Maths Curriculum Flow

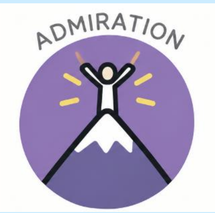
Curriculum Drivers



Curiosity



Communication



Admiration



Worldly









Maths at Beaminster St Mary's

At Beaminster St Mary's, we aim to instill a fascination for Maths and foster an enduring love of number and the manipulation of numbers. Through engaging, real life anchor tasks, children develop an appreciation for the practical uses of Maths, as well as its aesthetic nature. A key focus of our learning is the use of concrete manipulatives – physical objects that expose the underlying mathematical concepts - helping our children to recognise that Maths is a search for pattern and relationship.

We believe real Maths is about conjecturing, verifying, debating and articulating, so our classrooms reflect this, with our lessons packed full of opportunities for mathematical thinking and discussion. We want to help pupils to understand that Maths is a powerful tool for communication.

With carefully planned support and challenge, we support pupils to become active, confident mathematicians, providing opportunities for pupil to demonstrate and use their Maths in everyday situations. We encourage pupils to take responsibility for their own learning, take pride in their own mathematics, and take the initiative to get themselves 'unstuck' when things get tricky!

Children at Beaminster St Mary's Academy will:

- *Become fluent in arithmetic and number knowledge.*
- *Recall and apply knowledge rapidly and accurately*
- *Experience varied and fluent practice and consolidation*
- *Develop reasoning and problem-solving skills*
- *Understand mathematical language and use this to reason*
- *Apply their mathematical knowledge and understanding to solve routine and non-routine problems*

We want them to: *'Love Maths, Talk Maths, Use Maths'*



Mathematics

Develop a secure understanding of the six key concepts of mathematics:

- **Number and Place Value**: understanding the value of numbers, the relationships between them, and how numbers can be represented and compared.
- **Calculation**: understanding the methods, properties and relationships involved in addition, subtraction, multiplication and division.
- **Fractions, Decimals and Percentages**: understanding parts of wholes, proportional relationships and equivalent representations of quantity.
- **Measurement**: understanding and applying units, measures and relationships involving length, mass, capacity, time, area, volume and temperature.
- **Geometry**: understanding properties of shape, position, movement, space and relationships between geometric objects.
- **Statistics and Data**: understanding how information can be collected, represented, interpreted and used to answer questions and solve problems.

Fluent Mathematicians

- Recalling and applying mathematical facts, procedures and strategies with increasing accuracy and efficiency.
- Selecting appropriate methods and representations to solve calculations and mathematical tasks.
- Demonstrating flexibility when working with numbers and mathematical concepts.

Reasoning Mathematicians

- Identifying patterns, relationships and generalisations within and across mathematical concepts.
- Making connections between different areas of mathematics to deepen understanding.
- Justifying, proving and evaluating mathematical ideas using logical reasoning.

Problem Solvers

- Applying mathematical knowledge and skills to unfamiliar and real-world contexts.
- Selecting and adapting strategies to solve increasingly complex problems.
- Persevering when faced with challenge, evaluating approaches and refining solutions.

Confident Communicators

- Explaining mathematical thinking clearly using precise mathematical vocabulary.
- Listening to, building upon and respectfully challenging the thinking of others.
- Representing and communicating ideas through discussion, diagrams, models, symbols and calculations.
- Discussing, comparing and critiquing mathematical methods, strategies and solutions.



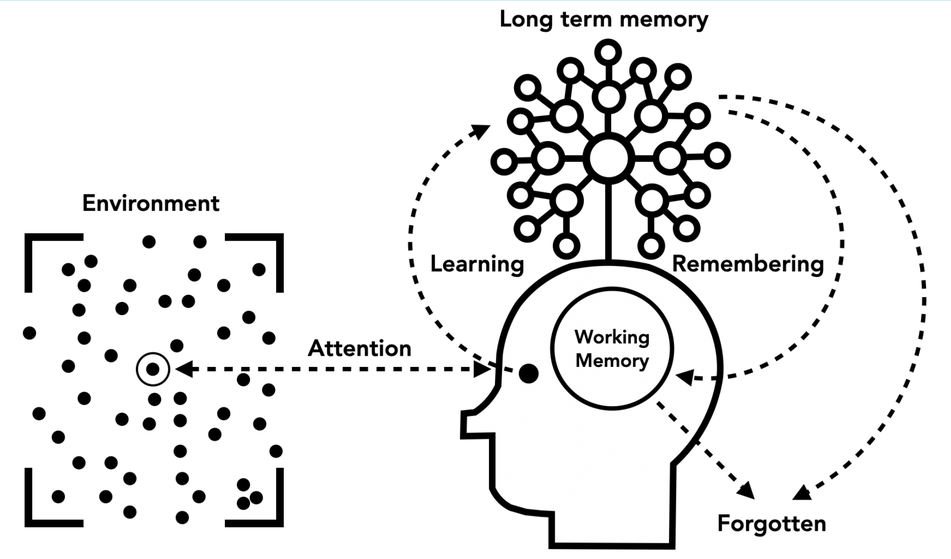
Curriculum Drivers

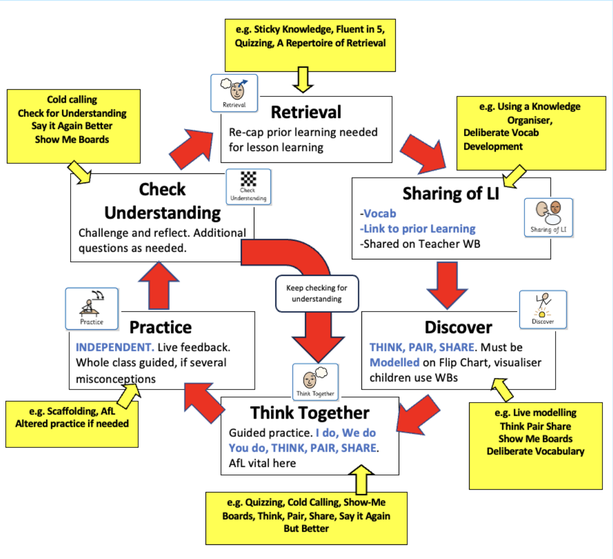
At **Beaminster St Mary's Academy**, we believe that our curriculum should provide children with more than the knowledge and skills set out in the National Curriculum. It should help them to **love each other, learn together and inspire all to succeed**, preparing them not only for the next stage of their education but for life beyond our school.

When designing and developing our curriculum, we consider the **needs of our children and families, our local community, our Christian vision and values, and the distinctive context and opportunities of living and learning in Beaminster and Dorset**. We want every child to develop a strong sense of who they are, their place within their community and their responsibility towards the wider world.

Our curriculum is underpinned by four key drivers: **Curiosity, Admiration, Communication and Worldly**. These drivers help us to identify the experiences, knowledge, skills and opportunities that we want every child to encounter during their time at Beaminster St Mary's. They are woven through our curriculum and wider school life, ensuring that our curriculum is **ambitious, enriching and purposeful**, while reflecting the needs and aspirations of our children.

Learning model and lesson design





Tom Sherrington's learning model underpins our teaching and learning by ensuring that lessons are well-sequenced and structured with clear learning intentions. We prioritise active student engagement, regular retrieval practice and high-quality feedback, allowing students to consolidate and retain knowledge effectively. The model supports teachers in assessing progress through formative assessment and adapting teaching to meet individual needs. A focus on delivering lessons with optimal cognitive load and promoting independent learning, helps students develop a deep understanding of the curriculum and the skills necessary for lifelong learning.

Curiosity



We want our children to be curious about themselves, each other and the world around them. We encourage them to ask questions, investigate, explore and develop a lifelong love of learning.

Communication



We want every child to develop the confidence and skills to express themselves, listen to others and communicate effectively. We place a strong emphasis on vocabulary, reading, speaking and listening, enabling children to participate fully in school, their community and wider society.

Admiration



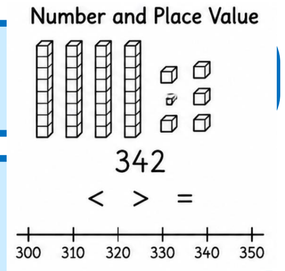
We want our children to recognise and celebrate excellence, beauty, creativity, courage and achievement in themselves and others. Through our curriculum, children encounter inspiring people, ideas, places, achievements and examples of faith and character.

Worldly



We want our children to understand that they are part of a world much bigger than Beaminster. Our curriculum helps them to appreciate different cultures, communities, places, beliefs and perspectives, while understanding their own responsibilities towards others and the world we share.

Maths at Beaminster St Mary's



National Curriculum

KS1

Develop confidence with numbers, counting and place value.
Count to and across 100, forwards and backwards, beginning with zero or one, 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 number lines, and use the language of equal to, more than, less than, most and least.
Read and write numbers from 1 to 20 in numerals and words.

KS2

Count in steps of powers of 10 for any given number up to 1,000,000.
Count backwards through zero to include negative numbers.
Read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit.
Read, write, order and compare numbers up to 10,000,000 and determine the value of each digit.
Read Roman numerals to 1,000 and recognise years written in Roman numerals.
Interpret negative numbers in context and calculate intervals across zero.
Round any number to a required degree of accuracy.

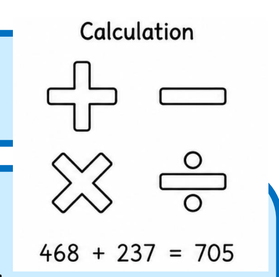
Our Big Ideas that link the learning: Substantive

- Number and Place Value
- Calculation
- Fractions, Decimals and Percentages
- Measurement
- Geometry
- Statistics and Data

Second Order Concepts: Disciplinary

- Fluent Mathematicians
- Reasoning Mathematicians
- Problem Solvers
- Confident Communicators

Maths at Beaminster St Mary's



National Curriculum

KS1

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 one-step problems involving addition and subtraction, using concrete objects and pictorial representations.
Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables.
Calculate mathematical statements for multiplication and division within the multiplication tables, using appropriate signs.
Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods and multiplication and division facts.

KS2

Add and subtract numbers mentally, including increasingly large numbers.
Add and subtract whole numbers with up to four digits and more than four digits using formal written methods where appropriate.
Estimate and use inverse operations to check answers.
Recall multiplication and division facts up to 12 × 12.
Multiply two- and three-digit numbers by one-digit numbers using formal written methods.
Multiply up to four-digit numbers by one- and two-digit numbers using formal written methods.
Divide numbers up to four digits by one-digit and two-digit numbers using formal written methods, interpreting remainders appropriately.
Multiply and divide mentally, drawing upon known facts.
Multiply and divide whole numbers and those involving decimals by 10, 100 and 1,000.
Use the order of operations to carry out calculations involving the four operations.
Solve addition and subtraction, multiplication and division, and multi-step problems in contexts, deciding which operations and methods to use.

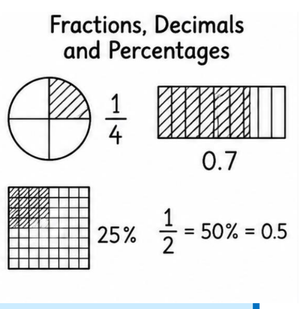
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Maths at Beaminster St Mary's



National Curriculum

KS1

Recognise, find, name and write fractions of a length, shape, set of objects or quantity.
Recognise, find and name a half as one of two equal parts and a quarter as one of four equal parts.

KS2

Recognise and show, using diagrams, families of common equivalent fractions.
Count up and down in hundredths and recognise that hundredths arise when dividing an object by 100 and dividing tenths by 10.
Recognise and write decimal equivalents of tenths, hundredths, \(1/2\), \(1/4\) and \(3/4\).
Recognise the per cent symbol (%) and understand that per cent relates to the number of parts per hundred.
Compare and order fractions, including fractions greater than one.
Add and subtract fractions with the same denominator and denominators that are multiples of the same number.
Multiply proper fractions and mixed numbers by whole numbers.
Read, write, order and compare numbers with up to three decimal places.
Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents.
Recall and use equivalences between simple fractions, decimals and percentages.
Solve problems involving fractions, decimals, percentages, ratio and proportion.

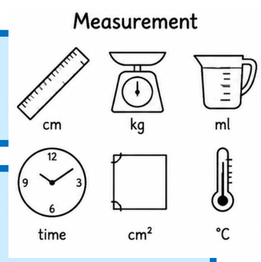
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Maths at Beaminster St Mary's



National Curriculum

KS1

Compare, describe and solve practical problems for lengths and heights, mass and weight, capacity and volume, and time.
Measure and begin to record lengths and heights, mass and weight, capacity and volume, and time.
Recognise and know the value of different denominations of coins and notes.
Sequence events in chronological order and recognise the number of seconds, minutes and hours in familiar time units.
Tell and write the time to five minutes, including quarter past and quarter to the hour.
Recognise and use symbols for pounds (£) and pence (p), combine amounts and solve practical money problems.

KS2

Measure, compare, add and subtract lengths, mass and capacity using standard units.
Convert between different units of measure, including kilometres and metres, centimetres and metres, and hours and minutes.
Estimate, compare and calculate different measures, including money in pounds and pence.
Read, write and convert time between analogue and digital 12-hour and 24-hour clocks.
Solve problems involving converting between units of time.
Understand and use approximate equivalences between metric units and common imperial units.
Use all four operations to solve problems involving measure using decimal notation, including scaling.
Solve problems involving the calculation and conversion of units of measure, using decimal notation to three decimal places where appropriate.

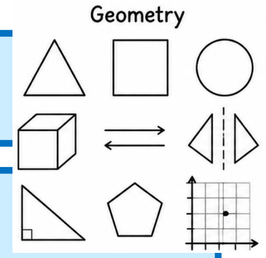
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- **Measurement**
- Geometry
- Statistics and Data

Second Order Concepts: Disciplinary

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- Problem Solvers
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Maths at Beaminster St Mary's



National Curriculum

KS1

Recognise and name common 2-D and 3-D shapes.
Identify and describe the properties of 2-D and 3-D shapes, including the number of sides and vertices.
Compare and sort common 2-D and 3-D shapes and everyday objects.
Describe position, direction and movement, including whole, half, quarter and three-quarter turns.

KS2

Identify acute and obtuse angles and compare and order angles up to two right angles.
Identify horizontal and vertical lines and pairs of perpendicular and parallel lines.
Compare and classify geometric shapes based on their properties and sizes.
Identify lines of symmetry in 2-D shapes and complete simple symmetrical figures.
Describe positions on a 2-D grid as coordinates in the first quadrant.
Describe movements between positions as translations and plot specified points.
Identify, describe and represent the position of a shape following a reflection or translation.
Identify 3-D shapes from 2-D representations.
Draw 2-D shapes using given dimensions and angles.
Recognise, describe and build simple 3-D shapes, including making nets.
Illustrate and name parts of circles, including radius, diameter and circumference.
Recognise angles at a point, on a straight line, and in multiples of 90 degrees; use these facts to find missing angles.
Describe positions on the full coordinate grid, including all four quadrants.

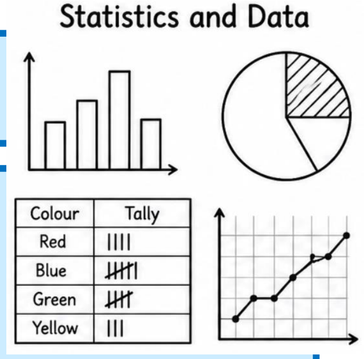
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Maths at Beaminster St Mary's



National Curriculum

KS1

Interpret and construct simple pictograms, tally charts, block diagrams and tables.
Ask and answer simple questions by counting the number of objects in each category and sorting categories by quantity.
Ask and answer questions about totals and differences.

KS2

Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs.
Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.
Complete, read and interpret information in tables, including timetables.
Interpret and construct pie charts and line graphs, and use these to solve problems.
Calculate and interpret the mean as an average.

Our Big Ideas that link the learning: Substantive

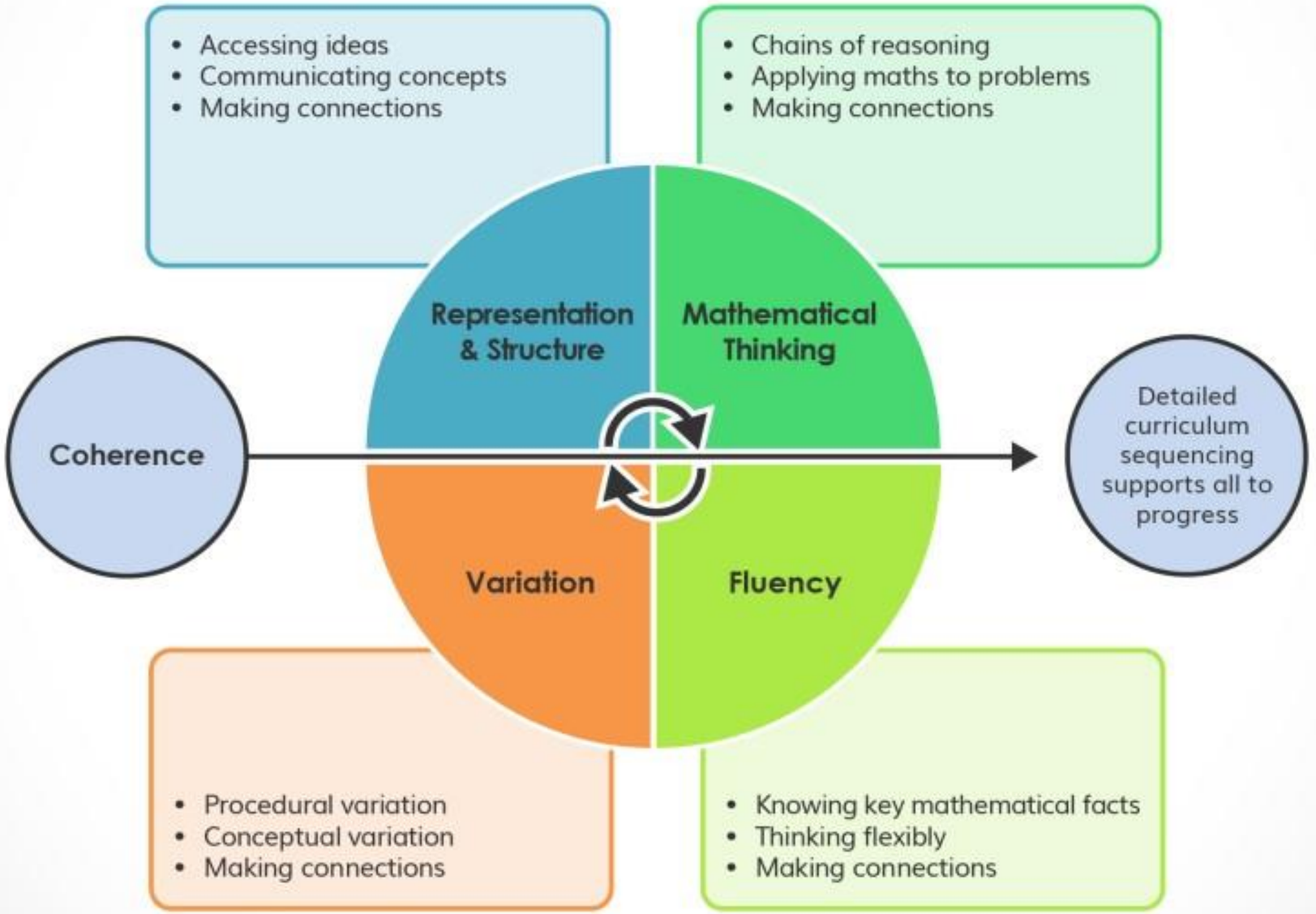
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Teaching for Mastery

Five Big Ideas



THE NCETM 5 BIG IDEAS FOR MATHS MASTERY: A GUIDE FOR NEW LEADERS

1 COHERENCE

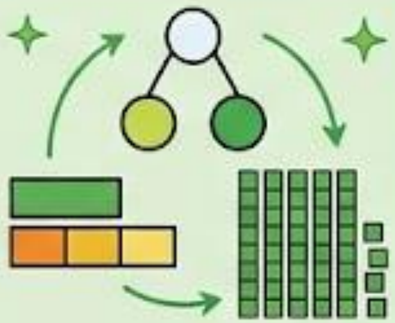


BREAKING DOWN CONCEPTS INTO SMALL, LOGICAL STEPS.

A seamless journey for all learners.

Leadership Look-fors:
Progressive planning, no rushes, building generalisation.

2 REPRESENTATION & STRUCTURE



USING VISUAL & PHYSICAL MODELS TO REVEAL MATHEMATICAL STRUCTURE.

Making abstract ideas concrete.

Leadership Look-fors:
Consistent tool use across grades, not just a crutch.

3 MATHEMATICAL THINKING

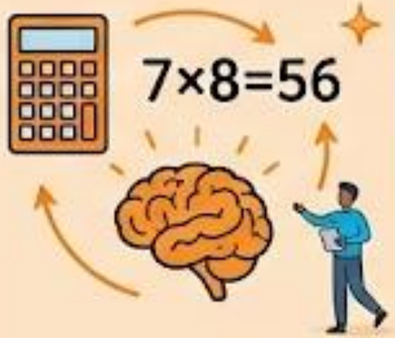


ACTIVELY ENGAGING WITH IDEAS TO BUILD DEEP UNDERSTANDING.

Thinking, reasoning, and discussing.

Leadership Look-fors:
Pupil talk (Ping-Pong teaching), making conjectures, sentence

4 FLUENCY

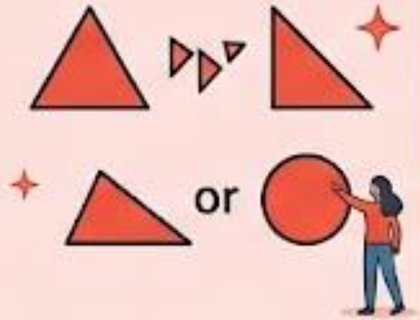


QUICK, ACCURATE RECALL OF FACTS & FLEXIBLE APPLICATION OF STRATEGIES.

Freeing mental capacity.

Leadership Look-fors:
Daily arithmetic slots, fact practice with connections.

5 VARIATION



PRESENTING CONCEPTS IN MULTIPLE WAYS AND DESIGNING CAREFUL PRACTICE.

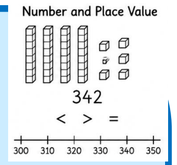
Spotting patterns and relationships.

Leadership Look-fors:
Examples & non-examples, dynamic question sets.

NCETM

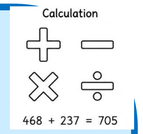
Our Big Ideas

1. Number and Place Value



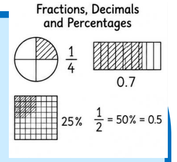
Number and Place Value provides the foundations for understanding how numbers work and how they relate to one another. Pupils learn to count, read, write, represent, compare and order numbers, developing an understanding of the value of each digit and the structure of the number system. Progression moves from recognising, subitising and representing small quantities in EYFS to working confidently with large numbers, negative numbers, rounding and increasingly complex numerical relationships by Year 6. Through this understanding, pupils develop the number sense needed to estimate, calculate, identify patterns and solve problems. Number and Place Value underpins success across all other areas of the mathematics curriculum.

2. Calculation



Calculation develops pupils' understanding of the four operations: addition, subtraction, multiplication and division. Children learn to select and apply mental strategies, practical resources, pictorial representations and formal written methods to solve mathematical problems. Progression moves from combining, separating and sharing quantities in EYFS to using efficient written methods, understanding the relationships between operations, applying the order of operations and solving complex, multi-step problems by Year 6. Throughout the curriculum, pupils develop fluency, accuracy and flexibility, learning to explain their reasoning, recognise patterns and check the reasonableness of their answers. Calculation enables children to apply their mathematical knowledge confidently in both familiar and unfamiliar situations.

3. Fractions, Decimals and Percentages



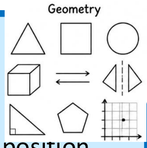
Fractions, Decimals and Percentages develops pupils' understanding of how quantities can be divided, represented and compared in different ways. Children learn that fractions describe parts of a whole and that fractions, decimals and percentages are interconnected representations of quantity. Progression moves from exploring equal parts and simple fractions through practical experiences in EYFS and KS1 to recognising equivalence, comparing and calculating with fractions, working with decimal numbers and finding percentages of quantities by Year 6. Pupils increasingly apply these relationships to solve problems involving proportion, scaling and unequal sharing. This Big Idea helps children understand how quantities relate to one another and provides essential foundations for more advanced mathematics and real-world applications.

4. Measurement



Measurement develops pupils' understanding of how the world can be described, compared and quantified. Children learn to estimate, measure, compare and calculate using appropriate units and instruments, exploring length, height, mass, capacity, time, area, volume, money and temperature. Progression moves from comparing everyday objects and using descriptive language in EYFS to selecting appropriate units, converting between measures, calculating perimeter and area, and solving increasingly complex problems involving volume and measurement relationships by Year 6. Pupils develop an understanding of the importance of accuracy, standard units and appropriate methods of measurement. Measurement enables children to apply mathematics to practical situations and understand the numerical relationships that describe the world around them.

5. Geometry



Geometry develops pupils' understanding of shape, space, position and movement. Children learn to recognise, describe, compare and classify two-dimensional and three-dimensional shapes, exploring their properties and the relationships between them. Progression moves from manipulating shapes and using positional language in EYFS to identifying angles, investigating parallel and perpendicular lines, understanding symmetry and transformations, working with coordinates and reasoning about increasingly complex geometric properties by Year 6. Pupils develop their ability to visualise, describe and represent mathematical relationships, using accurate mathematical vocabulary, diagrams and representations. Geometry encourages spatial reasoning and helps children understand how shapes and space relate to one another in mathematics and the wider world.

6. Statistics and Data



Statistics and Data develops pupils' understanding of how information can be collected, organised, represented and interpreted to answer questions and solve problems. Children begin by sorting objects, recognising similarities and differences, and comparing groups before progressing to collecting and presenting data using tally charts, pictograms, tables, bar charts and line graphs. By Year 6, pupils interpret increasingly complex representations, including pie charts, and use data to identify patterns, make comparisons and draw conclusions. Throughout the curriculum, children develop curiosity, accuracy and critical thinking, learning to select appropriate ways to present information and explain what the data reveals. Statistics and Data enables pupils to make sense of information, communicate findings and use evidence to inform decisions in mathematics and everyday life.

Maths Curriculum Overview

	Autumn		Spring		Summer	
EYFS	Subitising Counting, cardinality and ordinality Composition Comparison Pattern, size and capacity Shape, position		Subitising Counting, cardinality and ordinality Composition Comparison Mass, capacity, length and height		Subitising Counting, cardinality and ordinality Composition Comparison shape, visualise, map and build,	
Year 1	Place Value (within 10)	Addition and Subtraction (within 10) Geometry	Place Value (within 20) Addition and Subtraction (within 20)	Place Value (within 50) Length and Height Mass and Volume	Multiplication and Division Fractions Geometry	Place Value (within 100) Measurement – Money Measurement - time
Year 2	Place Value Addition and Subtraction	Shape	Money Multiplication and Division	Length and Height Mass, Capacity and Temperature	Fractions Time	Statistics Position and Direction
Year 3	Place Value Addition and Subtraction	Multiplication and Division A	Multiplication and Division B Length and Perimeter	Fractions A Mass and Capacity	Fractions B Money Time	Shape Statistics
Year 4	Place Value Addition and Subtraction	Measurement – Area Multiplication and Division A	Multiplication and Division B Length and Perimeter	Fractions Decimals A	Decimals B Money Time	Shape Statistics Position and Direction
Year 5	Place Value Addition and Subtraction	Multiplication and Division A Fractions A	Multiplication and Division B Fractions B	Decimals and Percentages Perimeter and Area Statistics	Shape Position and Direction Decimals	Number – Negative Numbers Measurement – Converting Units Measurement - Volume
Year 6	Place Value Addition, Subtraction, Multiplication and Division	Fractions A Fractions B Measurement – Converting Units	Ratio Algebra Decimals	Fractions, Decimals and Percentages Area, Perimeter and Volume Statistics	Shape Geometry – Position and Direction	Themed Project – Problem Solving

1. Number and Place Value

Understanding the value of numbers, the relationships between them, and how numbers can be represented and compared.

EYFS	KS1	Lower KS2	Upper KS2
• Count verbally beyond 20 and count objects, actions and sounds. • Recognise and order numerals; develop cardinality and subitising. • Develop a deep understanding of numbers to 10, including number bonds, doubling facts, and odd and even numbers. • Compare quantities and explore, continue and represent patterns.	• Count forwards and backwards within 100, including in steps of 2, 3, 5 and 10. • Read, write, represent and estimate numbers using objects, pictures and number lines. • Recognise the place value of each digit in two-digit numbers; identify one more and one less. • Compare and order numbers to 100 using <, > and =. • Use place value and number facts to solve problems.	• Count in multiples of 4, 8, 50 and 100, and in multiples of 6, 7, 9, 25 and 1,000. • Count backwards through zero to include negative numbers. • Read, write, represent and estimate numbers to at least 1,000, including Roman numerals to 100. • Recognise the place value of digits in three- and four-digit numbers; find 1,000 more or less. • Compare and order numbers beyond 1,000; round to the nearest 10, 100 or 1,000. • Solve number and practical problems involving these ideas.	• Count forwards and backwards in powers of 10 and with positive and negative whole numbers, including through zero. • Read, write, order and compare numbers to at least 1,000,000 and then 10,000,000; identify the value of each digit. • Read Roman numerals to 1,000 and recognise years written in Roman numerals. • Interpret negative numbers in context and calculate intervals across zero. • Round numbers to specified powers of 10 and to a required degree of accuracy. • Solve increasingly complex number and practical problems.

2. Calculation

Understanding the methods, properties and relationships involved in addition, subtraction, multiplication and division.

EYFS	KS1	Lower KS2	Upper KS2
• Develop and recall simple addition and subtraction facts and number bonds. • Explore combining, taking away, doubling, halving, sharing and grouping using objects and pictures. • Notice that quantities can be represented in different ways and explain simple mathematical thinking.	• Read, write and interpret statements using +, − and =. • Recall addition and subtraction facts to 20 and derive related facts to 100. • Add and subtract one- and two-digit numbers using mental methods, objects and pictorial representations. • Understand that addition can be done in any order, while subtraction cannot; use the inverse relationship to check calculations. • Recall multiplication and division facts for the 2, 5 and 10 times tables; use arrays, repeated addition and equal groups. • Solve one-step and missing-number problems involving the four operations.	• Add and subtract mentally, including three-digit numbers and ones, tens or hundreds. • Use formal column methods for addition and subtraction with up to four digits where appropriate. • Recall multiplication and division facts up to 12 × 12; use known facts and place value to calculate mentally. • Multiply two- and three-digit numbers by one digit using formal written methods; use factor pairs and commutativity. • Estimate answers and use inverse operations to check calculations. • Solve missing-number, two-step and contextual problems, choosing suitable operations and methods.	• Add and subtract whole numbers with more than four digits using formal written methods and mental strategies. • Perform mental calculations with increasingly large numbers and mixed operations. • Multiply up to four-digit numbers by one- and two-digit numbers using formal written methods. • Divide numbers up to four digits by one- and two-digit numbers using appropriate written methods; interpret remainders in context. • Multiply and divide by 10, 100 and 1,000, including numbers with decimals. • Use the order of operations and the inverse relationship between operations. • Use estimation and rounding to check answers and solve multi-step problems involving combinations of operations.

3. Fractions, Decimals and Percentages

Understanding parts of wholes, proportional relationships and equivalent representations of quantity.

EYFS	KS1	Lower KS2	Upper KS2
• Explore wholes and parts by sharing, splitting and combining objects and shapes. • Use practical experiences to compare quantities and recognise when groups or shapes have been divided into equal parts.	• Recognise, find and name halves and quarters of objects, shapes and quantities; recognise thirds and other simple fractions. • Recognise that two quarters are equivalent to one half. • Find simple fractions of quantities and write simple fraction statements. • Begin to recognise simple relationships between fractions and decimal notation through practical contexts, where appropriate.	• Count forwards and backwards in tenths and hundredths; understand how these arise from dividing by 10 and 100. • Recognise, find and write unit and non-unit fractions of sets and quantities. • Recognise and show equivalent fractions; compare and order fractions with related or common denominators. • Add and subtract fractions with the same denominator. • Recognise and write decimal equivalents of tenths and hundredths and of 1/2, 1/4 and 3/4. • Compare and order decimals with up to two decimal places; understand the value of each digit. • Recognise the percent symbol and understand percentages as parts per hundred; link simple percentages, fractions and decimals.	• Identify, name and write equivalent fractions, including tenths and hundredths; simplify fractions using common factors. • Compare and order fractions, including fractions greater than one; convert between mixed numbers and improper fractions. • Add and subtract fractions with related denominators and multiply proper fractions and mixed numbers by whole numbers. • Read, write, order and compare decimals with up to three decimal places; recognise thousandths and their relationship to tenths and hundredths. • Multiply and divide by 10, 100 and 1,000 and solve problems involving decimal calculations and appropriate rounding. • Recall and use equivalences between common fractions, decimals and percentages. • Calculate percentages of quantities and solve problems involving scaling, relative sizes, unequal sharing and proportion.

4. Measurement

Understanding and applying units, measures and relationships involving length, mass, capacity, time, area, volume and temperature.

EYFS	KS1	Lower KS2	Upper KS2
• Compare and describe length, height, weight, mass and capacity using everyday language. • Explore full, empty, more, less, heavier, lighter, longer and shorter. • Sequence familiar events and use language relating to time, including before, after, morning and evening.	• Compare, describe, measure and record lengths, heights, mass, capacity and volume using standard units and suitable instruments. • Choose appropriate units and tools, including rulers, scales, thermometers and measuring vessels. • Compare and order measurements and record results using <, > and =. • Recognise coins and notes, combine amounts and solve practical money problems, including change. • Tell and write the time to the hour, half-hour, quarter-hour and five-minute intervals; compare time intervals. • Measure and calculate the perimeter of simple shapes; find area by counting squares where introduced.	• Measure, compare, add and subtract lengths, mass and capacity using appropriate metric units. • Convert between common units, such as kilometres and metres or hours and minutes. • Estimate, compare and calculate measurements, including money. • Tell and record time to the nearest minute, use 12- and 24-hour clocks, and solve problems involving time. • Measure and calculate the perimeter of rectilinear shapes; find the area of rectilinear shapes by counting squares. • Use appropriate units and notation when recording measurements.	• Convert between metric units and use approximate equivalences between metric and common imperial units. • Use all four operations to solve problems involving measures, money and decimal notation. • Convert units of length, mass, volume and time, including using decimals to three places where appropriate. • Solve problems involving time conversions and interpret timetables. • Calculate and compare the area of rectangles and estimate the area of irregular shapes. • Estimate and calculate volume of cubes and cuboids and understand the relationship between area, perimeter, volume and capacity. • Use formulae where appropriate to calculate area and volume; convert between miles and kilometres.

5. Geometry

Understanding properties of shape, position, movement, space and relationships between geometric objects.

EYFS	KS1	Lower KS2	Upper KS2
• Explore, describe, select, rotate and manipulate 2-D and 3-D shapes. • Compose and decompose shapes and notice shapes within other shapes. • Use positional language to describe locations, familiar routes and movement.	• Recognise and name common 2-D and 3-D shapes and describe simple properties. • Compare and sort shapes and everyday objects; identify 2-D shapes on the surfaces of 3-D shapes. • Describe position, direction and movement, including turns and simple patterns or sequences. • Recognise and use whole, half and quarter turns and describe movement in straight lines. • Identify simple lines of symmetry in shapes.	• Draw 2-D shapes and make 3-D shapes using modelling materials; recognise shapes in different orientations. • Compare and classify triangles and quadrilaterals using their properties. • Recognise angles as turns; identify right, acute and obtuse angles and compare angles up to two right angles. • Identify horizontal and vertical lines and pairs of parallel and perpendicular lines. • Identify lines of symmetry and complete simple symmetrical figures. • Describe and plot positions on a grid in the first quadrant; describe translations and plot points to complete polygons.	• Distinguish regular and irregular polygons and classify shapes using properties of sides and angles. • Draw shapes accurately using given dimensions and angles; identify missing lengths and angles using known properties. • Identify and describe parts of circles, including radius, diameter and circumference. • Measure and draw angles in degrees; reason about angles at a point, on a straight line and in triangles and quadrilaterals. • Identify 3-D shapes from 2-D representations and build simple 3-D shapes, including nets. • Describe and represent reflections and translations; use coordinates in all four quadrants and draw shapes on a coordinate plane.

6. Statistics and Data

Understanding how information can be collected, represented, interpreted and used to answer questions and solve problems.

EYFS	KS1	Lower KS2	Upper KS2
• Sort objects and information into groups and notice similarities and differences. • Compare groups and quantities and talk about what has more, less or the same. • Ask and answer simple questions about objects, groups and everyday information.	• Collect, sort and organise data into categories. • Interpret and construct simple pictograms, tally charts, block diagrams and tables. • Ask and answer questions by counting objects in categories and comparing quantities. • Answer questions about totals and differences in categorical data.	• Interpret and present data using bar charts, pictograms and tables. • Interpret and present discrete and continuous data using appropriate graphs, including time graphs. • Solve one-step and two-step questions using information in charts, tables and graphs. • Solve comparison, sum and difference problems using data representations.	• Complete, read and interpret information in tables, including timetables and two-way tables. • Interpret and construct line graphs and pie charts and use them to solve problems. • Solve comparison, sum and difference problems using information presented in line graphs and other data displays. • Select and interpret appropriate data representations and explain what the information shows.