

Year R: Planning for Mastery

Autumn Term

Number of the week (includes simple addition and subtraction)

Shape

Position and direction

Spring Term

Number of the week (includes simple addition and subtraction)

Comparative measurement

Summer Term

Number of the week (includes simple addition and subtraction)

Doubling and halving

Simple fractions

- Every day: counting in ones to 10 and then 20 and beyond
- Every day: set up a designated games table. Teach children to play a game and then they teach others. Snakes and ladders, Ludo, dominoes, Shut the Box are good examples of games. Once they have learned how to play this could be part of their child-initiated work.
- Every day: bar modelling for simple problem solving such as placing drinks cartons on laminated bar model – how many are there, how many more are needed so that there are 10.
- Spring term: recap shape and positional vocabulary
- Summer term: recap vocabulary relating to comparative measures
- Summer term: days of the week, months of the year

	<div>Weeks are flexible: keep going until all children have mastered the area being taught</div>
	Shape
Autumn Term	<p>Focus on a 3-D shape a week and look at 2-D shape through the faces of the shapes. For each 3-D shape have a display of real life objects that are the shape you are focussing on.</p> <ul style="list-style-type: none"> • Sphere: curved surface, no edges or vertices. Children make a sphere using plasticine or similar. As they make it they say sphere. This will help some say the word correctly instead of sofia and spear! Can a sphere roll? Can it slide? Organise catching, kicking, rolling competitions. Position spheres in different ways: on top, under, beside, between etc. Cut a sphere in half to create a hemisphere. What 2-D shape can we see? Circle. Talk about circles. Children sketch circles of different sizes. They use oranges, lips of paper cups to make repeating patterns. They count the number of circles in their pattern. • Cylinder: curved surface, curved edge, circular faces. Can a cylinder slide? Can it roll? Compare the way it rolls with a sphere. Position cylinders in different positions. Make repeating patterns of different size or colour cylinders. • Cone: curved surface, curved edge, circular face, apex. Can a cone slide? Can it roll? Compare the way it rolls with a sphere and cylinder. Position cones in different positions. Make a cone shaped hat. Use cones to make a running track, children weave in and out of the cones from start to finish. • Cube: 6 square faces, 12 edges, 8 vertices. Edges are where faces meet. Vertices are where edges meet. Can a cube slide? Can it roll? Compare the way cubes roll with the other shapes looked at so far. A cube is a prism. It has two ends joined by 4 other squares. Position cubes in different positions. Take about squares. A square is a rectangle because it has four sides and 4 right angles. It is a regular rectangle because all sides are the same length. Identify right angles in the classroom. Children could make a right-angle measurer using strips of card and paper fastener. They measure different corners to see if they are right angles or smaller or greater. Show squares of different sizes and orientations. Make repeating patterns. • Cuboid: 6 faces, either 6 oblong or 4 oblong and 2 square, 12 edges, 8 vertices. Can a cuboid slide? Can it roll? A cuboid is a prism, two ends joined by rectangles. Position in different positions. Talk about oblongs. Oblongs are rectangles. Rectangles are 4-sided shapes so they are also quadrilaterals. Sketch oblongs of different sizes and in different orientations. Make repeating patterns. • Repeat for triangular prisms. Two triangular faces joined by rectangles. Talk about triangles. Generalise that any 3-sided shape is a triangle. Draw different triangles – different types, sizes and orientations. Repeating patterns etc. • Repeat for square based pyramids and other pyramids. What do they notice? There is a base and at least 3 triangular faces. <p>Once all shapes covered, sort them in simple Venn and Carroll diagram. Criteria to include: prism/not prism, pyramid/not pyramid. Introduce polyhedron – 3-D shape with faces. Spheres, cylinders, cones are not polyhedral. Make towers and structures using the shapes. Which are the most stable and why? Sort 2-D shapes.</p>

	Number of the week
Autumn and Spring Terms	<p>Begin with numbers 1 to 10.</p> <p>For each number make a visual display. Include for example, birthday cards, photo of a bus of that number, the o'clock time on analogue and digital clocks, regular and irregular shapes of that number of sides, different arrangements of people and toys, the number as a numeral, correct number of pennies, 10p coins, £1 coins.</p> <p>For each number talk about: what it is less than, what it is greater than, is it odd or even and how do we know.</p> <p>Can children count that number of objects (1-1 correspondence)? Can they tell you how many there are (cardinality)? Can they count that number from a larger group? Can they recognise that number without counting (subitising)? Dice and dominoes also good for this. Can they tell you how many there are when rearranged (order irrelevance)? Can they hear that number of pennies or objects as they are dropped into a tin (abstraction)?</p> <p>Explore how to make each number and include simple addition and subtraction, commutative and inverse. For example, 5 can be made from 1 and 4, so $1 + 4 = 5$, $4 + 1 = 5$, $5 - 4 = 1$, $5 - 1 = 4$. Use Numicon for this. Balance the Numicon plates on scales, e.g. the 5 plate should be the same mass as a one and a 4 plate.</p> <p>Simple problem solving related to the number of the week, for example, Suzie had 5 apples, she ate 1. How many are left?</p> <p>When moving on to numbers from 11 to 20, repeat activities in the same way and also introduce place value. $11 = 10 + 1$, $12 = 10 + 2$ and so on. Use place value grids as a visual model and concrete apparatus to go with them, e.g. Numicon, straws (bundle of 10 and single straws).</p>
	Comparative measurement
Spring Term	<p>Practical activities to help children master the vocabulary</p> <p>Measures to include:</p> <ul style="list-style-type: none"> • Length – longer, shorter, taller etc. • Mass – heavier, lighter etc. • Volume – full, half full, empty etc. • Capacity – holds more, holds less etc. • Time – days of the week, times of the day, months of the year etc. • Money – coin sorting and recognition. Use pennies to help counting in ones, 10p coins for counting in 10s etc. • Temperature – hot, warm, cold etc. <p>Measure objects using non-standard units. Compare lengths with a metre stick and ruler so that children become familiar with these scales.</p>

	Doubling and halving
Summer Term	<p>Work on doubling and halving at the same time.</p> <p>This is the child's first introduction to multiplication and division.</p> <p>Multiplication is repeated addition of groups of the same number. Doubling is adding the same number twice.</p> <p>Division is repeated subtraction of groups of the same number. Halving is subtracting a number to leave the same number.</p> <p>Double 1 is 2. Half of 2 is 1. Double 2 is 4. Half of 4 is 2 and so on to double 5 is 10. Half of 10 is 5. You can go further, maybe to 20 if children are ready to.</p>
	Sharing
Summer Term	<p>Link sharing to fractions. Sharing as division is best shown through fractions. Children are likely to know the vocabulary of half. They are likely to know what half is and that it needs to be an equal part of two parts. If you give children half of a chocolate bar or some sweets and they get a part that is not the same as the other part, they are likely to think – or say, that isn't fair.</p> <p>Work practically with them on this so that they begin to understand that fractions are equal parts of a whole.</p> <p>Activities could include:</p> <ul style="list-style-type: none"> • Making half a turn, then making the other half to make a whole turn • Filling a container half full of sand and then putting the other half in to fill the whole container • Sharing fruit equally between two so each child has a half. Four pieces of fruit, what is half? If we put both halves together we will have all the fruit • You could include sharing equally between three so that each child has one third. Discuss how many one third is, then two thirds and the whole. You could repeat this for quarters • You could model what the fraction you are working on looks like on paper or the board. It is important to draw the vinculum(line between the denominator and numerator) first to show that you are breaking a whole into parts, then the denominator to show the number of parts and finally the numerator to show how many parts you are considering.