

Mathematics Curriculum: Long Term Planning



At St Joseph's we are following our own individualised curriculum supplemented with a number of schemes including: White Rose, Third Space Learning, NCETM & Target Maths.

Below is a topic grid for when each area of learning will be studied. Refer also to individual year group objectives and the whole school progression map.

2-Year-Old Provision	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2		
General Themes	All about me	Night and day	Bears	Colours	Transport	Farm life		
	Developing a strong grounding in number is essential so that all children develop the necessary building blocks to excel mathematically. Children should be able to count confidently, develop a deep understanding of the numbers to 6, the relationships between them and the patterns within those numbers. By providing frequent and varied opportunities to build and apply this understanding - such as using manipulatives, including small pebbles and tens frames for organising counting - children will develop a secure base of knowledge and vocabulary from which mastery of mathematics is built. In addition, it is important that the curriculum includes rich opportunities for children to develop their spatial reasoning skills across all areas of mathematics including shape, space and measures. It is important that children develop positive attitudes and interests in mathematics, look for patterns and relationships, spot connections, 'have a go', talk to adults and peers about what they notice and not be afraid to make mistakes.							
	Learning objectives: I can combine objects like stacking blocks and cups. I can put objects inside others and take them out again. I can take part in finger rhymes with numbers.	Learning objectives: I react to changes of amounts in a group of up the three items. I am developing counting-like behavior, such as making sounds, pointing.	Learning objectives: I can compare amounts saying 'lots'. 'more' or 'same'. I can climb and squeeze into different spaces. I can build with a range of resources.	Learning objectives: I can count in everyday contexts, sometimes skipping numbers. I can complete an inset puzzle. I can compare sizes, using gestures and language such as 'bigger', 'little' or 'small'	Learning objectives: I can build more complex models with a range of resources. I can compare height and length using gestures and language such as ' high', 'low' or 'tall'. I can arrange things in patterns.	Learning objectives: I can compare the weight of an items using gestures and language such as 'heavy'. I can notice patterns in the environment.		
	Learning experiences will include: Free play with a range of objects, daily rhyme time to include finger action rhymes	Learning experiences will include: Adults modelling changes in amounts through play (e.g. adding more bricks/eating up food), adults model counting sequence in a variety of meaningful contexts	Learning experiences will include: Adults describing children's position using positional language, construction play using large blocks and boxes, adults modelling mathematical language during play in a variety of meaningful contexts	Learning experiences will include: Adults model counting sequence in a variety of meaningful contexts, access to inset puzzles, adults modelling mathematical language during play in a variety of meaningful contexts, access to a range of objects in different sizes	Learning experiences will include: Construction play, adults modelling mathematical language during play in a variety of meaningful contexts, access to a range of objects in different sizes/heights, loose part play	Learning experiences will include: Construction play, adults modelling mathematical language during play in a variety of meaningful contexts, access to a range of objects in different sizes/heights, loose part play		





Nursery	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2		
General Themes	All About Me	Stories & Celebrations	Animal Fun	Growing Up	Adventures Under the Sea	A Taste of the World		
	Developing a strong grounding in number is essential so that all children develop the necessary building blocks to excel mathematically. Children should be able to count confidently, develop a deep understanding of the numbers to 6, the relationships between them and the patterns within those numbers. By providing frequent and varied opportunities to build and apply this understanding - such as using manipulatives, including small pebbles and tens frames for organising counting - children will develop a secure base of knowledge and vocabulary from which mastery of mathematics is built. In addition, it is important that the curriculum includes rich opportunities for children to develop their spatial reasoning skills across all areas of mathematics including shape, space and measures. It is important that children develop positive attitudes and interests in mathematics, look for patterns and relationships, spot connections, 'have a go', talk to adults and peers about what they notice and not be afraid to make mistakes.							
	I can explore and name colours. I can match items that look similar such as buttons, shoes, shapes and numicon. I can sort objects using one simple criteria such as shapes, size and colours. I can discuss similarities and differences with items. I can sort natural materials and toys in the environment. I can use informal language such as 'stripy' 'pointy' when sorting objects	I can recite some number names to 5 through rhymes and songs. I can have conversations about numbers. I can subitise, recognise and count number 1 and 2. I can share play toys with a friend when asked I can create a simple ABABAB pattern I can fix a mistake in a pattern. I can make movement patterns.	I can recite some number names in sequence I can subitise, recognise and count numbers 3,4 and 5. I can explore the composition of numbers 3,4 and 5. I can show interest in and join in with number rhymes I can bring one or two objects to and adult when asked I can extend a simple ABABAB pattern I can experiment with my own symbols, marks and numerals	I can subitise, recognise and count numbers to 6. I am beginning to count small quantities accurately. I can identify the shape of everyday objects. I can describe and order three items by height and length. I know language related to height, length and weight. I can describe capacity using language of full, half full and empty.	I can recite some number names in sequence. I can show interest in and join in with number rhymes I can take one object away when asked. I can add one more when asked. I know that the last number reached when counting objects is how many in total I have fast recognition of three objects I can compare quantities using language of more and fewer. I can name some 2D shapes. I can use mathematical language to describe shapes	I can say one number name for each item in order to five I can link numerals and amounts. I can show finger numbers up to five. I can describe a sequence of events in order. I can name the parts of the day. I can identify numerals in the environment. I can represent numbers using marks		





Reception	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2	
General Themes	Who Helps Us?	Into the Woods	Space	Minibeasts and Megabeasts	Food Glorious Food	Imagine	
	Developing a strong grounding in number is essential so that all children develop the necessary building blocks to excel mathematically. Children should be able to count confidently develop a deep understanding of the numbers to 10, the relationships between them and the patterns within those numbers. By providing frequent and varied opportunities to build a apply this understanding - such as using manipulatives, including small pebbles and tens frames for organising counting - children will develop a secure base of knowledge and vocabular from which mastery of mathematics is built. In addition, it is important that the curriculum includes rich opportunities for children to develop their spatial reasoning skills across all are mathematics including shape, space and measures. It is important that children develop positive attitudes and interests in mathematics, look for patterns and relationships, spot connections, 'have a go', talk to adults and peers about what they notice and not be afraid to make mistakes.						
Number Numerical Patterns White Rose Maths	Learning Objectives: I can find and match objects which are the same. I know that objects can be sorted based on a variety of attributes. I can begin to compare amounts. I can begin to compare objects by. size/mass/capacity I can copy, continue and create my own repeated and simple pattern.	Learning Objectives: I can identify representations of 1,2,3. I can compare amounts of 1,2,3 saying one more and one less. I know the composition of 1,2,3 I can recognise circles and triangles and their properties. I can count up to 4 and 5 forwards and backwards. I can subitise sets of up to 4 and 5 objects. I can begin to use positional language. I can find one more and one less up to 5. I can recognise squares and rectangles and their properties I can talk about day and night and order key events in my day.	Learning Objectives: I know that 0/zero represents 'nothing there.' I can compare numbers to 5 saying when an amount is more, fewer or the same. I can count to 8 and can count out 4,5,6,7,8 objects. I can explore the composition of 4,5,6,7,8. I can compare mass/ capacity/length using the appropriate language. I can match objects to find pairs. I can combine two groups to find how many altogether.	Learning Objectives: I can count to 9,10. I can count out 9,10 objects from a larger group. I can explore the composition of 9 and 10. I can compare numbers to 10. I can recognise Number Bonds to 10. I know the names of some 3D shapes. I am beginning to recognise some similarities and differences between 3D shapes.	Learning Objectives: I can build and identify numbers to 20. I can count on and back beyond 10. I can select and rotate a shape to fill a given space (giving reasons for my choices). I can add amounts to 10. I can subtract amounts to 10. I can automatically recall number bonds for numbers 0-5 and some to 10.	Learning Objectives: I know my double facts to 10. I can share and group amounts to 10. I can identify odd and even numbers. I can copy, continue and create a widening range of repeating patterns and symmetrical constructions.	
	Learning experiences will include: Matching and sorting resources, making comparisons between objects that have been sorted, exploring capacity in sand and water, pattern making using resources and actions	Learning experiences will include: Maths songs and rhymes, identifying different numerical representations in classroom, children devising own maths games, printing with 3D shapes, Kadinsky art, dice games, introduction of 5 frames, junk modelling, exploring visual timetables	Learning experiences will include: Maths songs and rhymes, comparing classroom resources, Numicon exploration, creating amounts with cubes, using balancing scales, jugs in water area, dice games, dominos, part-part whole models, height charts	Learning experiences will include: Using 10 frames, using fingers for counting, exploring and creating number lines, using Numicon to create number bonds, construction using 3D shapes	Learning experiences will include: Using 10 frames and Numicon to represent numbers beyond 10, daily counting routines and games, puzzles, elastic boards for shape exploration, using concrete resources to add and subtract	Learning experiences will include: Sharing maths songs, recalling number bonds and number facts, using a range of concrete mathematical resources to explore number and numerical patterns, creating patterns with shapes and numbers	









Year 1	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Number: Place Value	Wk 1 - Place value within 10	Wk 8 – Addition & subtraction – number bonds	Wk 1 – Place Value (within 50)	Wk 7 - Measurement - Length & height	Wk 1 – Number – Place Value (Within 100)	Wk 7 - Number – Fractions
Number: Addition & Subtraction Number: Multiplication &	Wk 2 - Place value within 10	Wk 9 – Addition & subtraction	Wk 2 - Place Value (within 50)	Wk 8 - Measurement – Mass & volume	Wk 2 - Number – Place Value (Within 100)	Wk 8 - Measurement - Money
Division Number: fractions	Wk 3 - Place value – one more/less	Wk 10 – subtraction	Wk 3 - Addition and subtraction	Wk 9 – Measurement – Mass & volume	Wk 3 - Multiplication and division	Wk 9 - Measurement – Time
Number: Decimals & Percentages	Wk 4 - Place value – greater or less than/comparing	Wk 11 – Place value within 20	Wk 4 - Addition and subtraction	Week 10 – Geometry – 2D & 3D shapes	Wk 4 - Multiplication and division	Wk 10 - Measurement – Time
Geometry Measurement Statistics	Wk 5 - Place value – greater than/comparing	Wk 12 – Place value within 20	Wk 5 – Addition and subtraction	Wk 11 - Geometry – position and direction	Wk 5 - Multiplication and division	Wk 11 - Assessment/interventions
Ratio & Proportion Algebra	Wk 6 – Addition & subtraction – part-whole models	Wk 13 – Assessment/targeted interventions.	Wk 6 – Measurement - Length & height	Wk 12 – Assessment / targeted interventions	Wk 6 – Number – Fractions	Wk 12 - Consolidation
	Wk 7 Consolidation	Wk 14 Consolidation				
Key facts	Number bonds for all numbers 1-15 Count in 1s, 10s, 5s, 2s			mber bonds for all numbers 1-25 mber bonds for multiples of ten to 50.		of ten to 100.
Recording	Bar models Number lines – jumps of one		Bar models Number lines – jumps of who	ole numbers	Bar models Number lines – jumps of tens and ones	





Year 2	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Number: Place Value	Wk 1 - Number: Place value	Wk 8 – Addition and subtraction	Wk 1 Measurement: Money	Wk 7 – Measurement: Length and height	Wk 1 - Number: Fractions	Wk 7 - Geometry: Position and directions
Number: Addition & Subtraction Number: Multiplication &	Wk 2 - Number: Place value	Wk 9 - Addition and subtraction	Wk 2 - Measurement: Money	Wk 8 - Measurement: Length and height	Wk 2 - Number: Fractions	Wk 8 - Geometry: Position and directions
Division Number: fractions	Wk 3 - Number: Place value	Wk 10 - Addition and subtraction	Wk 3 - Number: Multiplication and division	Wk 9 – Measurement: Mass, capacity and temperature	Wk 3 - Number: Fractions	Wk 9 – Statistics
Number: Decimals & Percentages Geometry	Wk 4 - Number: Place value	Wk 11 - Measurement – Shape	Wk 4 - Number: Multiplication and division	Measurement: Mass, capacity and temperature	Wk 4 - Measurement: Time	Wk 10 - Statistics
Measurement Statistics	Wk 5 - Number: Addition and subtraction	Wk 12 - Measurement - money	Wk 5 - Number: Multiplication and division	Wk 11 - Mass, capacity and temperature	Wk 5 - Measurement: Time	Wk 11 - Consolidation
Ratio & Proportion Algebra	Wk 6 Number: Addition and subtraction	Wk 13 – Assessment/interventions	Wk 6 - Number: Multiplication and division	Wk 12 – Assessment/interventions	Wk 6 - Measurement: Time	Wk 12 – Assessment/interventions
	Wk 7 Consolidation	Wk 14 Consolidation				
Key facts	Recognise the inverse relationship between addition & subtraction. Recognise properties of 2D & 3D shapes.		Ten times table Five times table Two times table		Ten times table Five times table Two times table	
Recording	Bar models Number lines Partitioning		Bar models Number lines Partitioning		Bar models Number lines Partitioning	





Year 3	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Number: Place Value	Wk 1 - Place Value	Wk 8 - Addition and Subtraction	Wk 1 - Multiplication and Division	Wk 7 – Fractions	Wk 1 - Measurement: Mass and capacity	Wk 7 - Measurement: Time
Number: Addition & Subtraction Number: Multiplication &	Wk 2 - Place Value	Wk 9 - Multiplication and Division	Wk 2 - Multiplication and Division	Wk 8 - Fractions	Wk 2 - Measurement: Mass and capacity	Wk 8 - Geometry: Properties of Shape
Division Number: fractions	Wk 3 - Place Value	Wk 10 - Multiplication and Division	Wk 3 - Multiplication and Division	Wk 9 – Fractions	Wk 3 - Measurement: Money	Wk 9 - Geometry: Properties of Shape
Number: Decimals & Percentages	Wk 4 - Addition and Subtraction	Wk 11 - Multiplication and Division	Wk 4 - Multiplication and Division	Wk 10 - Fractions	Wk 4 - Measurement: Money	Wk 10 - Statistics
Geometry Measurement	Wk 5 - Addition and Subtraction	Wk 12 - Multiplication and Division	Wk 5 – Measurement: Length and perimeter	Wk 11 - Fractions	Wk 5 – Measurement: Time	Wk 11 - Statistics
Statistics Ratio & Proportion	Wk 6 - Addition and Subtraction	Wk 13 – Assessment/interventions	Wk 6 – Measurement: Length and perimeter	Wk 12 - Measurement: Mass and capacity	Wk 6 – Measurement: Time	Wk 12 – Assessment/intervention
Algebra	Wk 7 Consolidation	Wk 14 Consolidation				
Key facts	Four times table Eight times table Three times table		Four times table Eight times table Three times table		Four times table Eight times table Three times table	
Recording	Bar models Number lines Expanded column method addition & subtraction Decomposition addition Multiplication grid method		Bar models Number lines Expanded column method ac Decomposition addition & su Multiplication grid method Partitioning to divide	method Multiplication grid method		





Year 4	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2	
Number: Place Value	Wk 1 - Place Value	Wk 8 - Addition and Subtraction	Wk 1 - Number: Multiplication and division	Wk 7 – Fractions	Wk 1 - Number: Decimals	Wk 7 – Measurement: Consolidation of time	
Number: Addition & Subtraction Number: Multiplication &	Wk 2 - Place Value	Wk 9 – Measurement: Area	Wk 2 - Multiplication and Division	Wk 8 - Fractions	Wk 2 - Number: Decimals	Wk 8 - Geometry: Position and direction	
Division Number: fractions	Wk 3 - Place Value	Wk 10 – Number: Multiplication and division	Wk 3 - Multiplication and Division	Wk 9 – Fractions	Wk 3 - Number: Decimals	Wk 9 - Geometry: Position and direction (consolidation)	
Number: Decimals & Percentages	Wk 4 - Place Value	Wk 11 - Number: Multiplication and division	Wk 4 - Measurement: Length and perimeter	Wk 10 – Number: Decimals	Wk 4 - Measurement: Money	Wk 10 – Geometry: Shape	
Geometry Measurement	Wk 5 - Addition and Subtraction	Wk 12 - Number: Multiplication and division	Wk 5 - Measurement: Length and perimeter	Wk 11 – Number: Decimals	Wk 5 – Measurement: Money	Wk 11 – Geometry: Shape	
Statistics Ratio & Proportion	Wk 6 - Addition and Subtraction	Wk 13 – Assessment/intervention	Wk 6 - Fractions	Wk 12 - Number: Decimals Assessment	Wk 6 – Measurement: Time	Wk 12 – Statistics	
Algebra	Wk 7 Consolidation	Wk 14 – Consolidation					
Key facts	Six times table Nine times table Seven times table		Six times table Nine times table Seven times table		Six times table Nine times table Seven times table		
Recording	Bar model Column method addition & subtraction Grid method multiplication Expanded layout multiplication Compact multiplication Chunking		Grid method multiplication Expanded layout Expanded layout multiplication Compact multiplication multiplication		Column method addition & su Expanded layout multiplication Compact multiplication Chunking for division		





Year 5	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Number: Place Value	Wk 1 - Number- Place Value	Wk 8 - Number- Multiplication and division	Wk 1 - Number- Multiplication and division	Wk 7 - Number – Decimals and percentages	Wk 1 - Geometry – Properties of shape	Wk 7 – Measurement: Converting Units of Measurement.
Number: Addition & Subtraction Number: Multiplication &	Wk 2 - Number- Place Value	Wk 9 – Number- Multiplication and division	Wk 2 - Multiplication and division	Wk 8 - Number – Decimals and percentages	Wk 2 - Geometry – Position and direction	Wk 8 – Measurement: Converting Units of Measurement
Number: fractions Number: Decimals &	Wk 3 - Number- Place Value	Wk 10 – Number – Fractions	Wk 3 - Multiplication and division	Wk 9 – Measurement – Perimeter and area	Wk 3 - Geometry – Position and direction	Wk 9 – Measurement: Volume
Geometry	Wk 4 - Number- Addition and Subtraction	Wk 11 - Number – Fractions	Wk 4 - Number – Fractions	Wk 10 – Measurement – Perimeter and area	Wk 4 – Number: Decimals	Wk 10 – Number: Negative numbers
Measurement Statistics Ratio & Proportion	Wk 5 - Number- Addition and Subtraction	Wk 12 - Number – Fractions	Wk 5 - Number – Fractions	Wk 11 - Geometry – Properties of shape	Wk 5 – Number: Decimals	Wk 11 – Statistics
Algebra	Wk 6 - Number- Multiplication and division	Wk 13 – Assessment/intervention	Wk 6 - Number – Decimals & Percentages	Wk 12 – Geometry – Properties of shape	Wk 6 – Number: Decimals	Wk 12 – Statistics/assessment
	Wk 7 Consolidation	Wk 14 – Number - Fractions				
Key facts	Recall all multiplication facts Prime numbers to 19		Recall all multiplication facts Prime numbers to 19		Recall all multiplication facts Prime numbers to 19	
Recording	Bar models Column addition & subtraction Compact multiplication Bus stop division		Bar models Column addition & subtraction Compact multiplication Bus stop division	Bar models Column addition & subtraction Compact multiplication Bus stop division		n





Year 6	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Number: Place Value Number: Addition &	Wk 1 - Number: Place Value	Wk 8 – Number: Fractions	Wk 1 - Number: Decimals	Wk 7 - Measurement: Area, perimeter and volume	Wk 1 – Algebra	Wk 8-11 – Consolidation Project 2 White Rose Tours
Number: Multiplication & Division	Wk 2 - Number: Place Value	Wk 9 – Number: Fractions	Wk 2 - Number: Decimals	Wk 8 - Measurement: Area, perimeter and volume	Wk 2 – Algebra	
Number: fractions Number: Decimals &	Wk 3 – Number: Addition, subtraction, multiplication & division	Wk 10 - Number: Fractions	Wk 3 - Number: Decimals	Wk 9 - Geometry: Shape	Wk 3 - Consolidation	
Geometry Measurement	Wk 4 – School Residential	Wk 11 -Number: Fractions	Wk 4 - Number: Number: Fractions, decimals and percentages	Wk 10 - Geometry: Position & Direction	Wk 4 - SATS WEEK	
Statistics Ratio & Proportion	Wk 5 Number: Addition, subtraction, multiplication & division	Wk 12 - Measurement: Converting units and assessment	Wk 5 – Number: Fractions, decimals and percentages	WK 11 - Statistics	Wk 5-7 - Consolidation Project 1 White Rose Bakery	
Algebra	Wk 5 Number: Addition, subtraction, multiplication & division	Wk 13 - Ratio	Wk 6 – Number: Fractions, decimals and percentages	WK 12 – Statistics/assessment		Wk 12 – Consolidation
	Wk 5 Number: Addition, subtraction, multiplication & division	Wk 14 – Ratio				
Key facts	Recall all multiplication facts Prime numbers to 19		Recall all multiplication facts Prime numbers to 19		Recall all multiplication facts Prime numbers to 19	
Recording	Bar models Column addition & subtraction Compact multiplication Bus stop division		Bar models Column addition & subtraction Compact multiplication Bus stop division	n	Bar models Column addition & subtraction Compact multiplication Bus stop division	า