.
- Tell the time using o'clock, half past, quarter past and quarter to.
- Recognise and count amounts of money.

	Main learning	Rationale
Week 1 Number and place value	<ul style="list-style-type: none"> Read and write numbers to at least 100 in numerals and in words. Recognise the place value of each digit in a two-digit number (tens, ones). Identify, represent and estimate numbers using different representations, including the number line. Compare and order numbers from 0 up to 100; use <, > and = signs. <i>Round numbers to at least 100 to the nearest 10.</i> Use place value and number facts to solve problems. 	<p>Children develop their understanding of the number system to include numbers up to and beyond 100. They should use practical equipment, familiar items and pictures to represent the numbers they are working with – children should understand the notion of grouping in tens i.e. 10 ones is the same as 1 ten and that in two-digit number the first digit refers to the number of groups of ten.</p> <p>Children should experience numbers in different ways to support other place value understanding e.g. ordering numbers on a number line to support comparing and rounding numbers, and also make links between the number line and measuring scales and scales on a graph.</p>
Week 2 Number and place value	<ul style="list-style-type: none"> Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward. <i>Find 1 or 10 more or less than a given number.</i> <i>Partition numbers in different ways (for example, $23 = 20 + 3$ and $23 = 10 + 13$).</i> Identify, represent and estimate numbers using different representations, including the number line. Use place value and number facts to solve problems. 	<p>Children build on their understanding of numbers from the previous week, including using place value to identify numbers 1 and 10 more or less than a given number. At this stage, children should discover for themselves the structure of a 100 square by counting on or back 10 from a given number and realising where they finish.</p> <p>When counting, children should be encouraged to identify patterns in the sequences and reason as to why these patterns emerge.</p> <p>Partitioning numbers in different ways helps children understand the flexibility of how numbers can be made, and that thinking of numbers in different ways is useful when calculating in different contexts e.g. when adding 36 and 7, it is useful to think of 7 as $4 + 3$ to help bridge through 40.</p>
Week 3 Measurement (length and mass)	<ul style="list-style-type: none"> Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm) to the nearest appropriate unit using rulers. Compare and order lengths and record the results using >, < and =. Choose and use appropriate standard units to estimate and measure mass (kg/g) to the nearest appropriate unit using scales. Compare and order mass and record the results using >, < and =. 	<p>Children should use the term mass instead of weight. Children should work practically to measure length and height, recognising that both are measurements of distance. Children should use standard units and then consolidate their place value knowledge by comparing and ordering lengths and masses.</p> <p>The understanding of positioning numbers on a number line is applied to measuring scales and identifying lengths and masses of familiar items.</p>
Week 4 Addition and subtraction	<ul style="list-style-type: none"> Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot. Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100. Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: a two-digit number and ones; a two-digit number and tens; two two-digit numbers; adding three one-digit numbers. Solve problems with addition and subtraction: <ul style="list-style-type: none"> using concrete objects and pictorial representations, including those involving numbers, quantities and measures. applying their increasing knowledge of mental and written methods. 	<p>Children should use familiar items to create number stories e.g. 24 children in the class and 7 more come in, how many children are in the class now? This gives rise to the number sentence $24 + 7 = ?$</p> <p>Continuing the theme of number stories can give rise to other number sentences such as $24 + ? = 31$. This could be explained as, there are 24 children in the class. How many more children come into the class if in the end there are 31 children in class?</p> <p>The use of physical objects to tell a number story and the creation of numbers sentences helps children to understand the relationship between addition and subtraction. Children should also use practical models and visual images to support the place value understanding when calculating with 2-digit numbers.</p>



	Main learning	Rationale
Week 5 Addition and subtraction	<ul style="list-style-type: none"> ▪ Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100. ▪ Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: a two-digit number and ones; a two-digit number and tens; two two-digit numbers; adding three one-digit numbers. ▪ Solve problems with addition and subtraction: <ul style="list-style-type: none"> - using concrete objects and pictorial representations, including those involving numbers, quantities and measures. - applying their increasing knowledge of mental and written methods. ▪ Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems. ▪ <i>Understand subtraction as take away and difference (how many more, how many less/fewer).</i> 	<p>This week is a continuation of last week. Children are introduced to 'difference' in the summer term of Year 1. This understanding should be made more secure and the term difference should be used by children. Children should also learn the term sum and how this applies to addition.</p> <p>Children should also use knowledge of number bonds for each number up to 20 in calculations involving larger numbers e.g. knowing that $8 + 7 = 15$ can support children answering questions such as $28 + 7$, $58 + 7$ and $38 + 47$.</p>
Week 6 Geometry (2-D and 3-D shape)	<ul style="list-style-type: none"> ▪ Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line. ▪ Identify 2-D shapes on the surface of 3-D shapes, (for example, a circle on a cylinder and a triangle on a pyramid). ▪ Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces. ▪ Compare and sort common 2-D and 3-D shapes and everyday objects. 	<p>When learning about shapes, children should handle them, name them and begin to describe them. Children should recognise shapes in different orientations and also in different sizes, and know that some shapes can look differently to other shapes with the same name.</p> <p>When describing 2-D shapes, it is useful for children to consistently use the terms side and corner.</p> <p>When describing 3-D shapes, it is useful for children to consistently use the terms face, edge and vertex (vertices).</p> <p>When sorting shapes in different ways, children should use various diagrams including sorting tables, Venn and Carroll diagrams.</p>