Mathematics year group overview

‘Together we unlock potential and learn for life’

Mathematics					
0-3 year olds (Pre –Nursery)					
Typically 0-12 months		Typically 1 to 2 years		Typically 2-3 years	
Topic 1 …	Topic 2 …	Topic 3 ..	Topic 1 …	Topic 2 …	Topic 3 ..
• Combine objects like stacking blocks and cups. • Put objects inside others and take them out again. • Climb and squeezing selves into different types of spaces. • Build with a range of resources		• React to changes of amount in a group of up to three items • · Counting-like behaviour, such as making sounds, pointing or saying some numbers in sequence. • · Complete inset puzzles.		• Take part in finger rhymes with numbers • Compare amounts, saying 'lots', 'more' or 'same'. • Count in everyday contexts, sometimes skipping numbers - '1-2-3-5.' • Notice patterns and arrange things in patterns.	

Mathematics		
3- 4 year olds (Nursery)		
Autumn –	**Spring –**	**Summer –**
• Show 'finger numbers' up to 5. • Talk about and identifies the patterns around them. For example: stripes on clothes, designs on rugs and wallpaper. Use informal language like 'pointy', 'spotty', 'blobs' etc • Understand position through words alone – for example, "The bag is under the table," – with no pointing. • Select shapes appropriately: flat surfaces for building, a triangular prism for a roof etc. • Name and recognise some 2D shapes (added to support Spring term not an official statement).	• say one number for each item in order: 1,2,3,4,5. • Know that the last number reached when counting a small set of objects tells you how many there are in total ('cardinal principle'). • Link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5 • Experiment with their own symbols and marks as well as numerals. • Discuss routes and locations, using words like 'in front of' and 'behind'. • Talk about and explore 2D using informal and mathematical language: 'sides', 'corners'; 'straight', 'flat', 'round'. • • Extend and create ABAB patterns – stick, leaf, stick, leaf.	• Recite numbers past 5 • Combine shapes to make new ones – an arch, a bigger triangle etc. • Talk about and explore 3D using informal and using informal and mathematical language: 'sides', 'corners'; 'straight', 'flat', 'round'. • Notice and correct an error in a repeating pattern • Begin to describe a sequence of events, real or fictional, using words such as 'first', 'then'. • Solve real world mathematical problems with numbers up to 5. • Compare quantities using language: 'more than', 'fewer than' • Describe a familiar route • Fast recognition of up to 3 objects, without having to count them individually ('subitising'). • Make comparisons between objects relating to size, length, weight and capacity

Mathematics

Reception Year

Autumn -	Spring -	Summer -
• Counts objects, actions and sounds. • Link numeral with its cardinal number value. • Subitise • Select, rotate and manipulate shapes in order to develop spatial reasoning skills • Compare lengths, weight and capacity • Continue, copy and compare patterns	• Compare numbers • Compare quantities up to 10 in different contexts, recognising one quantity is greater than, less than or the same as another. (ELG) • Count beyond ten • Understand the 'one more than/ one less than' relationship between consecutive numbers • Explore composition on 10 • Atomically recall number bonds for numbers to 10 • Compose and decompose shapes so that children recognise a shape can have other shapes within it, just as numbers can. • Subitise up to 5.	• Verbally count beyond 20, recognising the pattern of the counting system. • Have a deep understanding of numbers to 10, including the composition of each number • Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds up to 10, including double facts. • Explore and represent patterns within numbers up to 10, including evens, odds, double facts and how quantities can be distributed equally.

Number ELG	Numerical Patterns ELG
Have a deep understanding of number to 10, including the composition of each number. Subitise (recognise quantities without counting) up to 5. Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts.	Verbally count beyond 20, recognising the pattern of the counting system. Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity. Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.

Reception Guidance

#MathsEveryoneCan

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Place Value - Numbers to 5 Addition and Subtraction - Sorting Place Value - Comparing groups Addition and Subtraction - Change within 5 Measurement - Time											
Spring	Addition and Subtraction - Numbers to 5 Place Value - Numbers to 10 Addition and Subtraction - Addition to 10 Geometry - Shape and space											
Summer	Geometry - Exploring patterns Addition and Subtraction - Count on and back Place Value - Numbers to 20 Multiplication and Division - Numerical patterns Measurement - Measure											

Reception - Notes and guidance

Autumn Progression

Number and Place Value	Numbers to 5	One, two, three
		Four
		Five
Addition and Subtraction	Sorting	Sorting into groups
Number and Place Value	Comparing groups	Comparing quantities of identical objects
		Comparing quantities of non-identical objects
Addition and Subtraction	Change within 5	One more
		One less
Measurement	Time	My day

Reception - Notes and guidance

Spring Progression

Addition and Subtraction	Numbers to 5	→ Number bonds to 5
Number and Place Value	Numbers to 10	→ Counting to 6, 7 and 8
		→ Counting to 9 and 10
		→ Comparing groups up to 10
Addition and Subtraction	Addition to 10	→ Combining two groups to find the whole
		→ Number bonds to 10 – ten frame
		→ Number bonds to 10 – part-whole model
Geometry	Shape and space	→ Spatial awareness
		3-D shapes
		2-D shapes

Reception - Notes and guidance

Summer Progression

Geometry	Exploring patterns	→ Making simple patterns
		→ Exploring more complex patterns
Addition and Subtraction	Count on and back	→ Adding by counting on
		→ Taking away by counting back
Number and Place Value	Numbers to 20	→ Counting to 20
Multiplication and Division	Numerical patterns	→ Doubling
		→ Halving and sharing
		→ Odds and evens
Measurement	Measure	→ Length, height and distance
		→ Weight
		→ Capacity

Year 1

Small Steps Guidance and Examples

White Rose Maths

WRM – Year 1 – Scheme of Learning 2.0

Year 1 – Yearly Overview

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number: Place Value (within 10)				Number: Addition and Subtraction (within 10)				Geometry: Shape	Number: Place Value (within 20)		Consolidation
Spring	Number: Addition and Subtraction (within 20)				Number: Place Value (within 50) (Multiples of 2, 5 and 10 to be included)			Measurement: Length and Height		Measurement: Weight and Volume		Consolidation
Summer	Number: Multiplication and Division (Reinforce multiples of 2, 5 and 10 to be included)			Number: Fractions		Geometry: position and direction	Number: Place Value (within 100)		Measurement : money	Time		Consolidation

WRM – Year 1 – Scheme of Learning 2.0

Year 1 – Autumn Term

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Number: Place Value Count to ten, forwards and backwards, beginning with 0 or 1, or from any given number. Count, read and write numbers to 10 in numerals and words. Given a number, identify one more or one less. Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least.				Number: Addition and Subtraction Represent and use number bonds and related subtraction facts within 10 Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs. Add and subtract one digit numbers to 10, including zero. Solve one step problems that involve addition and subtraction, using concrete objects and pictorial representations and missing number problems.				Geometry: Shape Recognise and name common 2-D shapes, including: (for example, rectangles (including squares), circles and triangles) Recognise and name common 3-D shapes, including: (for example, cuboids (including cubes), pyramids and spheres.)	Number: Place Value Count to twenty, forwards and backwards, beginning with 0 or 1, from any given number. Count, read and write numbers to 20 in numerals and words. Given a number, identify one more or one less. Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least.		Consolidation

Year 1 – Spring Term

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Number: Addition and Subtraction Represent and use number bonds and related subtraction facts within 20 Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs. Add and subtract one-digit and two-digit numbers to 20, including zero. Solve one step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7= ☐ – 9				Place Value Count to 50 forwards and backwards, beginning with 0 or 1, or from any number. Count, read and write numbers to 50 in numerals. Given a number, identify one more or one less. Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least. Count in multiples of twos, fives and tens.			Measurement: Length and Height Measure and begin to record lengths and heights. Compare, describe and solve practical problems for: lengths and heights [for example, long/short, longer/shorter, tall/short, double/half)		Measurement: Weight and Volume Measure and begin to record mass/weight, capacity and volume. Compare, describe and solve practical problems for mass/weight: [for example, heavy/light, heavier than, lighter than]; capacity and volume [for example, full/empty, more than, less than, half, half full, quarter]		Consolidation

WRM – Year 1 – Scheme of Learning 2.0

Year 1 – Summer Term

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Number: Multiplication and Division Count in multiples of twos, fives and tens. Solve one step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher.			Number: Fractions Recognise, find and name a half as one of two equal parts of an object, shape or quantity. Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity. Compare, describe and solve practical problems for: lengths and heights (for example, long/short, longer/shorter, tall/short, double/half) Compare, describe and solve practical problems for: mass/weight [for example, heavy/light, heavier than, lighter than]; capacity and volume [for example, full/empty, more than, less than, half, half full, quarter]		Geometry: position and direction Describe position, direction and movement, including whole, half, quarter and three quarter turns	Number: Place Value Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number. Count, read and write numbers to 100 in numerals. Given a number, identify one more and one less. Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than, most, least.		Measurement: Money Recognise and know the value of different denominations of coins and notes.	Measurement: Time Sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening. Recognise and use language relating to dates, including days of the week, weeks, months and years. Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times. Compare, describe and solve practical problems for time [for example, quicker, slower, earlier, later] Measure and begin to record time (hours, minutes, seconds)		Consolidation

Year 2

Small Steps Guidance and Examples

White Rose Maths

Year 2 – Yearly Overview

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number: Place value			Number: Addition and Subtraction					Measurement: Money		Number: Multiplication and Division	
Spring	Number: Multiplication and Division		Statistics	Geometry: Properties of Shape			Number: Fractions				Measurement: length and height	Consolidation
Summer	Position and direction			Problem solving and efficient methods		Measurement: Time		Measurement: Mass, Capacity and Temperature			Investigations	

WRM – Year 2 – Scheme of Learning 2.0

Year 2 – Autumn Term

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Number – Place Value Read and write numbers to at least 100 in numerals and in words. 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. Use place value and number facts to solve problems. Count in steps of 2, 3 and 5 from 0, and in tens from any number, forward and backward.			Number – Addition and Subtraction 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. Show that the addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot. 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. Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.					Measurement: Money Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value. Find different combinations of coins that equal the same amounts of money. Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change.		Multiplication and Division Recall and use multiplication and division facts for the 2, 5 and 10 times tables, including recognising odd and even numbers. Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (x), division (÷) and equals (=) sign. Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods and multiplication and division facts, including problems in contexts. Show that the multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot.	

Year 2 – Spring Term

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
<u>Multiplication and Division</u> Recall and use multiplication and division facts for the 2, 5 and 10 times tables, including recognising odd and even numbers. Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs. Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods and multiplication and division facts, including problems in contexts. Show that the multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot.		<u>Statistics</u> Interpret and construct simple pictograms, tally charts, block diagrams and simple tables. Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity. Ask and answer questions about totalling and comparing categorical data.		<u>Geometry- properties of shape</u> Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line. Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces. Identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid.] Compare and sort common 2-D and 3-D shapes and everyday objects.			<u>Number – fractions</u> 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. Write simple fractions for example, $\frac{1}{2}$ of 6 = 3 and recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$.			<u>Measurement: length and height</u> Choose and use appropriate standard units to estimate and measure <u>length/height in any direction (m/cm)</u>; mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, <u>using rulers</u>, scales, thermometers and measuring vessels <u>Compare and order lengths</u>, mass, volume/capacity and <u>record the results using >, < and =</u>	Consolidation

WRM – Year 2 – Scheme of Learning 2.0

Year 2 – Summer Term

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
<u>Position and Direction</u> 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). Order and arrange combinations of mathematical objects in patterns and sequences			Problem solving and Efficient methods.		<u>Measurement: Time</u> 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.		<u>Measurement: Mass, Capacity and Temperature</u> <u>Choose and use appropriate standard units to estimate and measure</u> length/height in any direction (m/cm); <u>mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using</u> rulers, <u>scales, thermometers and measuring vessels</u> <u>Compare and order</u> lengths, <u>mass, volume/capacity and record the results using >, < and =</u>			Investigations	

Year 3

Small Steps Guidance and Examples

White Rose Maths

WRM – Year 3 – Scheme of Learning 2.0

Year 3 – Yearly Overview

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number – Place Value			Number – Addition and Subtraction					Number – Multiplication and Division			Consolidation
Spring	Number - Multiplication and Division			Measurement: Money	Statistics		Measurement: length and perimeter			Number - Fractions		Consolidation
Summer	Number – fractions			Measurement: Time			Geometry – Properties of Shapes		Measurement: Mass and Capacity			Consolidation

WRM – Year 3 – Scheme of Learning 2.0

Year 3 – Autumn Term

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Number – Place Value Identify, represent and estimate numbers using different representations. Find 10 or 100 more or less than a given number Recognise the place value of each digit in a three-digit number (hundreds, tens, ones). Compare and order numbers up to 1000 Read and write numbers up to 1000 in numerals and in words. Solve number problems and practical problems involving these ideas. Count from 0 in multiples of 4, 8, 50 and 100			Number – Addition and Subtraction Add and subtract numbers mentally, including: a three-digit number and ones; a three-digit number and tens; a three digit number and hundreds. Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction. Estimate the answer to a calculation and use inverse operations to check answers. Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction.					Number – Multiplication and Division Count from 0 in multiples of 4, 8, 50 and 100 Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables. Write and calculate mathematical statements for multiplication and division using the multiplication tables they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods. Solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which *n* objects are connected to *m* objectives.			

WRM – Year 3 – Scheme of Learning 2.0

Year 3 – Spring Term

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
<u>Number – multiplication and division</u> Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables. Write and calculate mathematical statements for multiplication and division using the multiplication tables they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods. Solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which *n* objects are connected to *m* objectives.			<u>Measurement – money</u> Add and subtract amounts of money to give change, using both £ and p in practical contexts.	<u>Statistics</u> Interpret and present data using bar charts, pictograms and tables. Solve one-step and two-step questions [for example, 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables.		<u>Measurement – length and perimeter</u> <u>Measure, compare, add and subtract: lengths (m/cm/mm)</u>; mass (kg/g); volume/capacity (l/ml). Measure the perimeter of simple 2D shapes.			<u>Number – fractions</u> Count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10 Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators. Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators. Solve problems that involve all of the above.		Consolidation

WRM – Year 3 – Scheme of Learning 2.0

Year 3 – Summer Term

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Number – fractions Recognise and show, using diagrams, equivalent fractions with small denominators. Compare and order unit fractions, and fractions with the same denominators. Add and subtract fractions with the same denominator within one whole [for example, $\frac{5}{7}+\frac{1}{7}=\frac{6}{7}$] Solve problems that involve all of the above.			Measurement – time Tell and write the time from an analogue clock, including using Roman numerals from I to XII and 12-hour and 24-hour clocks. Estimate and read time with increasing accuracy to the nearest minute. Record and compare time in terms of seconds, minutes and hours. Use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight. Know the number of seconds in a minute and the number of days in each month, year and leap year. Compare durations of events [for example to calculate the time taken by particular events or tasks].			Geometry – properties of shape Recognise angles as a property of shape or a description of a turn. Identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle. Identify horizontal and vertical lines and pairs of perpendicular and parallel lines. Draw 2-D shapes and make 3-D shapes using modelling materials. Recognise 3-D shapes in different orientations and describe them.		Measurement – mass and capacity Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml).			Consolidation

Year 4

Small Steps Guidance and Examples

WRM – Year 4 – Scheme of Learning 2.0

Year 4 – Yearly Overview

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number – Place Value				Number- Addition and Subtraction			Measurement - Length and Perimeter	Number- Multiplication and Division			Consolidation
Spring	Number- Multiplication and Division			Measurement - Area	Fractions				Decimals			Consolidation
Summer	Decimals		Measurement- Money		Time	Statistics		Geometry- Properties of Shape			Geometry- Position and Direction	Consolidation

WRM – Year 4 – Scheme of Learning 2.0

Year 4 – Autumn Term

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Number – Place Value Count in multiples of 6, 7, 9. 25 and 1000. Find 1000 more or less than a given number. Recognise the place value of each digit in a four digit number (thousands, hundreds, tens and ones) Order and compare numbers beyond 1000 Identify, represent and estimate numbers using different representations. Round any number to the nearest 10, 100 or 1000 Solve number and practical problems that involve all of the above and with increasingly large positive numbers. Count backwards through zero to include negative numbers. Read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value.				Number- Addition and Subtraction Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate. Estimate and use inverse operations to check answers to a calculation. Solve addition and subtraction two step problems in contexts, deciding which operations and methods to use and why.			Measurement: Length and Perimeter Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres Convert between different units of measure [for example, kilometre to metre]	Number – Multiplication and Division Recall and use multiplication and division facts for multiplication tables up to 12 × 12. Count in multiples of 6, 7, 9. 25 and 1000 Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers. Solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects.			Consolidation

WRM – Year 4 – Scheme of Learning 2.0

Year 4 – Spring Term

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
<u>Number – multiplication and division</u> Recall and use multiplication and division facts for multiplication tables up to 12 × 12. Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers. Recognise and use factor pairs and commutativity in mental calculations. Multiply two digit and three digit numbers by a one digit number using formal written layout. Solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects.			<u>Measurement-Area</u> Find the area of rectilinear shapes by counting squares.	<u>Fractions</u> Recognise and show, using diagrams, families of common equivalent fractions. Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten. Solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number. Add and subtract fractions with the same denominator.				<u>Decimals</u> Recognise and write decimal equivalents of any number of tenths or hundredths. Find the effect of dividing a one or two digit number by 10 or 100, identifying the value of the digits in the answer as ones, tenths and hundredths <u>Solve simple measure</u> and money <u>problems involving fractions and decimals to two decimal places.</u> Convert between different units of measure [for example, kilometre to metre]			Consolidation

WRM – Year 4 – Scheme of Learning 2.0

Year 4 – Summer Term

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
<u>Decimals</u> Compare numbers with the same number of decimal places up to two decimal places. Round decimals with one decimal place to the nearest whole number. Recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$ and $\frac{3}{4}$ Find the effect of dividing a one or two digit number by 10 or 100, identifying the value of the digits in the answer as ones, tenths and hundredths		<u>Measurement- Money</u> Estimate, compare and calculate different measures, including money in pounds and pence. Solve simple measure and money problems involving fractions and decimals to two decimal places.		<u>Time</u> <u>Convert between different units of measure [for example,</u> kilometre to metre; <u>hour to minute]</u> Read, write and convert time between analogue and digital 12- and 24-hour clocks. Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days.	<u>Statistics</u> Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs. Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.		<u>Geometry: Properties of shape</u> Identify acute and obtuse angles and compare and order angles up to two right angles by size. Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes. Identify lines of symmetry in 2-D shapes presented in different orientations. Complete a simple symmetric figure with respect to a specific line of symmetry.			<u>Geometry- Position and Direction</u> Describe positions on a 2-D grid as coordinates in the first quadrant. Plot specified points and draw sides to complete a given polygon. Describe movements between positions as translations of a given unit to the left/ right and up/ down.	Consolidation

Year 5

Small Steps Guidance and Examples

White Rose Maths

WRM – Year 5 – Scheme of Learning 2.0

Year 5 – Yearly Overview

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number – Place Value			Number – Addition and Subtraction		Statistics		Number – Multiplication and Division		Perimeter and Area		Consolidation
Spring	Number – Multiplication and Division			Number – Fractions						Number – Decimals & Percentages		Consolidation
Summer	Number – Decimals				Geometry- Properties of Shapes			Geometry- Position and Direction	Measurement- Converting Units		Measures Volume	Consolidation

WRM – Year 5 – Scheme of Learning 2.0

Year 5 – Autumn Term

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
<u>Number – Place Value</u> Read, write, order and compare numbers to at least 1000000 and determine the value of each digit. Count forwards or backwards in steps of powers of 10 for any given number up to 1000000. Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers including through zero. Round any number up to 1000000 to the nearest 10, 100, 1000, 10000 and 100000 Solve number problems and practical problems that involve all of the above. Read Roman numerals to 1000 (M) and recognise years written in Roman numerals.			<u>Number- Addition and Subtraction</u> Add and subtract numbers mentally with increasingly large numbers. Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy. Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.		<u>Statistics</u> Solve comparison, sum and difference problems using information presented in a line graph. Complete, read and interpret information in tables including timetables.		<u>Number – multiplication and division</u> Multiply and divide numbers mentally drawing upon known facts. Multiply and divide whole numbers by 10, 100 and 1000. Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers. Recognise and use square numbers and cube numbers and the notation for squared (^{2}) and cubed (^{3}) Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes. Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers. Establish whether a number up to 100 is prime and recall prime numbers up to 19		<u>Perimeter and Area</u> Measure and calculate the perimeter of composite rectilinear shapes in cm and m. Calculate and compare the area of rectangles (including squares), and including using standard units, cm^2, m^2 estimate the area of irregular shapes.		Consolidation

WRM – Year 5 – Scheme of Learning 2.0

Year 5 – Spring Term

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
<u>Number – Multiplication and Division</u> Multiply and divide numbers mentally drawing upon known facts. Multiply numbers up to 4 digits by a one or two digit number using a formal written method, including long multiplication for 2 digit numbers. Divide numbers up to 4 digits by a one digit number using the formal written method of short division and interpret remainders appropriately for the context. Solve problems involving addition and subtraction, multiplication and division and a combination of these, including understanding the use of the equals sign.			<u>Number: Fractions</u> Compare and order fractions whose denominators are multiples of the same number. Identify, name and write equivalent fractions of a given fraction, represented visually including tenths and hundredths. Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements >1 as a mixed number [for example $\frac{2}{5}+\frac{4}{5}=\frac{6}{5}=1\frac{1}{5}$] Add and subtract fractions with the same denominator and denominators that are multiples of the same number. Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams. Read and write decimal numbers as fractions [for example 0.71 = $\frac{71}{100}$] Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.				<u>Number: Decimals and Percentages</u> Read, write, order and compare numbers with up to three decimal places. Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents. Round decimals with two decimal places to the nearest whole number and to one decimal place. Solve problems involving number up to three decimal places. Recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal. Solve problems which require knowing percentage and decimal equivalents of $\frac{1}{2}, \frac{1}{4}, \frac{1}{5}, \frac{2}{5}, \frac{4}{5}$ and those fractions with a denominator of a multiple of 10 or 25.		Consolidation

WRM – Year 5 – Scheme of Learning 2.0

Year 5 – Summer Term

Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
<u>Number: Decimals</u> Solve problems involving number up to three decimal places. Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000. Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling.				<u>Geometry- Properties of Shapes and Angles</u> Identify 3D shapes, including cubes and other cuboids, from 2D representations. Use the properties of rectangles to deduce related facts and find missing lengths and angles. Distinguish between regular and irregular polygons based on reasoning about equal sides and angles. Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles. Draw given angles, and measure them in degrees (°) Identify: angles at a point and one whole turn (total 360°), angles at a point on a straight line and ½ a turn (total 180°) other multiples of 90°			<u>Geometry- position and direction</u> Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed.	<u>Measurement- converting units</u> Convert between different units of metric measure [for example, km and m; cm and m; cm and mm; g and kg; l and ml] Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints. Solve problems involving converting between units of time.		<u>Measures Volume</u> Estimate volume [for example using 1cm³ blocks to build cuboids (including cubes)] and capacity [for example, using water] Use all four operations to solve problems involving measure.	Consolidation