Year 2 Summer 1

Starter suggestions for Number

- Read and write numbers to 100 in figures and words.
- Count on and back in 1s from any one or two-digit number.
- Count on and back in steps of 2, 3 and 5 from 0.
- Count on and back in 10s from any number.
- Recall multiplication facts for the 2x, 5x and 10x tables.
- Recognise odd and even numbers.
- Order a set of random numbers to 100.
- Recall addition and subtraction facts for each number up to 20, and related facts up to 100.
- 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.
- Estimate mass and capacity of familiar items using standard units.
- Tell the time to the nearest five minutes on an analogue clock.
- Know the number of minutes in an hour and the number of hours in a day.
- Recognise and count amounts of money.
- Interpret simple pictograms, tally charts, block diagrams and tables.

	Main learning	Rationale
Week 1 **Number and place value in the context of statistics**	▪ 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. ▪ *Round numbers to at least 100 to the nearest 10.* ▪ Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward. ▪ *Find 1 or 10 more or less than a given number.* ▪ *Partition numbers in different ways (for example, 23 = 20 + 3 and 23 = 10 + 13).* ▪ Use place value and number facts to solve problems.	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. 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. These scales should go up to 100 and use intervals of 2, 3, 5 or 10. When counting, children should be encouraged to identify patterns in the sequences and reason as to why these patterns emerge. 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.
Week 2 **Addition and subtraction**	▪ 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: - using concrete objects and pictorial representations, including those involving numbers, quantities and measures. - applying their increasing knowledge of mental and written methods.	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 = ? 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? 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. Children should confidently use the terms difference and sum. 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.

	Main learning	Rationale
Week 3 **Measurement (Capacity / volume and temperature)**	▪ Choose and use appropriate standard units to estimate and measure capacity and volume (litres/ml) to the nearest appropriate unit using measuring vessels. ▪ Compare and order volume/capacity and record the results using >, < and =. ▪ Choose and use appropriate standard units to estimate and measure temperature to the nearest degree (˚C) using thermometers.	Children learn about liquid volume and use standard units to measure volume and capacity. Place value knowledge is applied in this context when ordering volumes and capacities and reading scales. Children are introduced to temperature in the summer term, where they can sense differences in temperature between inside and outside and in the shade and in the sunshine. They learn that temperature is measured in degrees Celsius (˚C) and we use thermometers to measure temperature. Measuring different temperatures allows children to understand that the average room temperature is approximately 20˚C.
Week 4 **Fractions**	▪ *Understand and use the terms numerator and denominator.* ▪ *Understand that a fraction can describe part of a set.* ▪ *Understand that the larger the denominator is, the more pieces it is split into and therefore the smaller each part will be.* ▪ Recognise, find, name and write fractions $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$ and $\frac{3}{4}$ of a length, shape, set of objects or quantity. ▪ *Count on and back in steps of* $\frac{1}{2}$ *and* $\frac{1}{4}$. ▪ Write simple fractions for example, $\frac{1}{2}$ of 6 = 3 and recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$.	Children's knowledge and understanding of fractions develops to include the names of each number in a written fraction and what each number represents. Practical and visual approaches should be used to allow children to see what the numerator and denominator are and how they go together to form a fraction of a shape or quantity. Children are introduced to $\frac{2}{4}$ and $\frac{3}{4}$ as the first examples of non-unit fractions. Using shapes, practical and pictorial representations, children understand the concept of equivalent fractions e.g. $\frac{2}{4}$ and $\frac{1}{2}$ Children should understand the connection between finding a fraction of an amount and division by sharing. This can be supported by using shapes divided into equal fractions and sharing real items equally on to each fraction part.
Week 5 **Position, direction and time**	▪ Use mathematical vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three- quarter turns (clockwise and anti-clockwise). ▪ Tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times. ▪ Know the number of minutes in an hour and the number of hours in a day. ▪ Compare and sequence intervals of time.	Children's understanding of position and direction is developed through practical work describing routes and relating turns to the movement of the hands on a clock. When teaching time, links need to be made with fractions half and quarter, and also counting in 5s. Children should experience geared analogue clocks to recognise how the hour hand moves as the minute hand moves around the clock. The idea of minutes past the hour and minutes to the next hour can be explored and linked to rounding numbers and also number bonds of multiples of 5 to 60. Children should explore how long certain activities take and also how many times certain things can be done in a given time period e.g. one minute.
Week 6 **Geometry (2-D and 3-D shape)**	▪ 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.	When learning about shapes, children should handle, name and 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. When describing 2-D shapes, it is useful for children to consistently use the terms side and corner. When describing 3-D shapes, it is useful for children to consistently use the terms face, edge and vertex (vertices). When sorting shapes in different ways, children should use various diagrams including sorting tables, Venn and Carroll diagrams.