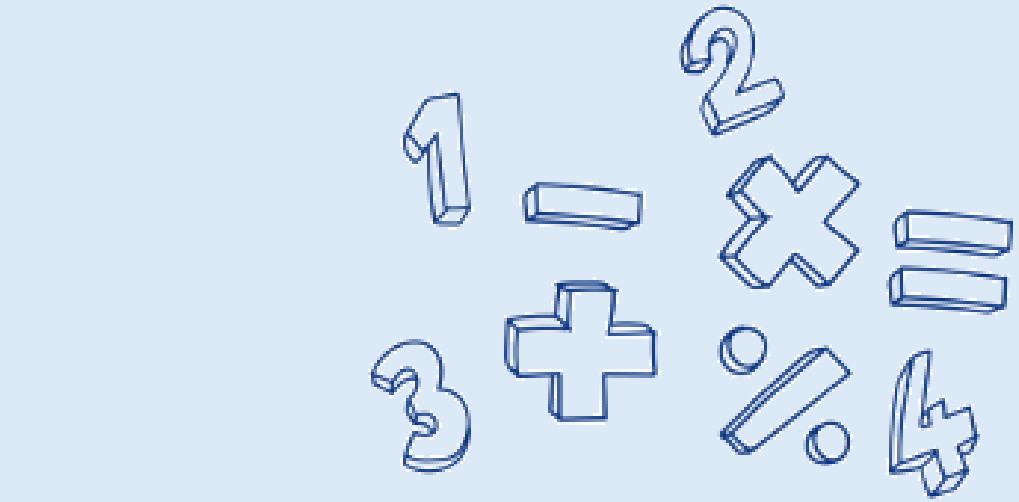
Maths



"Mathematics is not about numbers, equations, computations, or algorithms: it is about understanding."
– William Paul Thurston

We believe that Mathematics is essential to everyday life. It is of central importance within our ever-changing world. Critical within Science, engineering and technology. Mathematical and financial literacy are necessary requirements for future employment and, indeed, independent life. Our progressive, high-quality curriculum provides the basis for this principle. We are committed to ensuring that all of our children enjoy mathematics, experience success in the subject and fulfil their individual potential. We aim to deliver a curriculum that is accessible to all and maximises outcomes for all. To support this, we are committed to the ongoing continued professional development of staff within our school and their individual subject knowledge.

In line with the National Curriculum (2014), our aim is to ensure all children:

- become fluent in the fundamentals of mathematics.
- can recall know facts, rapidly and apply learnt knowledge, accurately.
- are able to reason mathematically with increasing sophistication as the curriculum progresses.
- can solve problems and apply mathematics. in different contexts.
- use and understand a wide range of age-appropriate mathematical language to discuss, explain and justify their mathematical thinking and reasoning.
- develop concrete pictorial and abstract methods to scaffold their understanding of key mathematical concepts.
- apply mathematical knowledge across the curriculum in different subjects.
- relate mathematical knowledge and skills to real-life situations.
- consolidate concepts through repetition and timely intervention where necessary.

Maths Lesson Organisation

Recall/ Retreival
- EYFS/Lower KS1 - This is to be Mastery of Number
- Arithmetic practice and regular TTRS

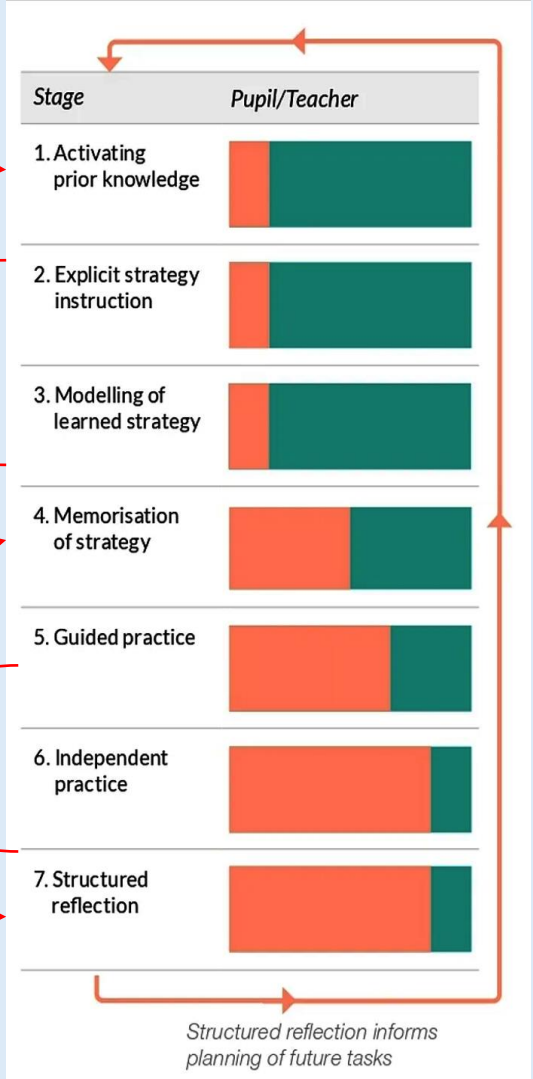
Revisit/ Remember
- Flashback 4 from WRMv3or specific focus linked to new topic
- Can be used for revisiting weaker topics from Assessments
- Discussion / Feedback on the Revisit and Remember

I Do
- Introduction of LO Small Step from RWM and exploration using Concrete/Pictorial/Abstract approach (CPA), using a worked example(s).

We Do
- Fluency example(s) completed
- Reasoning example(s) completed
- Scaffolding removed as appropriate, sometimes this can be gradual process.

You Do
- Independent Fluency and Reasoning Task(s)

Evaluate + Reflect
- Collective Marking and Reflection

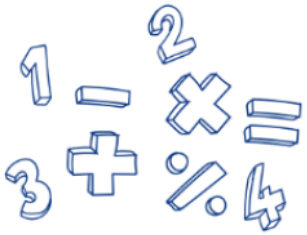


The Maths Foundational Knowledge documents serves as a structured guide, which outlines the essential concepts, skills and learning progressions that underpin effective mathematics education. Within mixed-age classroom contexts, this documents plays a vital role in ensuring consistency, equity and continuity of learning across diverse developmental stages.

Its primary purpose is to align curriculum delivery by clearly articulating what pupils are expected to know and be able to do at each stage of their mathematical development. This enables teachers to plan differentiated instruction that meets the varied needs of pupils while maintaining fidelity to curriculum standards. This document also supports assessment and monitoring processes by identifying key indicators of progress and areas requiring further consolidation, thus facilitating evidence-based instructional decisions.

By providing a shared reference point, the Mathematics Foundation Knowledge Document fosters pedagogical coherence across teaching teams and strengthens collaborative planning. It ensures that learning experiences build systematically upon prior knowledge and prepare students for subsequent stages of mathematical understanding. Importantly, it promotes equitable access to high-quality mathematics instruction, reducing learning gaps and supporting smooth progression through the curriculum.

For leadership, the document functions as a strategic tool for maintaining curriculum integrity, guiding professional development, and embedding a consistent vision for mathematical teaching and learning across the school. Through its structured approach, it empowers both teachers and students to engage purposefully with mathematics as a continuous and cumulative domain of knowledge.



Maths Foundational Knowledge Castle Carrock Primary School

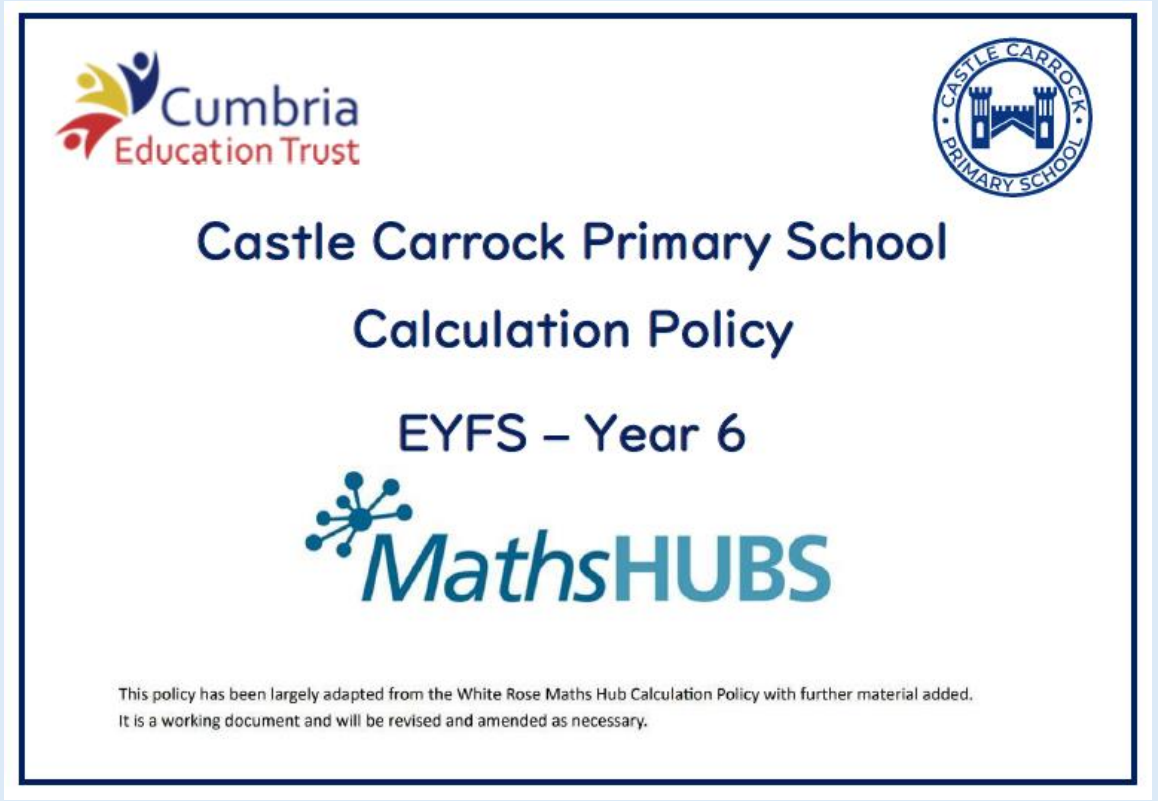
Please see our website to access the document or follow this link:

CC-Maths-Foundational-knowledge.pdf

A Calculation Policy provides a clear, structured, and consistent framework for the teaching and learning of written and mental calculation strategies across the Early Years Foundation Stage and Key Stages 1 and 2. Its core purpose is to ensure coherence, progression, and continuity in pupils' mathematical understanding, in alignment with the statutory aims and expectations of the National Curriculum for Mathematics.

The policy outlines the agreed methods and models for teaching the four operations — addition, subtraction, multiplication, and division — and demonstrates how pupils develop conceptual understanding and procedural fluency through a coherent learning sequence. It emphasises a mastery-based approach, moving from concrete and pictorial representations to abstract reasoning, ensuring that all pupils develop a deep, secure, and connected understanding of number and calculation.

In alignment with guidance from the NCETM Maths Hub, the policy supports the implementation of evidence-based pedagogy and coherent progression in line with the Curriculum Prioritisation Framework and Mastery principles. It reflects current best practice and ensures that the school's approach to calculation is consistent with national expectations for high-quality mathematics teaching. The policy also serves as a key reference for teachers, support staff, and parents, providing clarity on the methods and strategies used to develop confident, efficient, and accurate calculation skills.


Cumbria Education Trust

CASTLE CARROCK PRIMARY SCHOOL

Castle Carrock Primary School

Calculation Policy

EYFS – Year 6

MathsHUBS

This policy has been largely adapted from the White Rose Maths Hub Calculation Policy with further material added.
It is a working document and will be revised and amended as necessary.

Please see our website to access the document or follow this link:

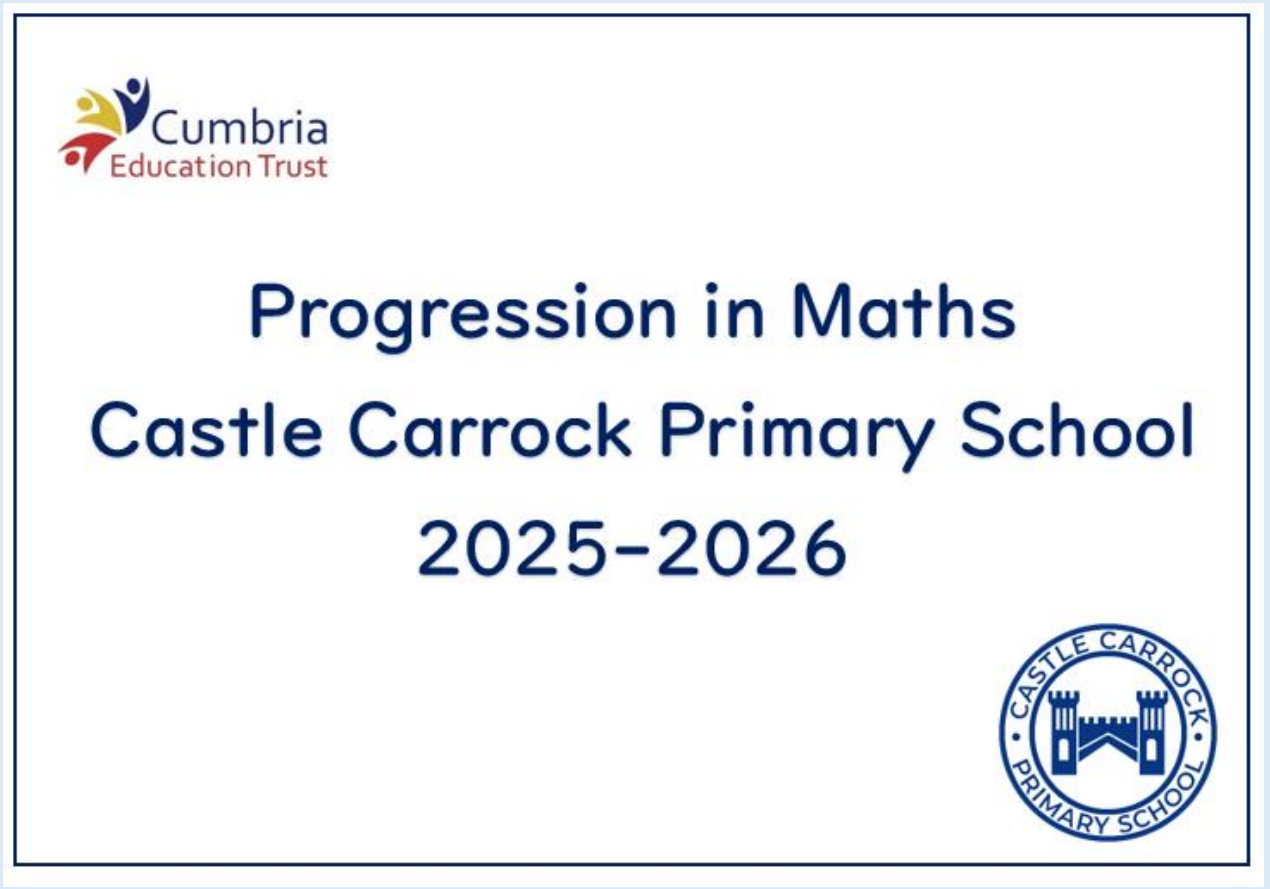
CC-Calculation-Policy.pdf

A Progression in Mathematics Policy provides a coherent framework that outlines how key mathematical concepts, skills, and reasoning processes are introduced, developed, and deepened from the Early Years Foundation Stage through to Year 6. Its primary purpose is to ensure that all pupils experience a consistent, connected, and carefully sequenced curriculum in accordance with the statutory aims of the National Curriculum for Mathematics.

The policy maps the learning journey across the key strands of the curriculum — Number, Measurement, Geometry, and Statistics — showing how understanding develops cumulatively over time. It ensures that teaching builds securely upon prior knowledge, allowing pupils to progress from foundational fluency to increasingly complex reasoning and problem-solving. This structured progression enables teachers to plan lessons that address the full range of attainment within mixed-ability and mixed-age settings.

In alignment with guidance from the NCETM Maths Hub and the principles of Teaching for Mastery, the policy supports both targeted intervention and high-level challenge. By clearly identifying key learning milestones and prerequisite knowledge, teachers can provide timely support to pupils who need to consolidate understanding, while also offering rich, sophisticated tasks that extend learning for those ready to deepen their thinking. This approach ensures that all learners are appropriately supported and challenged within the same coherent framework, maintaining high expectations and equity of access for every child.

School leaders hold responsibility for ensuring that the Progression in The policy is reviewed regularly to reflect current national guidance, research-informed practice, and outcomes from the NCETM Maths Hub network. Through its clear structure, emphasis on progression, and focus on both support and challenge, the policy underpins the school's commitment to mathematical excellence and ensures that every pupil is enabled to achieve their full potential.



Please see our website to access the document or follow this link:

CC-Maths-Progressions-Document-2025-26.pdf

Arithmetic Progression Year 1 – 6

Arithmetic Skills taught each term

Year 1 – Term 1	Year 2 – Term 1	Year 3 – Term 1	Year 4 – Term 1	Year 5 – Term 1	Year 6 – Term 1
Addition within 10 Subtraction within 10	Addition 2-digit numbers Subtract 2-digit numbers Basic Money Problems	Addition 3-digit numbers Subtract 3-digit numbers 3 times table 4 times table 8 times table Multiply 2 x 1 digits	Rounding to nearest 10, 100, 1000 Addition 4-digit numbers Subtract 4-digit numbers 6 times table 7 times table 9 times table 11 times table 12 times table Multiply 3 x 1 digits Divide 3 digits by 1	Addition 4+ digit numbers Subtract 4+ digit numbers Primes Squares Cubes Multiples of 10, 100, 1000 Add fractions different denominators Subtract Fractions different denominators Multiply by 2 digits Divide by 1 digit with remainders	Adding and subtracting Negatives BIDMAS Short division Long Division Add Mixed numbers Subtract Mixed numbers Multiply fractions Divide Fractions by wholes Ratio notation
Year 1 – Term 2	**Year 2 – Term 2**	**Year 3 – Term 2**	**Year 4 – Term 2**	**Year 5 – Term 2**	**Year 6 – Term 2**
Addition within 20 Subtraction within 20	2 times table 5 times table 10 times table	Divide 2 digits by 1 Equivalent Fractions	Mixed numbers and improper fractions Add and subtract fractions with same denominator including mixed numbers Order decimals Divide by 10, 100, 1000	Multiply fractions by wholes Multiply fraction by fraction Fractional parts FDP Equivalence	Multiply decimals by wholes Divide decimals by wholes Percentage of an amount Arithmetic mean
Year 1 – Term 3	**Year 2 – Term 3**	**Year 3 – Term 3**	**Year 4 – Term 3**	**Year 5 – Term 3**	**Year 6 – Term 3**
Doubling Finding a half Finding a quarter	Find a third	Add and subtract fractions with same denominator Add and subtract money		Decimal addition Decimal subtraction Multiplying decimals by 10, 100, 1000 Negative Numbers Metric conversions	
TTRS: N/A	TTRS: 2,5,10 from Easter	TTRS: 2, 5,10 in Autumn 2,3,4,5,8,10 from January	TTRS: 2,3,4,5,8,10 start full set from start of December	TTRS: 2- to 12	

Maths in EYFS

In Early Years, Maths is taught through Number and Numerical Pattern. The children learn key concepts and terminology in their play and adult led activities.

Children are encouraged to be Mathematicians by:

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

Maths in EYFS: Nursery

Autumn	Spring	Summer
Recite numbers past 5. Say one number for each item in order: 1,2,3,4,5. Show 'finger numbers' up to 5. Understand position through words alone – for example, "The bag is under the table," – with no pointing. Make comparisons between objects relating to size, length, weight and capacity. Talk about and identifies the patterns around them. For example: stripes on clothes, designs on rugs and wallpaper. Use informal language like 'pointy', 'spotty', 'blobs' etc.	Fast recognition of up to 3 objects, without having to count them individually ('subitising'). Know that the last number reached when counting a small set of objects tells you how many there are in total ('cardinal principle'). Compare quantities using language: 'more than', 'fewer than'. Talk about and explore 2D and 3D shapes (for example, circles, rectangles, triangles and cuboids) using informal and mathematical language: 'sides', 'corners'; 'straight', 'flat', 'round'. Make comparisons between objects relating to size, length, weight and capacity. Select shapes appropriately: flat surfaces for building, a triangular prism for a roof etc. Combine shapes to make new ones – an arch, a bigger triangle etc. Extend and create ABAB patterns – stick, leaf, stick, leaf.	Link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5. Experiment with their own symbols and marks as well as numerals. Solve real world mathematical problems with numbers up to 5. Talk about and explore 2D and 3D shapes (for example, circles, rectangles, triangles and cuboids) using informal and mathematical language: 'sides', 'corners'; 'straight', 'flat', 'round'. Describe a familiar route. Discuss routes and locations, using words like 'in front of' and 'behind'. Make comparisons between objects relating to size, length, weight and capacity. Notice and correct an error in a repeating pattern. Begin to describe a sequence of events, real or fictional, using words such as 'first', 'then...'

Maths in EYFS: Reception

Autumn	Spring	Summer
• Count objects, actions and sounds. • Subitise. • Link the number symbol (numeral) with its cardinal number value. • Count beyond ten. • Compare numbers. • Select, rotate and manipulate shapes in order to develop spatial reasoning skills. • Compose and decompose shapes so that children recognise a shape can have other shapes within it, just as numbers can. • Compare length, weight and capacity.	• Subitise. • Compare numbers. • Understand the 'one more than/one less than' relationship between consecutive numbers. • Explore the composition of numbers to 10. • Automatically recall number bonds for numbers 0–10. • Select, rotate and manipulate shapes in order to develop spatial reasoning skills. • Compose and decompose shapes so that children recognise a shape can have other shapes within it, just as numbers can. • Compare length, weight and capacity.	**Number** • Have a deep understanding of number to 10, including the composition of each number. • Subitise (recognise quantities without counting) up to 5. • Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts. **Numerical Patterns** • Verbally count beyond 20, recognising the pattern of the counting system. • Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity. • Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.

Maths in KS1

In Key Stage 1, pupils consolidate foundational number skills and begin to develop fluency in calculation, reasoning, and problem-solving. Teaching covers key areas of number, measurement, geometry, and statistics, using concrete and pictorial representations to support progression toward abstract understanding. The curriculum is designed to ensure all pupils are supported to consolidate learning where needed and challenged to extend their mathematical thinking.

Year 1/2 Yearly Overview 2025-2026

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12	Week 13	Week 14	Week 15
Autumn	Number: Place Value (within 20)				Number: Addition, Subtraction (within 20)			Number: Place Value (within 100)				Geometry: Shape		Number: Addition, Subtraction (within 100)	
Spring	Number: Addition, Subtraction (within 100)				Number: Multiplication and Division			Measurement: Length and Height		Statistics					
Summer	Measurement: Money				Number: Fractions			Measurement: Time		Measurement: Capacity and Temperature		Geometry: Position and Direction	Consolidation		

Maths in LKS2

In Lower Key Stage 2, pupils build on Key Stage 1 foundations to develop greater fluency, reasoning, and problem-solving skills. The curriculum covers number, calculation, measurement, geometry, and statistics, with increasing emphasis on applying knowledge across a range of contexts. Teaching ensures that all pupils consolidate prior learning while being challenged to extend their understanding and develop confidence with more complex mathematical concepts.

Year 3/4 Yearly Overview 2025-2026

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12	Week 13	Week 14	Week 15
Autumn	Number: Place Value				Number: Addition, Subtraction				Number: Multiplication and Division A			Measurement: Area	Number: Multiplication and Division B		
Spring	Measurement: Perimeter, Area and Volume		Number: Fractions A			Measurement: Mass and Capacity			Number: Fractions B		Measurement: Time				
Summer	Measurement: Time	Number: Decimals				Measurement: Money			Geometry: Shape		Geometry: Position and Direction	Statistics			

Maths in UKS2

In Upper Key Stage 2, pupils consolidate and extend their mathematical knowledge and skills, developing fluency, reasoning, and problem-solving with increasing independence. The curriculum covers number, calculation, measurement, geometry, and statistics, with a focus on applying understanding in increasingly complex and real-world contexts. Teaching ensures that all pupils are supported to master essential skills while being challenged to deepen their thinking and prepare for the transition to secondary mathematics.

Year 5/6 Yearly Overview 2025-2026

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12	Week 13	Week 14	Week 15
Autumn	Number: Place Value			Number: Addition, Subtraction.	Number: Multiplication and Division A		Fractions A*			Number: Multiplication and Division B			Mock SATs	Fractions B	
Spring	Number: Decimals A	Measurement: Perimeter, Area and Volume		Number: Decimals B		Fractions, Decimals and Percentages (from Y5/6 SOW)		Ratio (needs 7 days)	Mock SATs	Geometry – Shape (from Y5/6 SOW)					
						Fractions, Decimals and Percentages (from Y6 SOW)				Geometry – Properties of Shapes (from Y6 SOW)		Geometry : Position and Direction (from Y6 SOW)			
Summer	Statistics*		Number: Algebra (needs 8 lessons)	SATs	Position and Direction		Converting Units		Fractions, Decimals and Percentages revisited		Mensuration		Basic Probability		

TTRS

Who does it?

Year 2:
- Autumn Term, familiarisation, 2 times and moving onto 10 times tables.
- Spring Term onwards, 2 5- and 10-times tables.

Year 3:
- Autumn Term, 2,5- and 10-times tables.
- Spring Term onwards 2, 3, 4-, 5-, 8- and 10-times tables.

Year 4:
- Autumn Term 2, 3, 4-, 5-, 8- and 10-times tables.
- Spring Term onwards 2 to 12 times tables.

Year 5 + 6:
- 2 to 12 times tables.
- Both year groups should do TTRS 5 days a week for the first part of each autumn to reinforce their fluency after the summer break. See below for the next steps.

For how long do they do TTRS?

All pupils from Years 2 up to Year the end of Year 6 should be doing TTRS for 15minutes a day. The pupils need monitoring, so they do not spend time watching videos or playing games. They should all be engaged in doing TTRS for the fifteen minutes.

What is a good response time?

A good student in Year 4 will be able to answer each question within a maximum of 4 seconds. (light green on the Heat Maps)
By the end of Year 6 they should have effective immediacy(automaticity) which means recall within 2 seconds of any of the times tables. (dark green on the Heat Maps)

How do we Track Pupils?

Staff should regularly track pupil success levels using the Heat Map function. The class Heat Map should be displayed in the room.
At least once a week a member of staff should check the Heat Map for each individual pupil and where there is a sticky Times Tables should be putting in place intervention to support the pupil.
Pupils should be aware of where they are weaker in their response times and be challenged to turn the heat map green in all areas and for all combinations in the times tables. From Year 4 onwards the pupils should be self-checking their heat map once a week and identifying their areas for improvement.

What if the pupils have the mastered the 2 to 12 Times Tables?

This means that they have a dark green heat map for all times tables in the 2-12 range.

Step 1- Put them onto the Times Tables that will help them in Secondary school.
- 15 and 20
- 14 and 18
- 19 and 16
- 13 and 17

They should be able to master these timetables readily.

Step 2- The pupils continue to do TTRS twice a week, their heat map needs to remain darker green. The other days they use an AI based tool, such as Mathletics or White Rose Infinity, to target wider Maths practice.