St Mary's RC Primary School – Reception Maths Overview (adapted 2019/20)

Reception: Yearly Overview (Adapted)

White Rose Maths

	1 (3 days)	2	3	4	5	6	7	1	2	3	4	5	6	7	8
Autumn	Number and Place Value				Addition and Subtraction		Consolidation	Number and Place Value				Addition and Subtraction		Geometry	

	1 (4 days)	2	3	4	5	6	7	1	2	3	4	5	6 (4 days)	
Spring	Addition and Subtraction		Number and Place Value				Measurement	Addition and Subtraction		Geometry			Consolidation	

	1	2	3	4	5	1	2	3	4	5	6	
Summer	Geometry		Addition and Subtraction		Number and Place Value	Multiplication and Division			Measurement			

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Autumn 1						
Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7
Number and Place Value (Numbers to 5) **One, two, three!** • Children are taught to count forwards and backwards to three. • They count up to three objects in different arrangements by touching ieach object as they count, saying the names in a stable order. • Children can say the total number in the group, understanding that the final number they have said is the total of the group. • The children are starting to **subitise** (instantly recognise a small quantity without counting how many there are) numbers up to three • Children can count out three objects from a larger set.	**Number and Place Value (Numbers to 5)** **Four** • Children continue to apply the counting principles when counting to four (forwards and backwards). • They can represent four in different ways. • Children can count out four objects from a larger group.	**Number and Place Value (Numbers to 5)** **Five** • Children continue to learn to count forwards and backwards, accurately using the counting principles. • Children represent up to five objects on a five frame. • Children understand that if a five frame is full then there are five.	**Addition and Subtraction (Sorting)** **Sorting into groups** • Children learn that a collection of objects can be sorted into sets based on attributes such as colour, shape or size. • Children consider what is the same about all of the objects in one set and how they are different in others. • Children begin to understand that the same collection of objects can be sorted in different ways. • Children are encouraged to come up with their own criteria for sorting objects into sets.		**Consolidation of:** **Number and Place Value (Numbers to 5)** **Addition and Subtraction (Sorting)**

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Autumn 2							
Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8

Number and Place Value (Comparing Groups)

Compare identical objects
- When comparing two groups, children should be encouraged to line the items up to make direct comparisons.
- Children should be encouraged to count each set carefully, which helps them link the names of numbers, their value and their position in the counting order.

Number and Place Value (Comparing Groups)

Compare identical objects
Prior Learning: children should be able to confidently sort collections into sets and learn that these sets can be compared and ordered.
- Children compare non-identical objects by linking names of numbers, numerals, their value and their position in counting order.
- Children understand that when making comparisons a set can have more items, fewer items or the same number of items as another set.

Addition and Subtraction (Change within 5)

One more
- Children use their counting and comparing skills to find one more than numbers up to 5.
- Children should be encouraged to use a five frame to represent numbers and then make one more.
- Children should see the link that one more than a number is the next number they say when they are counting.

Addition and Subtraction (Change within 5)

One less
- Children use their counting and comparing skills to find one less than numbers up to 5.
- Children should be encouraged to use a five frame to represent numbers and then make one less.
- Children should see the link that one less than a number is the next number they say when they are counting backwards.

Geometry (Shape and space)

2-D Shapes
- Children are encouraged to see 2-D shapes on the flat faces of 3D shapes.
- Children begin to name some common shapes such as circles, triangles and rectangles including squares – shapes should be shown in different orientations.
- Children have opportunities to compare 2-D shapes and say what is the same and what is different.
- Children are encouraged to explore how shapes can be combined or partitioned to make a new shape.

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Spring 1						
Week 1	**Week 2**	**Week 3**	**Week 4**	**Week 5**	**Week 6**	**Week 7**
Addition and Subtraction (Addition to 10) **Combining two groups to find the whole.** • Children begin to combine 2 groups to find how may altogether. Children should be given opportunities to do this in many contexts using real-life objects. • Children should be encouraged to subitise where possible, although they may need to count in ones to find how many altogether.	**Addition and Subtraction (Numbers to 5)** **Introducing zero and number bonds to 5** • Children begin to have a concept of zero. • Children begin to understand that numbers can be made by combining smaller numbers, including zero. • Children use real-life objects and familiar contexts to explore the composition of numbers to 5. • Children use a 5 frame and part-whole models to represent different parts which combine to make a whole. • Children should be encouraged to record their work using mathematical jottings.		**Number and Place Value (Numbers to 10)** **Counting to 6, 7 and 8** • Children continue to apply the counting principles when counting to 6, 7 and 8 (forwards and backwards). • Children can represent 6, 7 and 8 in different ways and can count out the required number of objects from a larger group. • Children can place objects onto a 10 frame to support them to subitise 6, 7 and 8 to see them as 5 and 1; 5 and 2; 5 and 3.	**Number and Place Value (Numbers to 10)** **Counting to 9 and 10** • Children continue to apply the counting principles when counting to 9 and 10 (forwards and backwards). • Children can represent 9 and 10 in different ways and can count out the required number of objects from a larger group. • Children may notice that the 10 frame is full when there are 10. • Children can use 10 frames, fingers and bead strings to subitise 9 and 10.	**Number and Place Value (Numbers to 10)** **Comparing groups up to 10** • Children make comparisons by lining items up to compare them directly or by counting each set carefully and comparing their position in the counting order. • Children's knowledge of where each number sits in relation to other numbers should be improving as they develop a sense of number. • Children understand that when making comparisons a set can have more items, fewer items of the same number of items as another set. Children begin by comparing 2 sets and progress to ordering 3 or more sets.	**Measurement (Time)** **My Day** • Children order important times in their day and use positional language to describe when events happen e.g. now, before, later, soon, after and next. • Children start to develop a sense of time and use the vocabulary 'yesterday', 'today' and 'tomorrow' to describe when relative events happen. • Children begin to measure time in simple ways e.g. the number of sleeps to an event/using timers to measure the duration of events.

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Spring 2					
Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
Addition and Subtraction (Addition to 10) **Number bonds to 10 – ten frame** • Children explore number bonds to 10 using a 10 frame. • Children may use different representations such as fingers, number shapes or bead strings to explore the bonds to 10.	**Addition and Subtraction (Addition to 10)** **Number bonds to 10 – part-whole model** • Children use the part-whole model to continue exploring number bonds to 10. • Children are encourage to move the objects between the whole and the 2 parts. • Children should be shown the part-whole model in different orientation so that the whole is not always on top.	**Geometry (Shape and space)** **Spatial Awareness** • Children hear and begin to use positional language to describe how items are positioned in relation to other items. • Children begin to represent real places they have visited or places in stories with their drawings, maps or models. • Children build life-sized journeys outdoors and travel through them, exploring them from different perspectives.	**Geometry (Shape and space)** **3-D Shapes** • Children will naturally explore 3-D shapes through their block play and modelling. • Children should be introduced to the names of the shapes. • Children are given opportunities to exp[lore similarities and differences between them and to sort them according to what they notice. • Children are prompted to consider which shapes are good for stacking, which will roll and why that is. • Children should be given the opportunities to construct their own 3-D shapes in different ways.	**Geometry (Shape and space)** **2-D Shapes** • Children are encouraged to see 2-D shapes on the flat faces of 3D shapes. • Children begin to name some common shapes such as circles, triangles and rectangles including squares – shapes should be shown in different orientations. • Children have opportunities to compare 2-D shapes and say what is the same and what is different. • Children are encouraged to explore how shapes can be combined or partitioned to make a new shape.	**Consolidation of:** **Addition and Subtraction (Addition to 10)** **Geometry (Shape and space)**

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Summer 1

Week 1	Week 2	Week 3	Week 4	Week 5
Geometry – Exploring Patterns **Making Simple Patterns** • Children copy, continue and create their own simple repeating patterns. They focus on AB and ABC patterns. • Children should be given opportunities to explore pattern in a range of contexts including shapes, colours, sizes, actions and sounds. Encourage them to build patterns both vertically and horizontally.	**Geometry – Exploring Patterns** **More complex Patterns** • Children copy, continue and create patterns. They explore patterns which use items more than once in each repeat for example ABB, AAB, AABB, AABBB. • Children should be encouraged to say each pattern aloud and to create patterns around the edge of shapes as well as in a straight line.	**Addition and Subtraction - Change** **Adding more** • Children will use real objects to see that the quantity of a group can be changed by adding more. The first, then, now structure can be used to create mathematical stories in meaningful contexts. At first, the children may need to re-count all of the items to see how many they have altogether. Eg. 1,2,3,4… 5,6,7. When they are ready encourage them to count on. Eg. 4… 5,6,7. • Children could represent the number stories using 10 frames, number tracks and their fingers.	**Addition and Subtraction - Change** **Taking away** • Children will use real objects to see that the quantity of a group can be changed by taking items away. The first, then, now structure can be used to create mathematical stories in meaningful contexts. • Encourage children to count out all of the items at the start, take away the required amount practically, and recount to see how many left. • Continue to encourage children to represent the number stories using 10 frames, number tracks and their fingers.	**Number and Place Value – Numbers to 20.** **Counting to 20** • Provide opportunities for children to count beyond 10 learning the number names in order. • Once the children can confidently say the number names provide opportunities for them to match them to quantities and symbols. • Prompt children to recognise that as we count, each number is one more than the number before building staircases to show the growing pattern within numbers to 20.

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Summer 2

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
Multiplication and Division – Numerical Patterns **Doubling** • Children will learn double means 'twice as many'. • They should be given opportunities to build doubles using real objects and mathematical equipment. • Encourage children to say the double as they build them, eg. Double 2 is 4. • Provide examples of doubles and non-doubles for the children to sort and explain why.	**Multiplication and Division – Numerical Patterns** **Halving and Sharing** • Children will halve quantities by sharing items into 2 equal groups. • The distinction between fair and unfair sharing can be used to emphasise the idea of half as being one of 2 **equal** parts. • Once children can confidently halve small quantities, they can explore sharing between 3 or 4 people. They will notice that sometimes there are items left over and may come up with their own suggestions for how to resolve this.	**Multiplication and Division – Numerical Patterns** **Odds and Evens** • Children will begin to understand that quantities which can be shared into 2 equal groups with no items left over are even. Those which have one left over when they are shared into 2 equal groups are odd. • Encourage the children to notice this structure on the number shapes and by building pair-wise patterns on the 10 frames. • Children can explore odd and even by grouping quantities into pairs.	**Measurement - Measure** **Length, height and distance** • Children begin by using language to describe length and height eg. the tree is tall, the pencil is short. When making direct comparisons they may initially say something is big or bigger than something else. • Encourage children to use more specific mathematical vocabulary relating to length (longer, shorter), height (taller, shorter), and breadth (wider, narrower). • Children should move on to make direct comparisons using identical objects such as blocks or cubes to measure each item eg. The sand tray is 5 bricks long and the table is 4 blocks long. The sand tray is longer than the table. • They may also compare distance to see which is further or nearer.	**Measurement - Measure** **Weight** • Children may already have some experience of weight through carrying heavy and light items. Encourage them to make direct comparisons using their hands to estimate which item feels the heaviest and then use balance scales to check. • Prompt children to use the language heavy, heavier, heaviest, light, lighter, lightest to compare items starting with items which have an obvious difference in weight. • Avoid the misconception that bigger items are always heavier by providing some small, heavier items and some large, lighter ones. • Children can also use balance scales to make indirect comparisons by measuring how many cubes or beads balance each item.	**Measurement - Measure** **Capacity** • Children will already have some experience of full and empty. Encourage them to extend their understanding to show half full, nearly full and nearly empty. • Provide opportunities to explore capacity using different materials such as water, sand, rice, cereal and a variety of loose parts. • Children will also need a variety of different sized and shaped containers to investigate. • Prompt children to use language such as tall, thin, narrow, wide and shallow. • Encourage the children to make direct comparisons by pouring from one container to another. They can also use small pots or ladles to make indirect comparisons by counting how many pots it takes to fill each container.

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