

Branston Locks



Primary and Nursery School

**Branston Locks**  
**Primary and Nursery School**  
**Mathematics Curriculum**



# Mathematics Curriculum Intent



At Branston Locks Primary and Nursery School, our intent is to deliver a high-quality mathematics education that equips all pupils with the skills, knowledge, and confidence to succeed in life. In line with the **National Curriculum for Mathematics**, we aim to ensure that all children:

- Become fluent in the fundamentals of mathematics, developing conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
- Reason mathematically by following a line of enquiry, making connections, and developing arguments using mathematical language.
- Solve problems by applying their mathematics to a variety of routine and non-routine contexts, breaking down problems into smaller steps and persevering in seeking solutions.

Mathematics is taught as a creative and interconnected discipline that is essential to everyday life, critical to science, technology, and engineering, and necessary for financial literacy and most forms of employment. We want pupils to leave primary school with a secure foundation in mathematics, ready for the challenges of secondary education and beyond.

- We recognise that every child is unique, and our teaching is carefully adapted to meet individual needs. This includes:
- **Adaptive teaching:** Tasks are scaffolded or extended to ensure accessibility and challenge for all learners.
- **Concrete–Pictorial–Abstract approach:** Children build deep understanding through practical resources, visual representations, and abstract reasoning.
- **Targeted support:** Interventions and small-group teaching are provided for those who need additional help, while rapid graspers are challenged through rich and complex problems.
- **Inclusive practice:** Lessons are designed to remove barriers to learning, ensuring pupils with SEND or other needs can fully participate and achieve success.

We embed mathematics across the wider curriculum, encouraging children to see its relevance in subjects such as science, geography, and computing, as well as in everyday life.

Our STRIPE curriculum is the golden thread throughout all of our provision. We strive to ensure that our curriculum develops key skills and values essential learning behaviours. In the delivery of our Mathematics curriculum, we seek to further develop these learning behaviours in our children.

S	T	R	I	P	E
Self-manager	Team player	Reflective and resilient	Innovative and creative	Participator	Enquirer



# Mathematics Curriculum Implementation



At Branston Locks Primary and Nursery School, our curriculum design is based on evidence from cognitive science; three main principles underpin it:

- Learning is most effective with spaced repetition.
- Interleaving helps pupils to discriminate between topics and aids long-term retention.
- Retrieval of previously learned content is frequent and regular, which increases both storage and retrieval strength.

We also recognise that mastery takes time and must be sustained knowledge and skill retention to be true mastery.

Our content is subject specific in Mathematics. However, we make links to other curriculum areas where possible to develop schema and both continuous provision and repetition and fact retrieval ensure that the children know more and remember more.

Children study Maths for the equivalent of at least 5 hours per week. Planning is aligned with the EYFS Framework and the National Curriculum and staff have access to a wide number of resources to develop their own subject knowledge.

## **Teaching Approach**

**Mastery-led teaching:** We follow a mastery approach that ensures all pupils develop a deep, long-term, and adaptable understanding of mathematics.

**Concrete–Pictorial–Abstract (CPA) model:** Pupils explore concepts using manipulatives, visual representations, and symbolic notation to build secure understanding.

**Daily lessons:** Mathematics is taught every day, with a focus on fluency, reasoning, and problem-solving.

**Vocabulary-rich environment:** Teachers explicitly teach mathematical language to support reasoning and communication.

## **Adapting to Pupils' Needs**

**Inclusive planning:** Lessons are designed to be accessible to all learners, including those with SEND, through differentiated tasks and scaffolding.

**Responsive teaching:** Teachers use formative assessment to identify misconceptions and adapt instruction accordingly.

**Targeted support:** Interventions are provided for pupils who need additional help, while those who grasp concepts quickly are challenged with rich tasks.

**Flexible grouping:** Pupils may work in mixed-ability or targeted groups depending on the learning objective and their needs.

## **Assessment and Progress**

**Ongoing assessment:** Teachers use questioning, observation, and low-stakes quizzes to monitor understanding, as well as a range of other Assessment for Learning techniques.

**Summative checks:** Termly assessments help track progress against age-related expectations.

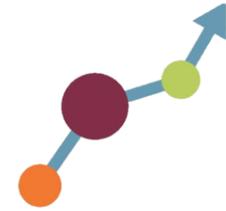
**Feedback and reflection:** Pupils receive timely feedback and are encouraged to reflect on their learning to build independence.

## **Cross-Curricular Links**

Mathematics is connected to other subjects such as science, computing, and geography to reinforce learning and demonstrate real-world relevance. Opportunities for mathematical thinking are embedded across the curriculum to promote coherence and application.



# Mathematics Curriculum Impact



Our vision at Branston Locks Primary and Nursery School is that every child leaves us 'Happy, Curious and Learning.'

The impact of our mathematics curriculum is evident in the confidence, fluency, and depth of understanding our pupils demonstrate across all areas of the subject. Through consistent, high-quality teaching and a mastery-led approach, children develop the skills and knowledge needed to succeed both in school and in their future lives.

## **What Impact Looks Like**

**Fluent mathematicians:** Pupils can recall and apply mathematical facts and procedures with speed and accuracy.

**Confident problem-solvers:** Children approach unfamiliar problems with resilience, using reasoning and strategic thinking.

**Mathematical thinkers:** Pupils explain their ideas clearly using appropriate vocabulary, and can justify their reasoning.

**Secure foundations:** Pupils leave each key stage with a deep understanding of core concepts, ready for the next phase of learning.

## **Measuring Impact**

**Assessment for learning:** Teachers use formative assessment daily to identify gaps and adapt teaching.

**Summative assessment:** Half-termly checks track progress against age-related expectations and inform future planning.

**Pupil voice:** Children express enjoyment and confidence in maths, and can articulate what they've learned and why it matters.

**Monitoring:** Pupils' books show progression, depth, and increasing independence over time.

## **Long-Term Outcomes**

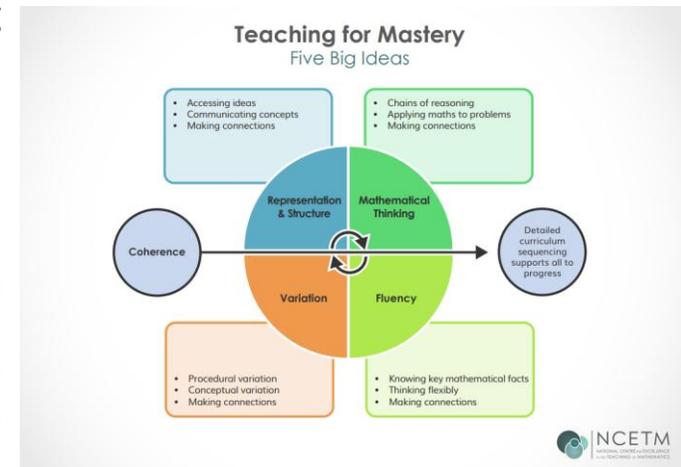
- Pupils are well-prepared for the mathematical demands of secondary education.
- Children understand the relevance of maths in everyday life and across the curriculum.
- All learners, including those with SEND, make sustained progress and achieve their potential.



# Teaching for Mastery

Mastering maths means pupils of all ages acquiring a deep, long-term, secure and adaptable understanding of the subject. The phrase ‘teaching for mastery’ describes the elements of classroom practice and school organisation that combine to give pupils the best chances of mastering maths. Achieving mastery means acquiring a solid enough understanding of the maths that’s been taught to enable pupils to move on to more advanced material.

Mastering maths means acquiring a deep, long-term, secure and adaptable understanding of the subject. At any one point in a pupil’s journey through school, achieving mastery is taken to mean acquiring a solid enough understanding of maths that’s been taught to enable them to move on to more advanced material. Teaching is underpinned by a belief in the importance of mathematics and that the vast majority of children can succeed in learning mathematics in line with national expectations for the end of each key stage. Research has shown that in order to have a successful curriculum progression it must be planned from the beginning of a pupil’s education by focusing on core content, to develop pupils’ motivation and to allow more breadth and depth later. As well as ensuring that the planned curriculum details the core facts, concepts, methods and strategies that give pupils the best chance of developing proficiency in the subject. A great mathematics curriculum should ‘help pupils to gain enjoyments through a growing self-confidence in their ability’.





# Mathematics Long Term Overview (Master the Curriculum)

## NURSERY

### Nursery MTP Overview [www.masterthecurriculum.co.uk](http://www.masterthecurriculum.co.uk)

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn  Starters: Number songs	Colours • Red • Blue • Yellow	Colours • Green • Purple • Mix of colours	Match • Buttons and colours • Matching towers • Matching shoes	Match • Match number shapes • Match shapes • Pattern handprints – big and small	Sort • Colour • Size • Shape	Sort • What do you notice? • Guess the rule • Guess the rule	Number 1 • Subitising • Counting • Numeral	<b>Number 2</b> Subitising- dice pattern Subitising- random pattern Subitising – different sizes	<b>Number 2</b> • Counting • Numeral • Numeral	<b>Pattern</b> • Extend AB Colour patterns • Extend AB Outdoor Patterns • AB Movement Patterns	• Fix my Pattern • Extend ABC Colour patterns • Extend ABC Outdoor Patterns	Consolidation Activities - Winter activity week
Spring  Starters: Number songs	Number 3 Subitising Subitising Subitising	Number 3 3 Little pigs 1:1 counting Numerals/Tria ngles	Number 4 1:1 counting Numerals Squares/recta ngles	Number 4 Composition of 4 Composition of 4 Composition of 4	Number 5 1:1 counting Numerals Pentagon	Number 5 Composition of 5 Composition of 5 Composition of 5	Consolidate 1 - 5	Number 6 Introduce 10 frame	Height & Length • Tall and short • Long and short • Tall/long and short	Mass Relate to books 3 little pigs goldilocks	Capacity	Consolidation
Summer  Starters – subitising and revision	Sequencing	Positional Language	More than/fewer than	Shape – 2D Revisit pattern from Autumn	Shape – 3D Revisit pattern from Autumn	Consolidation: More than/fewer one more and one less	Number composition 1 – 5 Revision	What comes after?	What comes before?	Numbers to 5	Consolidation / Activity weeks SUMMER	Consolidation / Activity weeks



# Mathematics Long Term Overviews (White Rose)

## RECEPTION

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Getting to know you		Match, sort and compare FREE TRIAL <i>Free trial</i> VIEW	Talk about measure and patterns VIEW	It's me 1, 2, 3 VIEW	Circles and triangles VIEW	1, 2, 3, 4, 5 VIEW	Shapes with 4 sides VIEW				
Spring	Alive in 5 VIEW	Mass and capacity VIEW	Growing 6, 7, 8 VIEW	Length, height and time VIEW	Building 9 and 10 VIEW	Explore 3-D shapes VIEW						
Summer	To 20 and beyond VIEW	How many now? VIEW	Manipulate, compose and decompose VIEW	Sharing and grouping VIEW	Visualise, build and map VIEW	Make connections VIEW	Consolidation					



# Mathematics Long Term Overviews (White Rose)

## YEAR ONE

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12		
Autumn	<p>Number</p> <hr/> <p><b>Place value</b> (within 10) FREE TRIAL</p> <p><a href="#">VIEW</a></p>					<p>Number</p> <hr/> <p><b>Addition and subtraction</b> (within 10)</p> <p><a href="#">VIEW</a></p>					<p>Geometry</p> <hr/> <p><b>Shape</b></p> <p><a href="#">VIEW</a></p>		<p>Consolidation</p>	
Spring	<p>Number</p> <hr/> <p><b>Place value</b> (within 20)</p> <p><a href="#">VIEW</a></p>		<p>Number</p> <hr/> <p><b>Addition and subtraction</b> (within 20)</p> <p><a href="#">VIEW</a></p>			<p>Number</p> <hr/> <p><b>Place value</b> (within 50)</p> <p><a href="#">VIEW</a></p>		<p>Measurement</p> <hr/> <p><b>Length and height</b></p> <p><a href="#">VIEW</a></p>		<p>Measurement</p> <hr/> <p><b>Mass and volume</b></p> <p><a href="#">VIEW</a></p>				
Summer	<p>Number</p> <hr/> <p><b>Multiplication and division</b></p> <p><a href="#">VIEW</a></p>			<p>Number</p> <hr/> <p><b>Fractions</b></p> <p><a href="#">VIEW</a></p>		<p>Geometry</p> <hr/> <p><b>Position and direction</b></p> <p><a href="#">VIEW</a></p>	<p>Number</p> <hr/> <p><b>Place value</b> (within 100)</p> <p><a href="#">VIEW</a></p>		<p>Measurement</p> <hr/> <p><b>Money</b></p> <p><a href="#">VIEW</a></p>	<p>Measurement</p> <hr/> <p><b>Time</b></p> <p><a href="#">VIEW</a></p>		<p>Consolidation</p>		



# Mathematics Long Term Overviews (White Rose)

## YEAR TWO

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	<p>Number</p> <hr/> <p><b>Place value</b></p> <p>FREE TRIAL</p> <p><a href="#">VIEW</a></p>				<p>Number</p> <hr/> <p><b>Addition and subtraction</b></p> <p><a href="#">VIEW</a></p>				<p>Geometry</p> <hr/> <p><b>Shape</b></p> <p><a href="#">VIEW</a></p>			
Spring	<p>Measurement</p> <hr/> <p><b>Money</b></p> <p><a href="#">VIEW</a></p>		<p>Number</p> <hr/> <p><b>Multiplication and division</b></p> <p><a href="#">VIEW</a></p>				<p>Measurement</p> <hr/> <p><b>Length and height</b></p> <p><a href="#">VIEW</a></p>		<p>Measurement</p> <hr/> <p><b>Mass, capacity and temperature</b></p> <p><a href="#">VIEW</a></p>			
Summer	<p>Number</p> <hr/> <p><b>Fractions</b></p> <p><a href="#">VIEW</a></p>			<p>Measurement</p> <hr/> <p><b>Time</b></p> <p><a href="#">VIEW</a></p>			<p><b>Statistics</b></p> <p><a href="#">VIEW</a></p>		<p>Geometry</p> <hr/> <p><b>Position and direction</b></p> <p><a href="#">VIEW</a></p>		<p>Consolidation</p>	



# Effective planning for progression in Maths

Weekly planning proformas are available on Teams: [Planning documents](#)

**01 DAILY REVIEW**



Daily review is an important component of instruction. It helps strengthen the connections of the material learned. Automatic recall frees working memory for problem solving and creativity.

**03 ASK QUESTIONS**



The most successful teachers spend more than half the class time teaching, demonstrating and asking questions. Questions allow the teacher to determine how well the material is learned.

**02 NEW MATERIAL IN SMALL STEPS**



Our working memory is small, only handling a few bits of information at once. Avoid its overload — present new material in small steps and proceed only when first steps are mastered.

**05 GUIDE STUDENT PRACTICE**



Students need additional time to rephrase, elaborate and summarise new material in order to store it in their long-term memory. More successful teachers built in more time for this.

**10 WEEKLY & MONTHLY REVIEW**



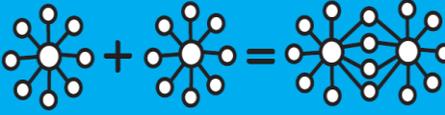
The effort involved in recalling recently-learned material embeds it in long-term memory. And the more this happens, the easier it is to connect new material to such prior knowledge.

**06 CHECK STUDENT UNDERSTANDING**



Less successful teachers merely ask "Are there any questions?" No questions are taken to mean no problems. False. By contrast, more successful teachers check on all students.

**04 PROVIDE MODELS**



Students need cognitive support to help them learn how to solve problems. Modelling, worked examples and teacher thinking out loud help clarify the specific steps involved.

**07 OBTAIN HIGH SUCCESS RATE**

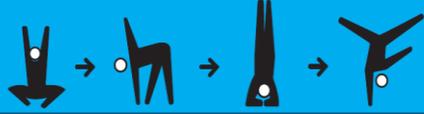


A success rate of around 80% has been found to be optimal, showing students are learning and also being challenged. Better teachers taught in small steps followed by practice.

This summary is from the work of Barak Rosenshine who based these ten principles of instruction and suggested classroom practices on:

- research on how the brain acquires and uses new information
- research on the classroom practices of those teachers whose students show the highest gains
- findings from studies that taught learning strategies to students

**09 INDEPENDENT PRACTICE**



Independent practice produces 'overlearning' — a necessary process for new material to be recalled automatically. This ensures no overloading of students' working memory.

**08 SCAFFOLDS FOR DIFFICULT TASKS**



Scaffolds are temporary supports to assist learning. They can include modelling, teacher thinking aloud, cue cards and checklists. Scaffolds are part of cognitive apprenticeship.

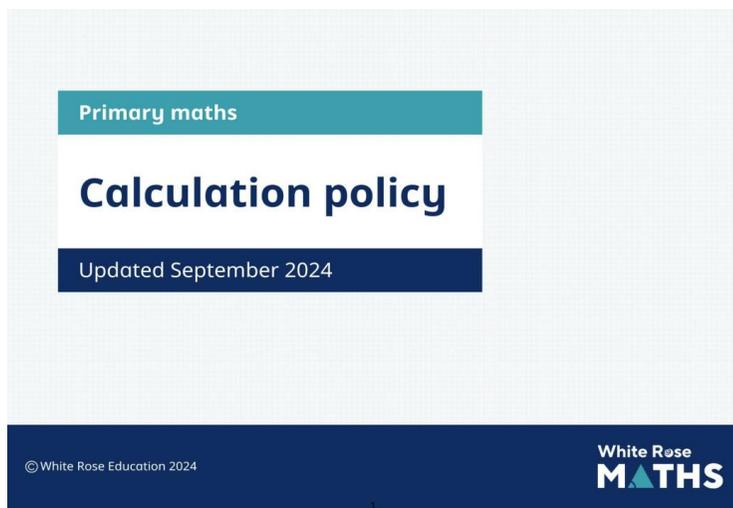


# Calculation Policy

We follow the White Rose calculation Policy throughout school.

This can be found here:

[WRM calculation policy 2024 All year groups.pdf](#)



## Guidance for teachers

The calculation policy is divided into four sections: addition, subtraction, multiplication and division. At the start of each section, you will find an overview of the progression of skills. Calculations involving decimal numbers and fractions are included.

The calculation policy follows the same concrete, pictorial, abstract approach as our main schemes of learning. Where appropriate, sentence stems and key questions are included alongside the key representations.

Where skills are divided into more than one section across the page, there is a progression in the level of difficulty from left to right. For example, when adding across a 10, children need to be able to add across 10 itself, before making links with related facts.

<b>Add across a 10</b>	... can be partitioned into ... and ...	I add ... to get to ... then I add ...	$8 + 5 = 13$ $28 + 5 = 33$
Partition the number you are adding to make a full ten.			

