



Small Schools Partnership

Maths

Curriculum Map Document

Contents

1. Statement of Intent
2. Whole School Long Term Plan Grange Moor then Birdsedge
3. Progression of Skills
4. Arithmetic sessions
5. Assessment



Birdsedge



BEST

1. Statement of Intent

In our small school partnership, we aim to provide a high-quality mathematics education that is ambitious, inclusive and accessible to all pupils. Our curriculum is based on the **National Curriculum for England** and is carefully structured through the **White Rose Maths** schemes of learning to ensure progression, coherence and mastery.

We intend for pupils to:

- Develop a deep and secure understanding of mathematical concepts through a small-steps approach.
- Become fluent in the fundamentals of mathematics, including number facts, calculation strategies and mathematical vocabulary.
- Reason mathematically by following lines of enquiry, making connections, justifying their thinking and proving their ideas.
- Solve a variety of routine and non-routine problems by applying their mathematical knowledge with confidence and resilience.
- Build positive attitudes towards mathematics, recognising its relevance in everyday life and future learning.
- Develop independence, curiosity and perseverance, enabling them to become confident and successful mathematicians.

Through the White Rose Maths approach, pupils experience carefully sequenced learning that promotes conceptual understanding through the use of concrete, pictorial and abstract representations. We believe that all children can achieve in mathematics, and we provide opportunities for challenge, support and greater depth thinking so that every pupil can reach their full potential.

Our intention is that pupils leave our school with a strong mathematical foundation, the ability to think critically and solve problems effectively, and the confidence to apply their mathematical knowledge in a range of contexts.

Whole School Long Term Plan

Year

Reception



	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	Getting to know you		Match, sort and compare VIEW	Free trial Talk about measure and patterns VIEW	It's me 1, 2, 3 VIEW	Circles and triangles VIEW	1, 2, 3, 4, 5 VIEW	Shapes with 4 sides VIEW				
Spring	Alive in 5 VIEW	Mass and capacity VIEW	Growing 6, 7, 8 VIEW	Length, height and time VIEW	Building 9 and 10 VIEW		Explore 3-D shapes VIEW					
Summer	To 20 and beyond VIEW	How many now? VIEW	Manipulate, compose and decompose VIEW	Sharing and grouping VIEW	Visualise, build and map VIEW		Make connections VIEW	Consolidation				

Year

Mixed age - Year 1/2 (New for 24/25) ▼

	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 20) VIEW		Free trial Number Addition and subtraction (within 20) VIEW				Number Place value (within 100) VIEW				Geometry Shape VIEW	
Spring	Number Addition and subtraction (within 100) VIEW				Number Multiplication and division VIEW		Measurement Length and height VIEW		Statistics VIEW		Consolidation	
Summer	Measurement Money VIEW	Number Fractions VIEW			Measurement Time VIEW		Measurement Mass, capacity and temperat... VIEW		Geometry Position and direction VIEW		Consolidation	

Year

Mixed age - Year 3/4 (New for 24/25) ▾

	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 VIEW				Number Addition and subtraction VIEW				Number Multiplication and division A VIEW			Measurement Area VIEW	
	Number Multiplication and division B VIEW		Measurement Length and perimeter VIEW		Number Fractions A VIEW		Measurement Mass and capacity VIEW		Number Fractions B VIEW				
Spring	Measurement Time VIEW		Number Decimals VIEW			Measurement Money VIEW		Geometry Shape VIEW		Geometry Position and direction VIEW		Statistics VIEW	
Summer													

Year

Mixed age - Year 5/6 (New for 24/25) ▼

	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 VIEW		Free trial Number Addition and subtraction VIEW	Number Multiplication and division A VIEW			Number Fractions A VIEW				Number Multiplication and division B VIEW	
Spring	Number Multiplication and division B continued VIEW	Number Fractions B VIEW	Number Decimals A VIEW	Measurement Area, perimeter and volume VIEW			Number Decimals B VIEW				Number Fractions, decimals and percentages VIEW	
Summer	Ratio VIEW	Algeb... VIEW	Geometry Shape VIEW		Geometry Position and direction VIEW			Statistics VIEW			Measurement Converting units VIEW	

Year 1 White Rose Long term plan

	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) FREE TRIAL VIEW					Number Addition and subtraction (within 10) VIEW				Geometry Shape VIEW	Consolidation	
Spring	Number Place value (within 20) VIEW	Number Addition and subtraction (within 20) VIEW		Number Place value (within 50) VIEW		Measurement Length and height VIEW	Measurement Mass and volume VIEW					
Summer	Number Multiplication and division VIEW		Number Fractions VIEW	Geometry Position and direction VIEW	Number Place value (within 100) VIEW	Measurement Money VIEW	Measurement Time VIEW		Consolidation			

Year 1 LTP 2025 26

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Autumn	Place value within 10					Addition and Subtraction within 10			Mass and Volume		Shape	Addition and Subtraction within 10		AW	C
Spring	Place Value within 20			Addition and Subtraction within 20			Length and Height		Time		AW	Money			
Summer	Place Value within 50		Multiplication and Division			Fractions		Position and Direction	Place Value within 100		Money	AW	C		

AW = Assessment Week

C = Consolidation

Year 2 White Rose Long term plan

	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 FREE TRIAL VIEW				Number Addition and subtraction VIEW				Geometry Shape VIEW			
	Spring	Measurement Money VIEW	Number Multiplication and division VIEW				Measurement Length and height VIEW	Measurement Mass, capacity and temperature VIEW				
Summer		Number Fractions VIEW		Measurement Time VIEW		Statistics VIEW	Geometry Position and direction VIEW		Consolidation			

Year 3 White Rose Long term plan

	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 FREE TRIAL VIEW			Number Addition and subtraction VIEW				Number Multiplication and division A VIEW				
Spring	Number Multiplication and division B VIEW			Measurement Length and perimeter VIEW		Number Fractions A VIEW		Measurement Mass and capacity VIEW				
Summer	Number Fractions B VIEW		Measurement Money VIEW		Measurement Time VIEW		Geometry Shape VIEW		Statistics VIEW		Consolidation	

Year 4 White Rose Long term plan

	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 FREE TRIAL VIEW				Number Addition and subtraction VIEW		Measurement Area VIEW	Number Multiplication and division A VIEW		Consolidation		
Spring	Number Multiplication and division B VIEW		Measurement Length and perimeter VIEW		Number Fractions VIEW			Number Decimals A VIEW				
Summer	Number Decimals B VIEW	Measurement Money VIEW	Measurement Time VIEW		Consolidation	Geometry Shape VIEW	Statistics VIEW	Geometry Position and direction VIEW				

Year 5 White Rose Long term plan

	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 FREE TRIAL VIEW		Number Addition and subtraction VIEW			Number Multiplication and division A VIEW			Number Fractions A VIEW			
Spring		Number Multiplication and division B VIEW		Number Fractions B VIEW		Number Decimals and percentages VIEW			Measurement Perimeter and area VIEW		Statistics VIEW	
Summer	Geometry Shape VIEW			Geometry Position and direction VIEW		Number Decimals VIEW			Number Negative numbers VIEW	Measurement Converting units VIEW		Measurement Volume VIEW

Class 3 Maths LTP 2025 26

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Autumn	Y4	PV	PV	PV	PV	A&S	A&S	A&S	L&P	L&P	A	M&D	M&D	M&D	AW	Cons.
	Y5	PV	PV	PV	NN	A&S	A&S	D&P	P&A	P&A	V	M&D	M&D	M&D	AW	Sh
Spring	Y4	F	F	F	F	M&D	M&D	M&D	D	D	AW	D				
	Y5	F	F	F	F	M&D	M&D	M&D	D&P	D&P	AW	D&P				
Summer	Y4	P&D	P&D	Sh	Sh	T	T	D	D	M	M	St	AW	Cons.		
	Y5	P&D	P&D	Sh	Sh	F	F	D&P	D&P	CU	CU	St	AW	St		

Year 4	Year 5
<u>PV Place Value</u> <u>A&S Addition</u> and Subtraction <u>L&P Length</u> and Perimeter <u>A Area</u> <u>M&D Multiplication</u> and Division <u>F Fractions</u> <u>D Decimals</u> <u>P&D Position</u> and Direction <u>Sh Shape</u> <u>T Time</u> <u>M Money</u> <u>St Statistics</u>	<u>PV Place Value</u> <u>NN Negative</u> Numbers <u>A&S Addition</u> and Subtraction <u>D&P Decimals</u> and Percentages <u>P&A Perimeter</u> and Area <u>V Volume</u> <u>M&D Multiplication</u> and Division <u>Sh Shape</u> <u>F Fractions</u> <u>P&D Position</u> and Direction <u>Sh Shape</u> <u>CU Converting</u> Units <u>St Statistics</u>

AW = Assessment Week

C = Consolidation

Progression of Skills

Progression of skills – Mathematics

Mathematics Progression of Skills – Year One	
Number: Number and 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; count in multiples of twos, fives and tens - 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 (fewer), most, least - Read and write numbers from 1 to 20 in numerals and words	Measurement Compare, describe and solve practical problems for: - lengths and heights (e.g. long/short, longer/shorter, tall/short, double/half) - mass or weight (e.g. heavy/light, heavier than, lighter than) - capacity/volume (full/empty, more than, less than, half, half full, quarter) - time (quicker, slower, earlier, later) Measure and begin to record the following: - lengths and heights - mass/weight - capacity and volume - time (hours, minutes, seconds) Recognise and know the value of different denominations of coins and notes - Sequence events in chronological order using language such as: 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
Number: Addition and Subtraction - Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs - Represent and use number bonds and related subtraction facts within 20 - Add and subtract one-digit and two-digit numbers to 20 including zero - Solve simple one-step problems that involve addition and subtraction, using concrete objects and pictorial representations and missing number problems such as $7 = ? - 9$ Number: Multiplication and Division Solve simple one-step problems involving multiplication and division, calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher	Geometry: Properties of shapes Recognise and name common 2-D and 3-D shapes, including: 2-D shapes (e.g. rectangles (including squares), circles and triangles) 3-D shapes (e.g. cuboids (including cubes), pyramids and spheres)
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	Geometry: Position and direction } Describe position, directions and movements, including half, quarter and three-quarter turns

Mathematics Progression of Skills – Year Two

Number: Number and place value

- Count in steps of 2,3 and 5 from 0, and in tens from any number, forward and backward
- Recognise the place value of each digit in two-digit numbers (tens and 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
- Read and write numbers to at least 100 in numerals and in words
- Use place value and number facts to solve problems

Measurement

- Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels Compare and order lengths, mass, volume/capacity and record the results using >, < and =
- Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value
- Find different combinations of coins to 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
- Compare and sequence intervals of time
- 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

Number: Addition and Subtraction

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 method

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 addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot
- Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems

Geometry: Properties of shapes

- Identify and describe the properties of 2-D shapes, including the number of sides and symmetry in a vertical line
 - Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces
 - To 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
- Geometry: Position and direction
- Order and arrange combinations of mathematical objects in patterns and sequences
 - 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)

Number: Multiplication and Division - Recall and use multiplication and division facts for the 2,5 and 10 multiplication 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 (=) signs - Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot - Solve one-step problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts	
Number: Fractions - 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 e.g. $\frac{1}{2}$ of 6 = 3 and recognise the equivalence of two quarters and one half	Statistics - 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.

Mathematics Progression of Skills – Year Three

Number: Number and place value

- Count from 0 in multiples of 4, 8, 50 and 100; finding 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
- Identify, represent and estimate numbers using different representations
- Read and write numbers to at least 1000 in numerals and in words
- Solve number problems and practical problems involving these ideas

Measurement

- Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)
- Measure the perimeter of simple 2-D shapes
- Add and subtract amounts of money to give change, using both £ and p in practical contexts
- 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, hours and o'clock; use vocabulary such as 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.

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 the efficient written methods of columnar addition and subtraction
- Estimate the answer to a calculation and use inverse operations to check answer
- Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction

Number: Multiplication and Division

- 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 that they know, including for two-

Geometry: Properties of shapes

- Draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them
- 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, vertical, perpendicular and parallel lines

digit numbers times one-digit numbers, using mental and progressing to efficient written methods Solve problems, including missing number problems, involving multiplication and division, including integer scaling problems and correspondence problems in which n objects are connected to m objects	
Number: Fractions - 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, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators - Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators - Recognise and show, using diagrams, equivalent fractions with small denominators - Add and subtract fractions with the same denominator within one whole (e.g. $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$) - Compare and order unit fractions with the same denominator - Solve problems involving all of the above	Statistics - Interpret and present data using bar charts, pictograms and tables - Solve one-step and two-step questions such as 'How many more?' and 'How many fewer?' using information presented in scaled bar charts and pictograms and tables

Mathematics Progression of Skills – Year Four

Number: Number and place value - Count in multiples of 6, 7, 9, 25 and 1000 - Find 1000 more or less than a given number - Count backwards through zero to include negative numbers - 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	Measurement - Convert between different units of measure (e.g. kilometre to metre; hour to minute) - Measure and calculate the perimeter of a rectilinear figure(including squares) in centimetres and metres - Find the area of rectilinear shapes by counting - Estimate, compare and calculate different measures, including money in pounds and pence - 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.
--	---

Read Roman numerals to 100 (I to C) and understand how, 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 efficient 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 Number: Multiplication and Division - Recall 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 multiplication problems such as which n objects are connected to m objects	Geometry: Properties of shapes - To compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes - To identify acute and obtuse angles and compare and order angles up to two right angles by size - To identify lines of symmetry in 2-D shapes presented in different orientations - To complete a simple symmetric figure with respect to a specific line of symmetry Geometry: Position, direction, motion - To describe positions on a 2-D grid as coordinates in the first quadrant } To describe movements between positions as translations of a given unit to the left/right and up/down } To plot specified points and draw sides to complete a given polygon
Number: Fractions (including decimals) - 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 a 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 - Recognise and write decimal equivalents of any number of tenths or hundredths - Recognise and write decimal equivalents to $\frac{1}{4}$; $\frac{1}{2}$; $\frac{3}{4}$ - Find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as units, tenths and hundredths	Statistics - To interpret and present discrete data using bar charts and continuous data using line graphs - To solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and simple line graphs.

- Round decimals with one decimal place to the nearest whole number
- Compare numbers with the same number of decimal places up to two decimal places
- Solve simple measure and money problems involving fractions and decimals to two decimal places.

Mathematics Progression of Skills – Year Five

Number: Number and place value

- Read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit
- Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000
- Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers through zero
- Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000
- 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

Number: Addition and Subtraction

- Add and subtract whole numbers with more than 4 digits, including using efficient written methods (columnar addition and subtraction)
- Add/subtract numbers mentally with increasingly large numbers
- 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
- Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers
- 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
- Multiply numbers up to 4 digits by a one or two-digit number using a formal written method, including long multiplication for two-digit numbers

Measurement

- Convert between different units of measure (e.g. kilometre and metre; metre and centimetre; centimetre and millimetre; kilogram and gram; litre and millilitre)
- Understand and use approximate equivalences between metric and common imperial units such as inches, pounds and pints
- Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres
- Calculate and compare the area of squares and rectangles (including squares), and including using standard units, square centimetres (cm²) and square metres (m²) and estimate the area of irregular shapes
- Estimate volume (e.g. using 1 cm³ blocks to build cubes and cuboids) and capacity (e.g. using water)
- Solve problems involving converting between units of time
- To solve problems involving addition and subtraction of units of measure (e.g. length, mass, volume, money) using decimal notation.
- Use all 4 operations to solve problems involving measure (e.g. Length, mass, volume, money) using decimal notation including scaling

Geometry: Properties of shapes

- Identify 3-D shapes, including cubes and cuboids, from 2-D representations
- Know angles are measured in degrees; estimate and compare acute, obtuse and reflex angles
- Draw given angles, and measure them in degrees (°)
- To Identify: • multiples of 90° • angles at a point and one whole turn (total 360°) • angles at a point on a straight line and 1/2 a turn (total 180°) • other multiples of 90°
- 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
- Geometry: Position, direction, motion
- 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

• Multiply and divide numbers mentally drawing upon known facts • Divide numbers up to 4 digits by a one-digit number using the efficient written method of short division and interpret remainders appropriately for the context • Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 • 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 • To solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign • To solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates	
Number: Fractions (including decimals) • Compare and order fractions whose denominators are all multiples of the same number • Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths • Add and subtract fractions with the same denominator and denominators that are multiples of the same number • Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements >1 as a mixed number (e.g. $2/5 + 4/5 = 6/5 = 1 \frac{1}{5}$) • Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams • Read and write decimal numbers as fractions (e.g. $0.71 = 71/100$) 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 • Read, write, order and compare numbers with up to three decimal places • Solve problems involving number up to three decimal places	Statistics • Solve comparison, sum and difference problems using information presented in a line graph • Complete, read and interpret information in tables, including timetables

- | | |
|---|--|
| <ul style="list-style-type: none">● 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 hundred, and as a decimal fraction● 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 with a denominator of a multiple of 10 or 25 | |
|---|--|

Mathematics Progression of Skills – Year Six

Number: Number and place value • Read, write, order and compare numbers up to 10 000 000 and determine the value of each digit • Round any whole number to a required degree of accuracy • Use negative numbers in context, and calculate intervals across zero • Solve number problems and practical problems that involve all of the above.	Algebra • Use simple formulae • Generate and describe linear number sequences • Express missing number problems algebraically • Find pairs of numbers that satisfy number sentences involving two unknowns • Enumerate possibilities of combinations of two variables
Number: Addition, Subtraction, Multiplication and Division • Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the efficient written method of long multiplication • Divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context • Divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context • Perform mental calculations, including with mixed operations and large numbers • Identify common factors, common multiples and prime numbers } Use their knowledge of the order of operations to carry out calculations involving the four operations • Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why • Solve problems involving addition, subtraction, multiplication and division • Use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy.	Measurement • Solve problems involving the calculation and conversion of units of measure, using decimal notation to three decimal places where appropriate • Use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to three decimal places • Convert between miles and kilometres • Recognise that shapes with the same areas can have different perimeters and vice versa • Recognise when it is necessary to use the formulae for area and volume of shapes • Calculate the area of parallelograms and triangles • Calculate, estimate and compare volume of cubes and cuboids using standard units, including centimetre cubed (cm³) and cubic metres (m³) and extending to other units, such as mm³ and km³
Number: Fractions (including decimals and percentages) • Use common factors to simplify fractions; use common multiples to express fractions in the same denomination • Compare and order fractions, including fractions >1 • Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions	Geometry: Properties of shapes • Draw 2D shapes using given dimensions and angles • Recognise, describe and build simple 3-D shapes, including making net • Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons

Weekly Arithmetic Sessions

To further strengthen mathematical fluency, all pupils participate in a daily **15-minute arithmetic session**. These short, focused sessions are designed to develop rapid recall, accuracy and confidence with key calculation skills. By revisiting previously taught concepts regularly, pupils embed essential number facts and calculation strategies into their long-term memory, enabling them to work more efficiently and accurately across all areas of mathematics.

The development of strong arithmetic skills has a direct impact on pupils' ability to engage in mental mathematics. As pupils become more fluent in number facts, place value and calculation methods, they are able to solve problems more quickly, communicate their reasoning more effectively and apply their learning confidently in a range of mathematical contexts. Regular arithmetic practice also helps pupils to prepare for end-of-unit assessments, termly NTS tests and statutory assessments by increasing their speed, accuracy and resilience when tackling mathematical questions.

Whilst arithmetic is taught consistently across the school, the structure and focus of the sessions develop as pupils progress through the year groups. In Key Stage 1, sessions may focus on number bonds, counting, place value and simple addition and subtraction facts through practical and interactive activities. As pupils move through Lower Key Stage 2, arithmetic sessions increasingly focus on written methods, multiplication tables, division facts and developing calculation efficiency. In Upper Key Stage 2, pupils are challenged through more complex arithmetic involving fractions, decimals, percentages and multi-step calculations, preparing them for the demands of secondary mathematics.

By dedicating time each day to arithmetic, we ensure that pupils develop the fluency and confidence needed to succeed in mathematics, allowing them to focus their cognitive effort on reasoning, problem-solving and applying their mathematical understanding in increasingly sophisticated ways.

Assessment

Assessment is an integral part of our mathematics curriculum and is used to inform teaching, identify gaps in learning and ensure all pupils make strong progress. Through our White Rose Maths approach, teachers use ongoing formative assessment during lessons to monitor understanding and adapt teaching to meet the needs of all learners.

At the end of each White Rose Maths unit, pupils complete an **end-of-unit assessment**. These assessments provide valuable information about pupils' understanding of the key concepts taught and help teachers identify areas that require further consolidation or challenge. The outcomes are used to inform future planning and targeted interventions where needed.

In addition to unit assessments, pupils complete **age-related NTS (National Test-Style) assessments on a termly basis**. These standardised assessments measure attainment against National Curriculum expectations and provide a broader picture of pupils' mathematical knowledge and skills. The results enable teachers and leaders to monitor progress over time, identify trends across cohorts and ensure pupils are on track to achieve age-related expectations.

Assessment information is used collaboratively by teachers and leaders to evaluate the effectiveness of teaching and learning, provide timely support for pupils and celebrate success. This robust approach ensures that assessment remains meaningful, enabling every child to develop confidence, fluency, reasoning and problem-solving skills in mathematics.