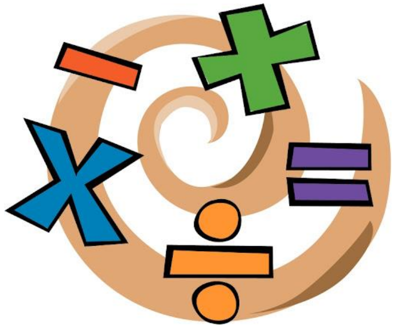
Mathematics

Learning Journey



Our Vision

The intent of the Mathematics curriculum at Grove Park is:

- To enable our pupils to become fluent in the fundamentals of mathematics through a sequential and consistent approach.
- To provide opportunities for pupils, over time, to apply their reasoning and to solve problems which are increasingly more complex and demanding so that pupils are able to demonstrate a mastery of their mathematical knowledge and skills with greater accuracy and rapidity.
- To provide opportunities for our pupils to develop the ability to demonstrate reasoning and enquiry skills by making connections, developing arguments and providing justifications.
- To foster a culture of perseverance and resilience when faced with mathematical problems, through metacognitive instruction in how to approach and break down increasingly more sophisticated and complex problems into manageable steps.
- To build pupils' awareness and understanding of mathematics across other areas of the curriculum, including D-STEM.
- To allow our pupils to connect their learning of mathematics from the classroom into the real world, through real-life mathematical enquiries, enterprise projects and 'maths-through-story' for application in later life.
- To use a combination of formative and summative assessment in order to gauge pupils' understanding of mathematical topics, and highlight potential gaps in understanding before moving onto new knowledge and learning as part of a 'mastery' approach.
- To provide considered and purposeful tasks which allow all pupils to further deepen and expand their mastery of the subject.
- Through the use of a 'concrete – pictorial – abstract' approach to teaching, for all pupils to be supported in making accelerated progress towards fluency and mastery of concepts and topics within mathematics, regardless of background or ability.

EYFS

Autumn 1	- Settling in to the year	- To match, sort and compare objects.	- To create sorting rules - To compare amounts	- To compare size - To compare mass - To compare capacity - To explore patterns	- To copy and explore patterns - To create patterns	- To find 1, 2 and 3 - To find 1, 2 and 4 - To subitise 1, 2 and 3
Half Term						
Autumn 2	- To find one more - To find one less - Finding the composites of 1, 2 and 3	- To identify the names shapes - To identify circles and triangles - To identify shapes in the environment - To describe the position of objects	- To find 1, 2, 3, 4 and 5 - To find 4 and 5 - To subitise 4 and 5	- To find one more than 4 and 5 - To find one less than 4 or 5	- Finding the composites of 4 - Finding the composites of 5 - Finding the composites of 4 and 5 - Finding the composites of 1, 2, 3, 4 and 5	- To identify and name shapes with 4 sides - To combine shapes with 4 sides - To find four-sided shapes in the environment
Christmas Holidays						
Spring 1	- To find different ways of making amounts to 5 - To find more or less of objects - To compare amounts up to 5	- To compare and order numbers - To subitise numbers (how many?)	- To compare mass and compacity through holding - To compare mass and capacity with scales	- Constructing numbers to 10 on a 10-frame - Counting beyond 5 on a 10-frame	- To recognise pairs of numbers to 10	- Make numbers to 10 by combining numbers of different representations.
Half Term						
Spring 2	- To represent numbers 9 and 10 - Sorting numbers 9 and 10 - Ordering numbers to 10	- To count back from 10 - To compare numbers within 10	- To recognise number bonds to 5 - To recognise subtraction facts from 5 - To recognise number bonds to 10	- To subitise numbers to 6 - To recognise 3D shapes - To continue a linear pattern - To make a new pattern - To make a number pattern	Consolidation from assessments	- Recognising the composition of numbers to 7 - - Recognising the composition of numbers to 8 - - Recognising the composition of numbers to 9
Easter Holidays						
Summer 1	- To explore 11 and 12 through different representations - To explore 13 and 14 using 10 frames - To explore 15 and 16 using 10 frames - To explore 17, 18, 19 and 20 through numbers and pictures	- To count patterns beyond 20 - To count from any number up to 20	- To develop special awareness, using shape - To explore shapes and patterns in art - To find the odd one out of a pattern - To find matching shapes - To continue a pattern using cubes	- To add using a part-whole model - To look at sequencing through first, then and now - To represent a number story - To subtract using a number line	- To combine shapes to form new shapes - To build shapes using triangles - To build shapes using squares - To break up shapes into smaller shapes	
Half Term						
Summer 2	- To count on beyond 20 - To explore making doubles using manipulatives - To explore making doubles using different representations	- To explore sharing and grouping	- To explore even and odd	- To explore special reasoning		
End of the Year						

Year 1

	Number: Place Value (within 10)	Number: Addition and Subtraction (Within 10)
Autumn 1	To be able to sort objects up to 10.	To explore parts and wholes using single objects.
	To be able to count objects up to 10.	To explore using the part-whole model to represent numbers.
	To be able to count on in objects from a group of 10.	To explore using the addition symbol in a number sentence.
	To be able to represent up to 10 objects with numbers.	To be able to recall addition facts for numbers up to 10.
	To be able to recognise numbers as words.	To be able to recall number bonds to 10.
	To be able to count forward to 10.	To explore finding number bonds to 10.
	To be able to count backwards from 10.	To be able to compart number bonds to 10.
	To be able to count one more or one less from numbers below 10.	To explore how to add numbers within 10 together.
	To explore counting up and down in ones.	To be able to add using known number bonds.
	To explore one-to-one correspondence.	To be able to find the part of a number using the part-whole model.
	To be able to compare up to 10 objects.	To explore the concept of subtraction.
	To explore using the <, > and = symbols for numbers within 10.	To explore using the subtraction symbol in a number sentence.
	To be able to order numbers up to 10.	
	To explore using a number line to order numbers to 10.	
	End of unit assessment for place value (within 10).	

Half Term

	Number: Addition and Subtraction	Geometry: Shape	Number: Place Value (within 20)
Autumn 2	To explore subtraction by finding the difference.	To be able to recognise and name simple 2D shapes.	To explore counting forwards and backwards to numbers up to 20.
	To compare addition and subtraction number sentences.	To explore sorting 2D shapes according to their properties.	To explore the properties of the numbers 11 – 20.
	End of unit assessment for addition and subtraction.	To be able to recognise and name simple 3D shapes.	To the tens and ones that make numbers up to 20.
		To explore sorting 3D shapes according to their properties.	To explore counting one more and one less to numbers up to 20.
		To investigate making patterns with 2D and 3D shapes.	To be able to compare groups of up to 20 objects.
			To be able to order and group up to 20 objects.
			To explore ordering the numbers up to 20.
			End of unit assessment for place value (within 20).

Year 1

Spring 1	Number: Addition and Subtraction (Within 20)	Number: Place Value (within 50, including multiples of 2, 5 and 10)
	To explore counting within 20.	To explore counting from 20 to 50.
	To be able to add by counting within 20.	To explore the numbers 20, 30, 40 and 50.
	To add in ones, using number bonds to 20.	To be able to count using groups of 10.
	To explore making number bonds to 20.	To be able to count using groups of 10s and 1s.
	To explore adding by making a 10.	To explore partitioning groups of 10s and 1s.
	To explore subtracting not across the 10.	To explore using a number line to 50.
	To explore subtracting by counting backwards.	To use a number line to help me estimate numbers up to 50.
	To explore subtracting across the 10 by counting backwards.	To be able add one more or one less to numbers up to 50.
	To be able to subtract across the 10.	To explore counting in multiples of 2.
	To be able to recall related subtraction facts.	To explore counting in multiples of 5.
	End of unit assessment for addition and subtraction (within 20).	To explore counting in multiples of 10.
		End of unit assessment for Place Value (within 50, including multiples of 2, 5 and 10)
Half Term		
Spring 2	Measurement: Length and Height	Measurement: Mass and Volume
	To explore and compare the lengths and heights of objects.	To explore using the words heavier and lighter to describe and compare the weight of something.
	To be able to use objects to measure the length of something.	To explore measuring the mass of objects.
	To be able to measure the length of objects using centimetres.	To be able to compare the masses of objects, using the words heavier and lighter.
	End of unit assessment for length and height.	To explore using the words full and empty to describe and compare the volume of something.
		To be able to compare the volume of something, using the words full and empty.
		To explore measuring the capacity of something.
		To be able to compare the capacity of different objects.
		End of unit assessment for mass and volume.

Year 1

Summer 1	Number: Multiplication and Division (recapping multiples of 2, 5 and 10)	Fractions	Geometry: Position and Direction
	To recap and explore counting in 2s.	To explore finding half of objects and shapes.	To use the word turn to describe the position of an object.
	To recap and explore counting in 10s.	To be able to find half of a given object or shape.	To be able to describe the position of objects using the words left and right.
	To recap and explore counting in 5s.	To explore finding half of an amount of objects.	To be able to describe the position of objects using the words forwards and backwards.
	To be able to recognise equal groups of objects.	To explore finding a quarter of an object or shape.	To be able to describe the position of something using the words above and below.
	To be able to add equal groups of objects together.	To be able to find a quarter of an object or shape.	To be able to describe position and direction using ordinal numbers.
	To explore making arrays.	To explore finding a quarter of an amount of objects.	End of unit assessment for position and direction.
	To explore making doubles of an amount of objects.	End of unit assessment for fractions.	
	To be able to make equal groups of objects through grouping.		
	To be able to make equal groups of objects through sharing.		
	End of unit assessment for multiplication and division (recapping on multiples of 2, 5 and 10)		
Half Term			
Summer 2	Number: Place Value (within 100)	Measurement: Money	Measurement: Time
	To be able to count from 50 to 100.	To explore unitising to represent amounts of money.	To be able to use the words 'before' and 'after' when talking about time.
	To explore counting in 10s to 100.	To explore the value of different types of coins.	To learn the days of the week.
	To be able to partition a two-digit number into tens and ones.	To explore the value of different types of notes.	To learn the months of the year.
	To explore using a number line to count to 100.	To be able to count using coins.	To be able to use the words 'hours', 'minutes' and 'seconds'.
	To be able to find one more and one less of numbers to 100.	End of unit assessment for money.	To be able to read the time to nearest hour.
	To be able to compare numbers with the same numbers of tens.		To be able to read the time to the nearest half-hour.
	To be able to compare any number up to 100.		End of unit assessment for time.
	End of unit assessment for numbers to 100.		

Year 2

Autumn 1	Number: Place Value	Number: Addition and Subtraction A
	To recap counting in objects to 100.	To be able to count forwards and backwards in 2s, 5s and 10s.
	To recap recognising ones and tens using a part-whole model.	To recap on number bonds to 10, 20 and 100.
	To recap recognising ones and tens on a place value chart.	To be able to add and subtract ones for a given number.
	To be able to partition numbers to 100.	To investigate adding and subtracting ones for a given number.
	To investigate partitioning numbers to 100.	To be able to add and subtract three 1-digit numbers together.
	To be able to write the numbers to 100 in words.	To investigate adding and subtracting three 1-digit numbers together.
	To recap recognising ones and tens on a number line.	
	To be able to order and compare numbers on a number line.	
	To be able to order and compare larger numbers.	
	End of unit assessment for place value.	
Half Term		
Autumn 2	Number: Addition and Subtraction B	Geometry: Shape
	To be able to add using a formal method, without carrying.	To recap on recognising and sorting 2D and3D shapes.
	To be able to add using a formal method, with carrying.	To investigate the properties of 3D shapes (faces).
	To be able to subtract using a formal method, without carrying.	To investigate the properties of 3D shapes (edges and vertices).
	To be able to subtract using a formal method, with carrying.	To be able to identify lines and symmetry within shapes.
	To investigate adding 10 more and 10 less to a number.	To investigate lines of symmetry in shapes.
	To be able to solve mixed addition and subtraction questions.	End of unit assessment for
	To explore missing number problems.	
	To apply my learning od addition and subtraction to solve problems.	
	End of unit assessment for addition and subtraction.	

Year 2

Spring 1	Number: Money	Number: Multiplication and Division
	To recap recognising coins and notes.	To recap on recognising, making and adding equal groups.
	To explore counting in pounds and pence.	To be able to write a multiplication sentence.
	To be able to select coins and notes to make an amount.	To explore using arrays.
	To investigate making amounts of money using coins and notes.	To explore using arrays to make equal groups and to share.
	To investigate comparing amounts of money.	To be able to recall facts for the 2, 5 and 10 times tables.
	To be able to calculate with money.	To be able to recall division facts for the 2, 5 and 10 times tables.
	To explore making the pound.	To explore doubling and halving.
	To explore finding amounts of change.	End of unit assessment for multiplication and division
	To apply my learning of using money to solve multi-step problems.	
Half Term		
Spring 2	Measurement: Length and Height	Measurement: Mass, Capacity and Temperature
	To explore measuring in centimetres and metres.	To explore comparing masses.
	To investigate comparing lengths and heights.	To be able to measure in grams and kilograms.
	To be able to order lengths and heights.	To calculate using measurements of mass.
	To calculate using measurements of length and height.	To investigate comparing capacity and volume.
	End of unit assessment for length and height	To be able to measure in millilitres and litres.
		To calculate using measurements of capacity and volume.
		To unders6tand and explore how to measure the temperature.
		End of unit assessment for mass, capacity and temperature.

Year 2

	Number: Fractions	Measurement: Time
Summer 1	To explore parts of numbers and whole numbers.	To explore telling the time to o'clock and half past.
	To explore equal and unequal parts of a number.	To be able to tell the time, using quarter past and quarter to.
	To be able to recognise and find a half.	To be able to recognise how many minutes to and how many minutes past the hour.
	To be able to recognise and find a quarter.	To be able to tell the time to the nearest 5 minutes.
	To be able to recognise and find a whole.	To be able to recall how many minutes in an hour.
	To explore unit fractions.	To be able to recall how hours in a day.
	To explore non-unit fractions.	End of unit assessment for time.
	To investigate the equivalence between halves and quarters.	
	To be able to recognise and find three quarters.	
	To be able to count up in fractions to make a whole.	
	End of unit assessment for fractions.	

Half Term

	Statistics	Geometry: Position and Direction	
Summer 2	To explore using tally charts to record data.	To explore the language of position and direction.	Consolidation in preparation for Year 3
	To make my own tally chart.	To be able to describe the movements of an object, using the language of position and direction.	
	To be able to interpret information from tally charts.	To be able to describe how an object turns, using the language of position and direction.	
	To be able to interpret information from a table.	To apply the language of position and direction to spot patterns and solve problems.	
	To be able to interpret information from a block diagram.	End of unit assessment on position and direction.	
	To explore using pictograms to record data.		
	To be able to interpret information from a pictogram.		

Year 3

Autumn 1	Number: Place Value	Number: Addition and Subtraction
	To be able to represent and partition numbers to 100.	To be able to add and subtract in 1s and 10s.
	To be able to represent numbers to 1000.	To be able to add and subtract in 100s.
	To be able to partition numbers to 1000.	To be able to add 1s across a 10.
	To investigate different ways to partition numbers to 1000.	To be able to add 10s across a 100.
	To be able to find 1, 10 or 100 more or less.	To be able to subtract 1s across a 10.
	To investigate using a number line to 1000.	To be able to subtract 10s across a 100.
	To be able to estimate on a number line to 1000.	To investigate connections between adding and subtracting 1s, 10s and 100s.
	To be able to compare numbers to 1000.	To be able to add two numbers (no exchange)
	To be able to order numbers to 1000.	To be able to subtract two numbers (no exchange)
	To be able to count in 50s.	To be able to add two numbers (across a ten)
	End of unit assessment for place value.	To be able to add two numbers (across a hundred)
		To be able to subtract two numbers (across a ten).
		To be able to subtract two numbers (across a hundred)
		To be able to subtract two numbers (across a ten and a hundred)
		To apply my knowledge of addition and subtraction to solve problems.
Half Term		
Autumn 2	Number: Addition and Subtraction	To be able to divide by 4.
	To be able to add two-digit and three-digit numbers.	To be able to recall the 8 times tables
	To investigate finding the compliments to 100.	To be able to multiply by 8.
	To be able to give an estimate of an answer.	To be able to divide by 8.
	To investigate using the Inverse operation to check an answer.	To consolidate my learning of the 3, 4 and 8 times tables.
	End of unit assessment for addition and subtraction	To be able to recall the multiples of 10.
		To investigate calculations involving multiples of 10.
	Number: Multiplication and Division	To apply my reasoning n order to solve multiplication problems.
	To investigate multiplying using equal groups of objects.	To investigate multiplying using concrete resources.
	To explore using arrays for multiplication.	To be able to multiply a two-digit number by a one-digit number.
	To be able to multiply by 5 and 10.	To be able to multiply a two-digit number by a one-digit number (with exchange)
	To be able to share and regroup multiples of 5 and 10.	To apply my knowledge of multiplication to solve problems.
	To be able to multiply by 3.	To be able to divide a two-digit number by a one-digit number (no exchange)
	To be able to divide by 3	To apply my knowledge of division to solve problems
	To be able to recall the 4 times tables.	End of unit assessment for multiplication and division
	To be able to multiply by 4.	

Year 3

Spring 1	Number: Multiplication and Division B	Measurement: Length and Perimeter
	To be able to use a formal method for multiplication.	To explore measuring in metric measures (centimetres and metres).
	To be able to apply a formal method for multiplication to solve problems.	To explore measuring in metric measures (millimetres)
	To investigate the connection between multiplication and division.	To investigate the connection between millimetres, centimetres and metres.
	To be able to divide a two-digit number by a single-digit number no exchange)	To be able to find the equivalent length of something in centimetres and metres.
	To divide a two-digit number by a single-digit number using partitioning.	To be able to find the equivalent length of something in millimetres and centimetres.
	To divide a two-digit number by a single-digit number with a remainder.	To be able to compare metric measures.
	To use a formal method of division (short division)	To be able to add metric measures.
	To apply a formal method of division to solve problems.	To be able to subtract metric measures.
	To investigate scaling, using multiplication and division.	To investigate finding the perimeter of a shape.
	To investigate alternative ways of multiplying and dividing.	To be able to measure the perimeter of a shape.
	End of unit assessment for multiplication and division.	To be able to calculate the perimeter of a shape, using known measurement facts.
		End of unit assessment for length and perimeter.
Half Term		
Spring 2	Number: Fractions	Measurement: Mass and Capacity
	To understand what is meant by the denominator.	To investigate using scales to find the measurement of an amount.
	To understand what is meant by the numerator.	To be able to find the measure the mass of an amount in grams.
	To understand what is meant by the whole.	To explore the connection between grams and kilograms.
	To be able to compare and order fractions	To be able to find equivalent masses in grams and kilograms.
	To investigate fractions and scales.	To investigate comparing masses using different metric measures.
	To be able to place fractions on a number line.	To be able to add and subtract metric masses.
	To be able to count in fractions on a number line.	To explore measuring capacity in millilitres.
	To explore finding equivalent fractions.	To explore measuring capacity in litres.
	To be able to find equivalent fractions on a number line.	To explore the connection between millilitres and litres.
	To investigate finding equivalent fractions using a bar model.	To investigate comparing metric measures for capacity.
	End of unit assessment for fractions.	To be able to add and subtract metric measures for capacity.
		End of unit assessment for mass and capacity.

Year 3

Summer 1	Number: Fractions	Measurement: Money	Measurement: Time A
	To investigate adding fractions.	To explore using pounds and pence.	To learn the numbers 1 – 12 in Roman Numerals.
	To investigate subtracting fractions.	To explore converting between pounds and pence.	To recall how to tell the time to o'clock and half-past.
	To explore partitioning the whole of an amount.	To be able to add and subtract amounts of money.	To recall how to tell the time to quarter past and quarter to.
	To apply my understanding of adding and subtracting fractions to solve problems.	To understand how to find the correct change in money.	To be able to tell the time to the nearest 5 minutes.
	To be able to find the fraction of an amount of objects.	To investigate finding the correct change in money.	To be able to tell the time to the nearest minute.
	To investigate finding the fraction of an amount of objects.	To apply my understanding of how to use money in order to solve problems.	To explore reading the time on a digital clock.
	End of unit assessment for fractions.	End of unit assessment for money.	To explore reading the time using am and pm
			To investigate telling the time using days, months and years.
			To investigate telling the time in hours and days.
			To investigate telling the time in minutes and hours.
			To explore lengths of time, using minutes and hours.
			To explore lengths of time, using seconds and minutes.
Half Term			
Summer 2	Measurement: Time B	Geometry: Properties of Shapes	Statistics
	To investigate converting units of time.	To understand what is meant by turns and angles.	To explore and interpret pictograms.
	To apply my learning of units of time in order to solve problems.	To explore turning in right-angles.	To be able to draw a pictogram.
	End of unit assessment for time.	To investigate comparing angles.	To explore and interpret bar charts.
		To be able to measure and draw angles accurately.	To be able to draw a bar chart.
		To understand and investigate 'horizontal' and 'vertical' lines.	To investigate collecting and representing data.
		To understand and investigate 'parallel' and 'perpendicular' lines.	To explore how two-way tables work.
		To be able to recognise and describe 2D shapes.	End of unit assessment for statistics.
		To be able to draw polygons.	
		To be able to recognise and describe 3D shapes.	
		To be able to make 3D shapes.	
		End of unit assessment for properties of shapes.	

Year 4

Autumn 1	Number: Place Value	Number: Addition and Subtraction.
	To represent numbers to 1,000.	To add subtract 1s, 10s, 100s and 1,000s.
	To partition up to 1,000.	To be able to add up to two 4-digit numbers (no exchange).
	To use a number line to 1,000.	To add two 4-digit numbers (one exchange).
	To count up in 1000s.	To add two 4-digit numbers (more than one exchange).
	To represent numbers to 10,000.	To subtract two 4-digit numbers (no exchange).
	To partition numbers up to 10,000.	To subtract two 4-digit numbers (one exchange).
	To flexibly partition numbers.	To subtract two 4-digit numbers (more than one exchange).
	To find 1, 10, 100 and 1,000 more and less.	To be able to apply efficient subtraction methods.
	To use a number line to 10,000.	To be able to estimate answers to a given amount.
	To estimate on a number line to 10,000.	To be able to efficient methods to check the strategies I use.
	To compare numbers to 10,000.	End of unit assessment for addition and subtraction.
	To order numbers to 10,000.	
	To recognise and write roman numerals.	
	To round numbers to the nearest 10.	
	To round to the nearest 100.	
	To round to the nearest 1,000.	
	To round to the nearest 110, 100 or 1,000.	
	End of unit assessment for place value.	
Half Term		
Autumn 2	Measurement: Area	Number: Multiplication and Division A
	To understand what is mean by area.	To recall the multiples of 3.
	To calculate the area of a shape by count in squares.	To be able to multiply and divide by 6.
	To be able to create shapes and calculate their area.	To recall the 6 times-table and related division facts.
	To be able to compare the area of shapes.	To be able to multiply and divide by 9.
	End of unit assessment for area.	To recall the 9 times-table and related division facts.
		To investigate the relationship between the 3, 6 and 9 times-tables.
		To be able to multiply and divide by 7.
		To recall the 7 times-table and related division facts
		To recall the 11 times-table and related division facts.
		To recall the 12 times-tables and related division facts.
		To be able to multiply by 1 and O.
		To divide a number by 1 and itself.
		To be able to multiply three numbers.
		End of unit assessment for multiplication and division A.

Year 4

Spring 1	Number: Multiplication and Division	Measurement: Length and Perimeter
	To be able to recognise factor pairs.	To be able to measure in kilometres and meters.
	To be able to use factor pairs to produce a product.	To be able to find equivalent lengths (Kilometres and meters).
	To be able to multiply by 10.	To be able to find the perimeter on a grid.
	To be able to multiply by 100.	To be able to find the perimeter of a rectangle.
	To be able to divide by 10.	To be able to recognise the perimeter of rectilinear shapes.
	To be able to divide by 100.	To be able to find missing lengths in rectilinear shapes.
	To be able to recall related multiplication and division facts.	To be able to calculate the perimeter of rectilinear shapes.
	To be able to apply Informal written methods for multiplication.	To recognise the perimeter of regular polygons.
	To be able to multiply a 2-digit number by a 1-digit number.	To be able to calculate the perimeter of polygons.
	To be able to multiply a 3-digit number by a 1-digit number.	End of block assessment for length and perimeter.
	To be able to divide a 2-digit number by a 1-digit number (1).	
	To be able to divide a 2-digit number by a 1-digit number (2).	
	To be able to divide a 3-digit number by a 1-digit number.	
	To investigate correspondence problems.	
	To investigate efficient methods for multiplication.	
	End of block assessment for multiplication and division.	
Half Term		
Spring 2	Number: Fractions	Number: Decimals A
	To understand what is meant by 'the whole'.	To recognise tenths as fractions.
	To be able to count beyond 1 in fractions.	To recognise tenths as decimals.
	To be able to partition a mixed number.	To be able to place tenths on a place value chart.
	To be able to count in mixed numbers on a number line.	To be able to place tenths on a number line.
	To be able to compare and order mixed numbers.	To be able to divide a one digit number by 10.
	To understand what is meant by an improper fraction.	To be able to divide a two digit number by 10.
	To be able to convert mixed numbers to improper fractions.	To recognise hundredths as fractions.
	To be able to convert improper fractions to mixed number.	To recognise hundredths as decimals.
	To be able to place equivalent fractions on a number line.	To be able to place hundredths on a place value chart.
	To investigate equivalent fraction families.	To be able to divide a one or two digit number by 100.
	To be able to add two or more fractions.	End of block assessment on decimals A.
	To be able to add fractions and mixed numbers.	
	To be able to subtract two fractions.	
	To be able to subtract a fraction from whole amounts.	
	To be able to subtract from mixed numbers.	
	End of block assessment for fractions.	

Year 4

Summer 1	Number: Decimals B	Measurement: Money	Measurement: Time
	To be able to make the whole with tenths.	To be able to write money as a decimal.	To be able to recognise years, months, weeks and days.
	To be able to make the whole with hundredths.	To be able to convert between pounds and pence.	To be able to recognise hours, minutes and seconds.
	To be able to partition decimals.	To investigate comparing amounts of money.	To be able to convert between analogue and digital time.
	To investigate methods for partitioning decimals.	To be able to estimate with money.	To be able to recognise and convert to the 24hr clock.
	To investigate comparing decimals.	To be able to calculate with money.	End of unit assessment for time.
	To investigate ordering decimals.	To investigate solve problems with money.	
	To be able to round to the nearest whole number.	End of unit assessment for money.	
	To investigate finding halves and quarters as a decimal.		
	End of unit assessment for decimals B.		
Half Term			
Summer 2	Geometry: Properties of Shapes	Geometry: Position and Direction	Statistics
	To be able to recognise angles as turns.	To be able to describe position using coordinates.	To be able to Interpret information on a chart.
	To investigate identifying angles.	To be able to plot coordinates.	To use a bar chart to compare the sum and difference.
	To be able to compare and order angles	To be able to draw 2D shapes on a grid.	To be able to Interpret information on a line graphs.
	To investigate the properties of triangles	To be able to translate a shape on a grid.	To be able to draw a line graph.
	To investigate the properties of quadrilaterals.	To be able to describe a translation on a grid.	End of unit assessment for statistics.
	To investigate the properties of different polygons.	End of unit assessment for position and direction.	
	To be able to recognise lines of symmetry.		
	To investigate the symmetric properties of shapes.		
	End of unit assessment for properties of shapes		

Year 5

	Number: Place Value	Number: Addition and Subtraction.	Number: Multiplication and Division A
	To recognise roman numerals to 1000.	To recognise and use appropriate mental strategies.	To recognise multiples and common multiple.
	To identify numbers up to 10, 000.	To add whole numbers of 4 or more digits.	To be able to recognise the factors of a number.
	To identify numbers up to 1 million.	To subtract whole numbers of 4 or more digits.	To be able to recognise and find common factors.
	To read and write numbers up to 1 million.	To use rounding to check answers.	To be able to recognise and find prime numbers.
	To understand and recognise powers of 10.	To recognise and use the inverse.	End of unit assessment for multiplication and division.
Autumn 1	To know 10, 100 and 1000 more or less than a number.	To apply my knowledge of addition and subtraction to multi-step problems.	
	To partition numbers up to 1 million.	To compare calculations by applying my knowledge.	
	To place numbers up to 1 million on a number line.	To apply my knowledge to find missing numbers.	
	To compare and order numbers up to 1 million.	End of unit assessment for addition and subtraction.	
	To round to the nearest 10, 100 or 1000.		
	To round within 1 million.		
	End of unit assessment for place value.		

Half Term

	Number: Multiplication and Division B	Number: Fractions
	To recognise and understand square numbers	To find fractions equivalent to a unit fraction
	To recognise and understand cube numbers	To find fractions equivalent to a non-unit fraction
	To multiply by 10, 100 and 1000	To recognise equivalent fractions
	To divide by 10, 100 and 1000	To convert improper fractions to mixed numbers
	To apply my knowledge of multiples of 10, 100 and 1000	To convert mixed numbers to improper fractions
	End of unit assessment for multiplications	To compare fractions less than 1
		To order fractions les than 1
		To compare and order fractions greater than 1
Autumn 2		To add and subtract fractions with the same denominator
		To add fractions within 1
		To add fractions with total greater than 1
		To add a mixed number
		To add two mixed number
		To subtract fractions
		To subtract from a mixed number
		To subtract from a mixed number fraction, breaking the whole
		To subtract mixed numbers
		End of unit assessment for fractions

Year 5

	Number: Multiplication and Division C	Number: Fractions B
Spring 1	To multiply up to 4 digit numbers.	To multiply a unit fractions by an integer.
	To multiply a 2 digit number by a 2 digit number.	To multiply a non-unit fraction by an integer.
	To multiply a 3 digit number by a 2 digit number (recognising long multiplication).	To multiply a mixed number by an integer.
	To multiply a 4 digit number by a 2 digit number (recognising long multiplication).	To calculate a fraction of a quantity.
	To apply my knowledge of multiplication to solve problems.	To find a fraction of an amount.
	To recognise and use short division.	To find a whole when given the part.
	To apply short division to 4 digit numbers.	To use fractions as operators.
	To use short division when there are remainders.	
	To recognise and choose efficient division methods.	
	To apply my knowledge to solve multiplication and division problems.	
	End of unit assessment for multiplication and division C.	

Half Term

	Number: Decimals and Percentages	Measurement: Perimeter and Area	Statistics
Spring 2	To recognise decimal numbers up to 2 decimal places.	To understand how to find the perimeter of rectangles.	To recognise and understand how to draw line graphs.
	To recognise and find equivalent fractions and decimals for tenths .	To understand how to find the perimeter of rectilinear shapes.	To read and interpret line graphs.
	To recognise and find equivalent fractions and decimals for hundredths.	To understand how to find the perimeter of polygons.	To recognise and interpret two-way tables.
	To recognise and find equivalent fractions and decimals.	To understand how to find the area of rectangles.	To read and interpret timetables.
	To recognise thousandths as fractions.	To understand how to find the area of compound shapes.	
	To recognise thousandths as decimals, including on a place value chart.	To apply my knowledge to estimate areas..	
	To order and compare decimals with the same number of decimal places.	End of unit assessment for perimeter and area.	
	To order and compare decimals, up to 3 decimal places.		
	To round to the nearest whole number.		
	To round to 1 decimal place.		
	To recognise and understand percentages.		
	To recognise percentages as decimals.		
	To find equivalent fractions, decimals and percentages.		
	End of unit assessment for decimals and percentages.		

Year 5

	Geometry: Properties of Shape	Geometry: Position and direction	Number: Decimals A
Summer 1	To understand degrees and classify angles.	To read and plot coordinates.	Use known facts to add and subtract decimals within 1.
	To use my prior knowledge to estimate angles.	To apply my knowledge of coordinates to solve problems.	To recognise decimal complements to 1.
	To measure angles up to 180 degrees.	To understand translation.	To add and subtract decimals across 1.
	To draw lines and angles accurately using correct equipment.	To apply my knowledge of translation to coordinates.	To add decimals with the same number of decimal places.
	To apply my knowledge to calculate angles around a point.	To recognise lines of symmetry.	To add decimals with a different number of decimal places.
	To apply my knowledge to calculate angles on a straight line.	To be able to reflect shapes in horizontal and vertical lines.	End of unit assessment for decimals A.
	To calculate and measure the lengths and angles within shapes.	End of unit assessment on position and direction.	
	To recognise and distinguish between regular and irregular polygons.		
	To recognise 3D shapes.		
	End of unit assessment on properties of shapes.		

Half Term

	Number: Decimals B	Number: Negative Numbers	Measurement: Converting Units	Measurement: Volume
Summer 2	To add decimals with the same number of decimal places.	To understand negative numbers.	To recognise and use kilograms and kilometres.	To recognise cubic centimeters.
	To subtract decimals with the same number of decimal places.	To count through zero in 1.	To recognise and use millimetres and millilitres.	To compare the volume of different containers.
	To recongise and use efficient strategies for adding and subtracting decimals.	To count through zero in multiples of a given number.	To convert between units of length.	To apply my knowledge to estimate volume.
	To recognise and understand decimal sequences.	To compare and order negative numbers.	To be able to convert between metric and imperial units.	To apply my knowledge to estimate capacity.
	To multiply decimals by 10, 100 and 1000.	To find the difference with negative numbers.	To convert between different units of time.	End of unit assessment for volume.
	To divide decimals by 10, 100 and 1000.	End of unit assessment for negative numbers.	To apply my knowledge of time to calculate with timetables.	
	To apply my knowledge of multipying and dividing decimals to find missing values.		End of unit assessment for converting units.	
	End of unit assessment for decimals B.			

Year 6

	Number: Place Value	Number: Addition, Subtraction, Multiplication and Division
Autumn 1	To be able to recognise numbers up to 1,000,000.	To be able to add and subtract any given integer.
	To be able to recognise numbers up to 10,000,000.	To be able to recognise common factors.
	To investigate numbers up to 10,000,000.	To be able to recognise common multiples.
	To understand powers of 10.	To investigate rules of divisibility.
	To explore using number lines for numbers up to 10,000,000.	To be able to recognise and explore square and cube numbers.
	To be able to compare and order any integer.	To be able to multiply a 4-digit number by a 2-digit number, using a formal method.
	To be able to round any integer to a given place value.	To be able to apply my learning to solve multiplication problems.
	To investigate negative numbers.	To explore using short division and diving with factors to solve problems.
	End of unit assessment for place value.	To be able to use the formal method for division.
		To apply me learning of division in order to solve problems.
		To investigate the rules for operations (BIDMAS)
		To be able to apply methods of mental calculation to create an estimation.
		To apply my learning of multiplication and division to solve problems.
		End of unit assessment for multiplication and division.
Half Term		
	Number: Fractions	Geometry: Measurement
Autumn 2	To explore finding equivalency through simplifying.	To find be able to compare and order amounts in metric measurements.
	To be able to identify equivalent fractions on a number line.	To be able to convert any given metric measurement.
	To be able to compare and order any given fraction using the denominator.	To calculate with amounts in metric measurements.
	To be able to compare and order any given fraction using the numerator.	To be able to convert between miles and kilometres.
	To be able to add and subtract any given simple fraction.	To investigate amounts in imperial measurement, and compare those with metric measurements.
	To investigate adding and subtracting any given fraction.	End of unit assessment for measurement.
	To be able to add mixed numbers.	
	To be able to subtract mixed numbers.	
	To be able to apply my learning of adding and subtracting mixed numbers to solve problems.	
	To be able to multiply a fraction by a given integer.	
	To be able to multiply any two fractions together.	
	To be able to divide a fraction by a given integer.	
	To apply my learning in order to solve problems involving fractions.	
	To be able to find a fraction of an amount.	
	To investigate finding fractions of amounts.	
	To be able to find the whole from a given fraction.	
	End of unit assessment for fractions.	

Year 6

Spring 1	Number: Ratio	Number: Algebra	Number: Decimals
	To investigate adding or multiplying in ratio.	To explore using one-step function machines.	To explore place value within 1.
	To be able to recognise and apply the language of ratio.	To explore using two-step function machines.	To investigate place value involving integers and decimals.
	To understand the meaning of the ratio symbol.	To be able to forma simple algebraic expression.	To be able to round a decimal to a given integer.
	To explore the connection between ratio and fractions.	To understand and explore the concept of substitution in algebraic expression.	To be able to add and subtract decimals.
	To be able to apply my learning of ratio to be able to draw at to a given scale.	To be able to follow a simple formula in order to solve problems.	To be able to multiply using place value (x10, x100, x1000)
	To investigate using scale factors to draw accurately.	To be able to form simple equations.	To be able to divide using place value (/10, /100, /1000)
	To explore creating similar shapes using ratio.	To be able to solve one-step equations.	To explore multiplying decimals by a given integer.
	To apply my learning of ratio in order to solve problems.	To be able to solve two-step equations.	To explore dividing decimals by a given integer.
	To investigate problems involving proportion.	To investigate finding pairs of values from an equation.	To apply my learning of decimals in order to solve problems.
	To apply my learning of ratio and proportion in order to follow a recipe.	To be able to solve algebraic problems with 2 unknowns.	End of unit assessment for decimals.
	End of unit assessment for ratio	End of unit assessment for algebra.	
Half Term			
Spring 2	Number: Fractions, Decimals and Percentages	Measurement: Perimeter, Area and Volume	Statistics
	To explore the relationship between decimals and fractions.	To explore the properties of shapes with the same area.	To investigate interpreting information from a line graph.
	To be able to express a given fraction as a decimal.	To be able to find the area and perimeter of regular and compound shapes.	To investigate interpreting information from a dual bar-chart.
	To explore the concept of percentages.	To explore finding the area of a triangle, using the counting squares method.	To be able to read and interpret information from a pie-chart
	To be able to express a fraction as a percentage.	To be able to calculate the area of a right-angle triangle.	To explore reading pie-charts involving percentages.
	To explore finding equivalence between fractions, decimals and percentages.	To be able to calculate the area of any given triangle, using a simple formula.	To be able to draw a pie-chart, using given information.
	To be able to order any given fraction, decimals and percentage.	To be able to find the area of a parallelogram, using a simple formula.	To be able to find the mean-average of a set of data.
	To be able to find a percentage of an amount.	To explore finding the volume of 3D shapes by counting cubes.	End of unit assessment for statistics.
	To investigate ways of finding a percentage of any given amount.	To be able to find the volume of a 3D shape, using a simple formula.	
	To be able to find the whole from a given percentage.	End of unit assessment for perimeter, area and volume.	
	End of unit assessment for fractions, decimals and percentages.		

Year 6

	Geometry: Properties of Shape	Geometry: Position and Direction
Summer 1	To explore measuring and classifying angles.	To explore plotting coordinates in the first quadrant.
	To be able to calculate missing angles along a straight line.	To be able to read and plot points across all four quadrants.
	To be able to identify vertically opposite angles around a point.	To apply my learning of coordinates in order to solve problems.
	To be able to calculate the angles within a triangle.	To be able to translate a shape within the four quadrants of a graph.
	To explore finding angles in any given triangle.	To be able to reflect a shape within the four quadrants of a graph.
	To be able to find the missing angle in any given triangle.	End of unit assessment for position and direction.
	To be able to find missing angles within a quadrilateral.	
	To be able to find missing angles in any given polygon.	
	To be able to identify the parts of a circle.	
	To be able to draw shapes accurately, using appropriate equipment.	
	To explore identifying the nets of given 3D shapes.	
	End of unit assessment for properties of shapes.	

Half Term

Summer 2	Real-Life Maths Investigation linked to Secondary Transition

Fiver-challenge project:

- Budgeting,
- Understanding profit and loss,
- Analysing and interpreting data,
- Critical-thinking and logical reasoning,
- Fluency in the application of the four operations,
- Accuracy of estimation,
- Pattern and relationship spotting within mathematics,
- Presentational and communication skills.

An understanding of the real-world application of mathematics.