Our maths curriculum is aligned to the National Curriculum programmes of study and appropriate aspects of the Early Years Foundation Stage. Units of learning are delivered through the main areas of maths which are:

- Number
- Measurement
- Geometry
- Statistics

Although we use the national curriculum programmes of study as the main driver for planning our learning journeys, we also use White Rose Maths resources to support planning and curriculum delivery.
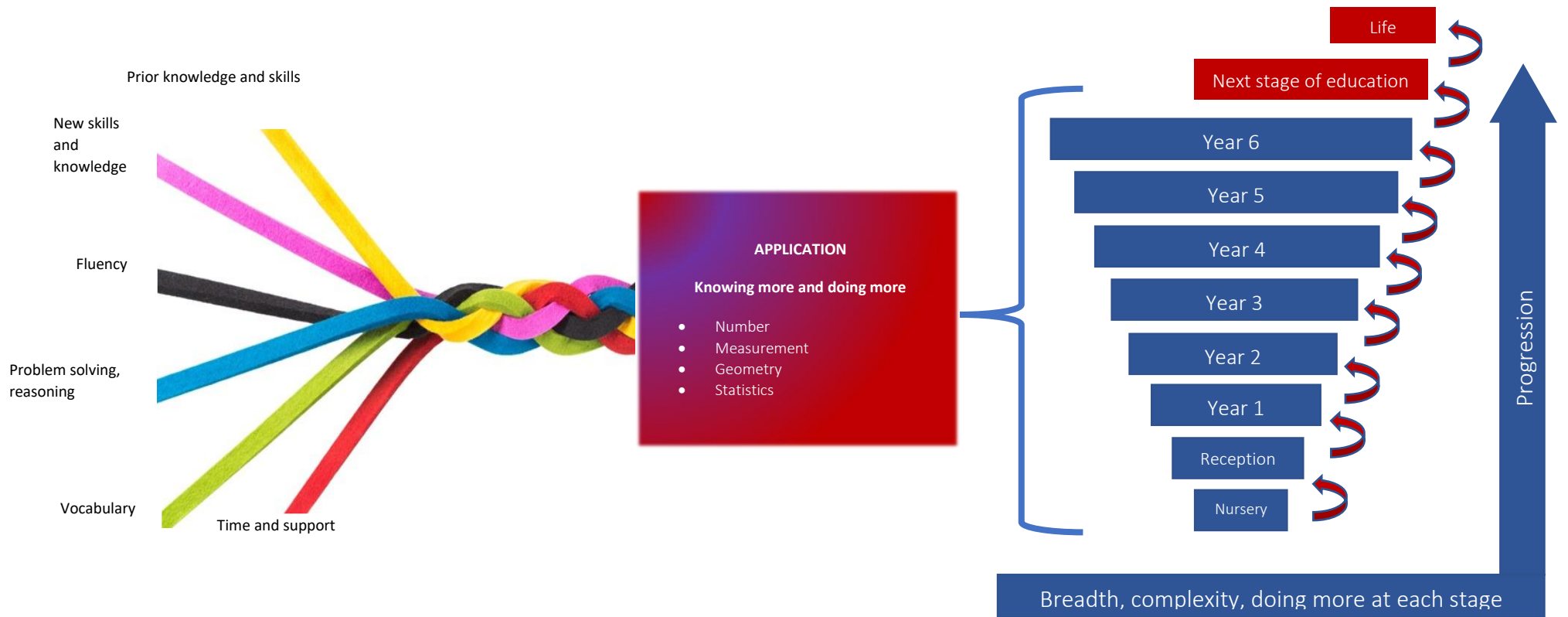
Our learning journey aims to provide a relevant and challenging curriculum to help pupils develop a positive and confident attitude towards maths. This feeds into our long-term goal of ensuring they become competent in real life situations where they are called upon to use their mathematical knowledge and skills.   We deliver our maths journeys using a spiral learning approach which is based on the following three main principles:

- **Recurring:** Learners return to the same topic many times, through their school career
- **Deepening learning:** Every time pupils return to a particular concept it must be explored in more complexity and be learned at a deeper level
- **Prior Knowledge:** A pupil's previous knowledge must be used when they revisit the same concept so that they build from the foundation instead of starting from the beginning.

For example, Year 1 cover addition and subtraction within 20, then transfer these skills to cover addition and subtraction to 100 in year 2, moving onto solving addition and subtraction crossing hundreds in year 3, then addition & subtraction of 3 & 4-digit numbers in year 4. As they make this learning journey, pupils will encounter frequent opportunities to apply their growing knowledge and mathematical skills in problem solving and reasoning activities. As with the core learning material, these activities increase in terms of challenge and complexity as pupils progress through their learning journey.

This approach is extremely beneficial in helping pupils to reinforce prior learning and allows them to contextualise new knowledge as it is effectively building on what pupils already know. Repeated exposure also helps pupils in having to avoid remembering or recalling whole concepts at once, thus avoiding any potential cognitive overload. It is important to remember that the curriculum is not simply about repetition but revisiting concepts with increasing complexity each time.

Progression documents ensure key learning is identified within each unit covered and, as part of our spiral approach, supports teachers in accurately referencing prior learning and next steps. Units of learning are carefully planned and sequenced, so pupils have opportunities to acquire and apply both skills and knowledge. Teachers assess pupils progress and understanding using both a formative ongoing approach as well as summative low stakes testing each half term.

Prior knowledge and skills

New skills and knowledge

Fluency

Problem solving, reasoning

Vocabulary

Time and support

APPLICATION

Knowing more and doing more

- Number
- Measurement
- Geometry
- Statistics

Life

Next stage of education

Year 6

Year 5

Year 4

Year 3

Year 2

Year 1

Reception

Nursery

Progression

Breadth, complexity, doing more at each stage

	Number	Measurement	Geometry	Statistics
	Number is a value, expressed by a word, symbol, or figure, representing a particular quantity and used in counting, making calculations, fractions, decimals and percentages, algebra and ratio	*Measurement in maths consists of the units of measurement, rules, and formulas to determine the measurement parameters such as area, volume, length, weight, capacity, perimeter, surface area, time, etc.*	*Geometry is the study of lines, angles, shapes, and their properties. It studies physical shapes, patterns and the object dimensions.*	*Statistics is the collection, analysis, interpretation, and organisation of data in a variety of forms such as graphs, tables, charts, etc.*
EYFS **Nursery**	• Place Value (number songs and games) • Addition & Subtraction (number songs)		• Shape – (notice shapes and patterns) • Position (simple positional language)	
Reception	• Place Value (recognise & order numbers to 10) • Addition & subtraction (introduce vocabulary)	• Length (making comparisons) • Weight (making comparisons) • capacity (making comparisons)	• Shape – (name & describe some 2D shapes) • Position (use positional language)	
	Reasoning and Problem Solving throughout all lessons.			
EYFS **Nursery**	• Place Value (recite numbers, in order, to 10) • Addition & Subtraction (compare two groups)	• length (talk about size) • Time (before, later)	• Shape (explore shapes through play) • Shape – (introduce vocabulary)	
Reception	• Place Value (recite numbers, in order, to 10) • Addition & Subtraction (one less/one more than a given number) • Fractions (half practically)	• Capacity, weight, length, height (compare& order) • Time (Vocabulary) • Money (recognise 1p & 2p coins)	• Shape – (name & describe some 3D shapes) • Position & Direction (use positional/directional language)	
	Reasoning and Problem Solving throughout all lessons.			
EYFS **Nursery**	• Place Value (recognise numerals 1-5) • Addition & Subtraction (number bonds to 4 practically)	• Capacity & weight (order two items)	• Shape (name and identify some shapes) • Position (describe positions)	

Reception	• Place Value (count with accuracy and 121 correspondence.) • Addition & Subtraction (devise number bonds to 5/10)	• Length/height (making comparisons) • Weight (making comparisons) • capacity (making comparisons) • Time (use timers)	• Shape (devise patterns) • Shape (explore symmetry)	
	Reasoning and Problem Solving throughout all lessons.			
1	• Place Value (within 10) • Addition & Subtraction (within 10) • Place Value (within 20)		• Shape – Recognise & sort 2D & 3D shapes.	
	Reasoning and Problem Solving throughout all lessons.			
	• Place Value (within 50) • Addition & Subtraction (within 20) • Multiplication and Division (count in 2's/5's)	• Length & Height (non-standard units) • Weight & Volume (non-standard units)		
	Reasoning and Problem Solving throughout all lessons.			
	• Place Value (within 100) • Multiplication and Division (count in 10's) • Fractions (½ & ¼)	• Money (recognising & counting coins) • Time (o'clock/ ½ hour)	• Position & Direction (describe turns)	
	Reasoning and Problem Solving throughout all lessons.			
2	• Place Value (within 100, multiples of 2,3,5) • Addition & Subtraction (within 100) • Multiplication & Division (2,5,10)	• Money (comparing coins/ finding the difference)		
	Reasoning and Problem Solving throughout all lessons.			
	• Multiplication & Division (2,5,10) • Fraction (½ 1/3 ¼ 2/4 ¾)		• Shape (Properties of 2D & 3D shapes)	• Statistics (pictograms & block graphs)
	Reasoning and Problem Solving throughout all lessons.			
		• Length & Height (standard units) • Time (to 5-minute intervals)	• Position & Direction (Describing movement & turns)	

		• Mass, Capacity, Temperature (standard units)		
	Reasoning and Problem Solving throughout all lessons.			
3	• Place Value (within 1000, multiples of 4,8,50.100) • Addition & Subtraction (2- & 3-digit numbers, crossing 100's) • Multiplication & Division (3,4,8)			
	Reasoning and Problem Solving throughout all lessons.			
	• Multiplication & Division (3,4,8) • Fractions (tenths, unit fractions, non-unit fractions)	• Money (convert pounds to pence) • Length & Perimeter (equivalent lengths)		• Statistics (pictograms, bar charts)
	Reasoning and Problem Solving throughout all lessons.			
	• Fractions (100th, addition and subtraction)	• Time (months, years, am & pm) • Mass & Capacity (measurement and comparisons)	• Properties of Shapes (parallel & perpendicular) • Properties of Shapes (angles)	
	Reasoning and Problem Solving throughout all lessons.			
4	• Place Value (within 1000, multiples of 6, 7, 9, 25) • Addition & Subtraction (3 & 4 - digit numbers) • Multiplication & Division (up to 12 times tables)	• Length & Perimeter (Perimeter on a grid, & rectilinear shape.)		
	Reasoning and Problem Solving throughout all lessons.			
	• Multiplication & Division (up to 12 times tables) • Fractions (counting in fractions/converting fractions) • Decimals (tenths 7 hundredths)	• Area (of a shape)		
	Reasoning and Problem Solving throughout all lessons.			
	• Decimals (compare & order)	• Money (addition, subtraction, giving change) • Time (analogue to digital)	• Properties of Shapes (triangles & quadrilaterals, lines of symmetry) • Position & Direction (position & movement on a grid)	• Statistics (line graphs)
	Reasoning and Problem Solving throughout all lessons.			

5	• Place Value (within 1000,000) • Addition & Subtraction (4-digit numbers) • Multiplication & Division (multiples, factors, prime numbers)	• Perimeter & Area (Compound & irregular shapes)		• Statistics (read & interpret tables & charts)
	Reasoning and Problem Solving throughout all lessons.			
	• Multiplication & Division (multiples, factors, prime, square & cube numbers) • Fractions (equivalent) • Decimals (thousandths, up to 2 d.p.) • Percentages (thousandths)			
	Reasoning and Problem Solving throughout all lessons.			
	• Decimals (compare. Order & round)	• Converting Units (kg, km, mm, ml, metric, imperial, time)	• Properties of Shapes (angles, degrees, using a protractor) • Position & Direction (Translation)	
	Reasoning and Problem Solving throughout all lessons.			
6	• Place Value Within 10,000,000) • Addition & Subtraction (reason from known facts) • Multiplication & Division (reason from known facts) • Fractions (compare & order, mixed addition & subtraction)		• Position & Direction (translations & reflections)	
	Reasoning and Problem Solving throughout all lessons.			
	• Decimals (multiply & divide by 10, 100, 1000, 3 d.p.) • Percentages (of an amount) • Algebra (find pairs of values) • Ratio (language, symbols, calculating)	• Converting Units (convert metric units) • Perimeter, Area & Volume	• Statistics (pie charts)	
	Reasoning and Problem Solving throughout all lessons.			
	• Consolidation, investigations & Preparation for SATs & KS3	• Consolidation, investigations & Preparation for SATs & KS3	• Properties of Shapes (Accurate drawings, and nets)	• Consolidation, investigations & Preparation for SATs & KS3
	Reasoning and Problem Solving throughout all lessons.			