

# Primary Semi-Formal

## Mathematics Long Term Plan

### Planning Year 1, 2 and 3

Term	Curriculum Focus	Week	Content Focus
Autumn 1	<b>Number, Shape, Space, Measure</b>	WK1	Matching with buttons
		WK2	Matching with socks/memory game
		WK3	Matching lids
		WK4	Sorting with buttons
		WK5	Sorting with natural objects
		WK6	Compare size
Autumn 2		Wk7	Compare amounts
		WK8	Compare height
		WK9	Compare length
		WK10	Who will fit inside?
		WK11	Repeating patterns
		WK12	Printing patterns
Spring 1	<b>Number, Shape, Space, Measure</b>	WK1	Representing 1
		WK2	Representing 2
		WK3	Representing 3
		WK4	Sorting 1, 2 and 3
		WK5	Matching 1, 2 and 3
		WK6	Comparing 1, 2 and 3
Spring 2		Wk7	Snap- matching numeral and picture cards
		WK8	Memory game- Matching numeral and picture cards
		WK9	Comparing- one more, one less
		WK10	Bean bag game- composition
		WK11	Sorting circles and triangle
		WK12	Shape pictures/ hunt
Summer 1	<b>Number, Shape, Space, Measure</b>	WK1	Representing 4
		WK2	Representing 5
		WK3	Sorting 4 and 5
		WK4	Composition of 4
		WK5	Composition of 5
		WK6	Composition 4 and 5
Summer 2		Wk7	Arrangements of 4 and 5 cubes
		WK8	One elephant went out to play
		WK9	Five green bottles
		WK10	One more and one more less
		WK11	Square and rectangles
		WK12	Shape pictures/ hunt

# Primary Semi-Formal

## Mathematics Long Term Plan

### Planning Year 4, 5 and 6

Term	Curriculum Focus	Week	Content Focus
Autumn 1	<b>Number, Shape, Space, Measure</b>	WK1	One less five current buns
		WK2	How many? Representing zero
		WK3	Composition of numbers to 5
		WK4	Comparing numbers to 5
		WK5	Equal and unequal groups
		WK6	Composition of numbers 5 (2 groups)
Autumn 2		Wk7	How many altogether?
		WK8	Composition of numbers to 5 (3 groups)
		WK9	How many are hiding?
		WK10	Comparing mass- heavier and lighter than
		WK11	Full and empty Measuring capacity
		WK12	Measuring capacity- how many fit inside? Measuring ingredients
Spring 1	<b>Number, Shape, Space, Measure</b>	WK1	Which show 6? - Composition of 6
		WK2	Sorting 6, 7 & 8 - Composition of 7
		WK3	Composition of 8
		WK4	Matching 6, 7 and 8
		WK5	1 more and less
		WK6	Matching 6, 7 and 8
Spring 2		Wk7	Making pairs
		WK8	Combining 2 groups
		WK9	Adding more
		WK10	Comparing height – taller and shorter than Comparing length – longer and shorter than
		WK11	Days of the week
		WK12	Measuring height Measuring time
Summer 1	<b>Number, Shape, Space, Measure</b>	WK1	Representing and sorting 9 and 10
		WK2	Representing and sorting 9 and 10
		WK3	Order numerals to 10
		WK4	Composition of 9 and 10
		WK5	Numbers to 10 - Bingo
		WK6	Counting back from 10 - 10 in the bed
Summer 2		Wk7	Comparing numbers within 10
		WK8	Making 10
		WK9	3-D shape – matching objects
		WK10	Building with 3-D shapes
		WK11	Printing with 3-D shapes
		WK12	Pattern

Unit	Planning Years 1, 2, 3	Planning Years 4, 5, 6
<b>Number</b>	<p><b>Autumn</b> Find and match objects which are the same. Objects can be sorted into sets based on attributes such as colour, size or shape. Pupils to consider what is the same about all the objects in one set and how they are different to the other sets. Objects can be sorted in different ways and should be encouraged to come up with their own criteria for sorting objects into sets. Lining up time is a great way to begin. Understand that when making comparisons when the difference is greater.</p> <p><b>Spring</b> Identify representations of 1,2 and 3. Subitise or count to find how many and make their own collections of 1, 2 and 3 objects. Match number names to numerals and quantities. Count up to three objects in different arrangements by touching each object as it is counted and recognise that the final number they say names the quantity of the set. Use mark-making to represent 1,2 and 3. Understand as we count each number is one more than the number before. Similarly as we count back, each number is one less than the previous number. Use a range of representations to support the understanding and encourage the representation of one more and one less patterns as counted. Support making comparisons in different contexts. Numbers are made up of smaller numbers. Allow exploration of different compositions of 2 and 3. Children may explore larger numbers during play, encourage them to share what they notice.</p> <p><b>Summer</b> Count on and back to 4. Count or subitise sets of up to 4 objects to find how many and make their own collection of objects. Match the number names to numerals and quantities and are able to say which sets have more and which have fewer items. When counting, they continue to learn that the final number they say names the quantity of the set. Use own mark-making to represent numbers. Continue to subitise up to 5 and to count forwards, and backwards, accurately using the counting principles. Represent up to five objects on a five frame and understand that if the frame is full then there are five. Continue to count, subitise and compare as they explore one more and one less. Encourage children to use a five frame to represent numbers and to predict how many there will be if they add one more or take one away. Prompt children to see the link between counting forwards and the one more pattern and counting back and the one less pattern.</p>	<p><b>Autumn</b> Using previous knowledge of 'nothing there' or 'all gone' the number name zero and the numeral 0 can be introduced. Continue to understand that when comparing numbers, one quantity can be more than, the same as or fewer than another quantity. Use a range of representations to support this understanding and encourage the children to compare quantities using a variety of objects and representations. Support children to make comparisons in different context as they play. Continue understanding that all numbers are made up of smaller numbers. Allow them to explore and notice the different compositions of 4 and 5. Encourage them to subitise and notice how many numbers can be composed of 2 parts or more than 2 parts.</p> <p><b>Spring</b> Continue to apply counting skills when counting 6, 7, and 8. They represent 6, 7, and 8 in different ways and can count out the required number of objects from a larger group. Arranging 6, 7, or 8 items into small groups will support then children to conceptually subitise and see how the numbers are made up of smaller numbers. Build on earlier knowledge on matching to find and make pairs. The begin to understand that a pair is two. Encourage the children to arrange small quantities into pairs and notice that some quantities will have an odd one left over with no partner. Teach the children to play games which involve matching pairs. Children begin to combine 2 groups to find how many altogether. They should be given opportunities to do this in many contexts using real objects. Encourage the children to subitise where possible although they may need to count in ones to find how many altogether.</p> <p><b>Summer</b> Children continue to apply the counting principles when counting to 9 and 10 (forwards and backwards). They represent nine and 10 in different ways. Arranging nine or ten items into small groups will support the children to conceptually subitise these larger numbers an explore their composition. Children notice that A10 frame is full when there is 10. They can use 10 frames, fingers an beads strings to subitise group Of nine and 10. Children continue to make comparisons by lining items up with one to one correspondence to compare them directly or by counting each set carefully and comparing their position in the counting order. As the children sense of number develops so does their knowledge of where each number six in relation to other numbers. They understand that when making comparisons are set can have more items, fewer items Or the same number of items as another set. They begin by comparing 2 quantities and progress to ordering three or more quantities. The children explore number bonds to 10 using real objects in different contexts. For example There are 10 apples. How many in the tree in how many on the ground? 10 frames or egg boxes With ten holes can be partially filled with objects and the children asked how many more do we need to make a full 10? Other manipulatives such as fingers, bead strings and number shaves are also useful for exploring bonds to 10.</p>

Unit	Planning Year 1, 2, 3	Planning Year 4, 5, 6
<b>Shape, Space and Measure</b>	<p><b>Autumn</b> Objects can be compared and ordered according to their size. Use language such as big, little, large and small, tall, long, and short to describe objects around the classroom. Compare and order objects by size using different objects using the key vocabulary to describe what they notice. Continue and create own simple repeating patterns. With provided patterns with at least three full units of repeat. Children to say the pattern aloud as this helps them identify the part which repeats and supports them to continue the pattern. Children to be given opportunities to explore AB patterns in a range of contexts including shapes, colours, sizes, actions, and sounds. Build patterns both vertically and horizontally.</p> <p><b>Spring</b> Learn that circles have one curved side and triangles have 3 straight sides. Children begin to recognise these shapes on everyday items in their environment. Encourage children to build their own circles and triangles. It is important to show a variety of different sized circles and triangles in different orientations and with sides of different lengths. Children begin to use positional language to describe how items are positioned in relation to other items. Build life-sized journeys outdoors and travel through them, exploring them from different perspectives. Begin to represent real places they have visited or places in stories with their models, drawings, or maps.</p> <p><b>Summer</b> Learn that squares and rectangles have 4 straight sides and 4 corners. They begin to recognise these shapes on everyday items in the environment. Encourage the children to build their own squares and rectangles in a variety of different sizes and orientations. Children talk about night and day and order key events in their daily routines. Use language to describe when events happen e.g., day, night, morning, afternoon, before, after, today, tomorrow. Measure time in simple ways e.g., counting the number of sleeps to an important event or using timers to measure durations of events.</p>	<p><b>Autumn</b> Children may already have some experience of weight through carrying heavy and light items. Encourage them to make direct comparisons holding items to estimate which feels the heaviest then use the balance scales to check. Use language of heavy, heavier than, heaviest, light, lighter than, lightest to compare items starting with items which have an obvious difference in weight. Avoid the common misconception that bigger items are always heavier by providing some small, heavier items and some large, lighter ones. Build on understanding of full and empty to show half full, nearly full, and nearly empty. Provide opportunities to explore capacity using different materials such as water, sand, rice, and beads. Provide different sized and shaped containers to investigate. Use language of tall, thin, narrow, wide, and shallow. Encourage children to make different comparisons by pouring from one container into another. Use small pots, ladles to make indirect comparisons by counting how many pots it takes to fill each container.</p> <p><b>Spring</b> Children begin by using language to describe length and height E dot G dot the tree is tall, the pencil is short. When making direct comparisons, they may initially say something is bigger Dan something else. Encourage them to use more specific mathematical vocabulary relating to length (longer, shorter), height (taller, shorter), and breadth (wider, narrower). Encourage the children to make indirect comparisons using objects such as blocks or cubes to measure items. Children continue to order and sequence important times in their day and use language such as now, before, later, soon, after, then and next to describe when events happen. They begin to recognise that regular events happen on the same day each week and use their vocabulary 'yesterday', 'today' and 'tomorrow' To describe when events happen. Children are able to describe significant events in their lives and talk about events they are looking forward to. They learn through their own experience and the stories they read and some processes such as growing vegetables, take a long time.</p> <p><b>Summer</b> Children will naturally explore the manipulate 3D shapes through their block play an modelling. Prompt them to consider which shapes stack and which shapes role and why that is. They should be given opportunities to build using a variety of shapes and to construct their own 3D shapes in different ways. Children can be introduced to the names of the shapes and be given opportunities to explore similarities and differences between them as they play and to sort them according to what they notice. Build on the children's earlier AB pattern work by introducing more complex patterns. The children explore patterns which use items more than once in each repeat. For example ABB, AAB, AABB, AABBB. Again it is important that each pattern you model has at least three full units of repeat. The more units of repeat, the easier it is to identify and continue the pattern. Encourage the children to say each pattern aloud and to create patterns around the edge of shapes as well as in straight lines.</p>