Priory's Approach to Maths 2025-2026

Intent

At Priory, the staff strive to ensure that they enable 'opportunities for all' and this reflects in our approach to the teaching of maths. In order for our children to succeed in the future, they need to be confident and able mathematicians as it is essential knowledge for everyday life. Priory is focused on three core behaviours which are intertwined with our approach to maths: **Courage** – to have a go independently to try and solve a challenge; **Determination** to succeed at solving the challenge and; **Kindness** to help others who need additional support to succeed not by telling them the answer, but helping them reach it themselves. We ensure that Priory children receive a high-quality maths education that will prepare them to be able to reason mathematically and help them to understand the world around them.

The national curriculum for mathematics aims to ensure that all pupils:

- become fluent in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
- reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language
- can solve problems by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

Our approach for maths is that all children move through the programme of study at broadly the same time. Within each year group, there are a group of children with special educational needs who need to work through the programme at a slightly slower pace with a focus on visual models and representations to support their learning. Pupils are taught maths in discrete topics but they are encouraged and made aware of connections with other areas of maths to help them reason and problem solve effectively. This helps them deepen their understanding and make strong connections between mathematical ideas.

Though we broadly follow White Rose Education's scheme of small steps, we are transitioning from a prescriptive approach to a more flexible model where teachers are encouraged to shape the provision for their learners, ensuring that they go at the right pace for their class so that they have a secure understanding before moving on. This may include: breaking a small step into smaller parts to help the children's understanding or more fluency practice to consolidate the learning before moving on to the next topic area. Children who grasp ideas quickly need to deepen their understanding by looking at concepts in more depth and applying their knowledge through reasoning and problem solving. Children are given stem sentences to help prompt their thinking and develop their understanding through talk.

Implementation

At Priory School, we use the mastery approach which we implement using the White Rose Education scheme and Mastering Number programme as our foundation. Medium term plans are constructed by year groups, focusing on the journey pupils will take to understand key concepts. Maths is taught daily across the school. A typical lesson structure starts with number bond or times table practise then the children move on to Quick Maths which is a recap of a previous topic to allow it to become 'sticky knowledge' . This is an opportunity for children to retrieve previous knowledge; therefore making stronger connections to embed their learning. The children then actively participate in Guided Practice before they complete their independent work. During the Guided Practice, teachers and support staff identify pupils who may need additional support or scaffolds in order to be successful during the independent task.

We also spend time ensuring that we teach maths throughout our curriculum in other areas such as position and direction in geography and statistics in computing. In Early Years and Key Stage 1, the children are also provided with opportunities to embed their learning and understanding through independent activities in continuous provision.

We aim for all children to be secure in each objective for their year group and then develop a greater understanding in each area by applying their skills in reasoning and problem solving, which is explicitly taught within lessons. We foster the CPA (concrete, pictorial and abstract approach) in our school to help embed the children's learning. We put more focus on the concrete approach where needed to fully support the children to make deep connections in their learning.

Calculation policies

White Rose Education calculation policies for addition and subtraction and multiplication and division are used to guide teachers into selecting the appropriate model or image to support the teaching of different concepts. This is shared with parents and guardians to support their children at home and they are invited to workshops to support their understanding on how we teach key concepts to pupils.

Times Tables at Priory

Children start learning times table in Year 1 in preparation for the Multiplication Tables Check in Year 4 and everyday life. Children begin by step counting in Year 1 and represent groups using objects and pictures. Parents and guardians are invited to workshops to support their children with times tables and all children have Times Table Rockstars and Numbots accounts to support their learning at home.

Number skills are regularly revised and embedded using active learning tasks. This supports the children in becoming fluent in key facts.

Intervention

If a pupil finds a concept or procedure challenging to grasp, intervention is put into place to develop the child's understanding and ensure that they are ready to move forward with their peers. This may daily keep-up interventions with the class teacher or regular sessions with a TLA in order to address existing gaps in learning. Pre-teaching is also used to support children to keep up with the objectives being taught to the class.

Active learning and partner talk

At Priory, we value the importance of oracy to help children develop their understanding and embed new concepts. As stated in the National Curriculum 'The quality and variety of language that pupils hear and speak are key factors in developing their mathematical vocabulary and presenting a mathematical justification, argument or proof. They must be assisted in making their thinking clear to themselves as well as others and teachers should ensure that pupils build secure foundations by using discussion to probe and remedy their misconceptions.'

Impact

Our approach to maths encourages Priory pupils to see themselves as mathematicians ready to use their skills in everyday life. Children understand the relevance of the mathematical skills that they learn at primary school and Year 6 pupils are prepared for the transition to secondary school and a future where mathematics is a key part of daily life.

Maths' exercise books and White Rose workbooks demonstrate that children are challenged and are encouraged to think about work in greater depth to consolidate their understanding. Work is presented neatly and pupils are proud of their work. Children understand that hard work leads to success and are not afraid to make mistakes whilst learning. Pupils are supportive of their peers and help others to succeed alongside them

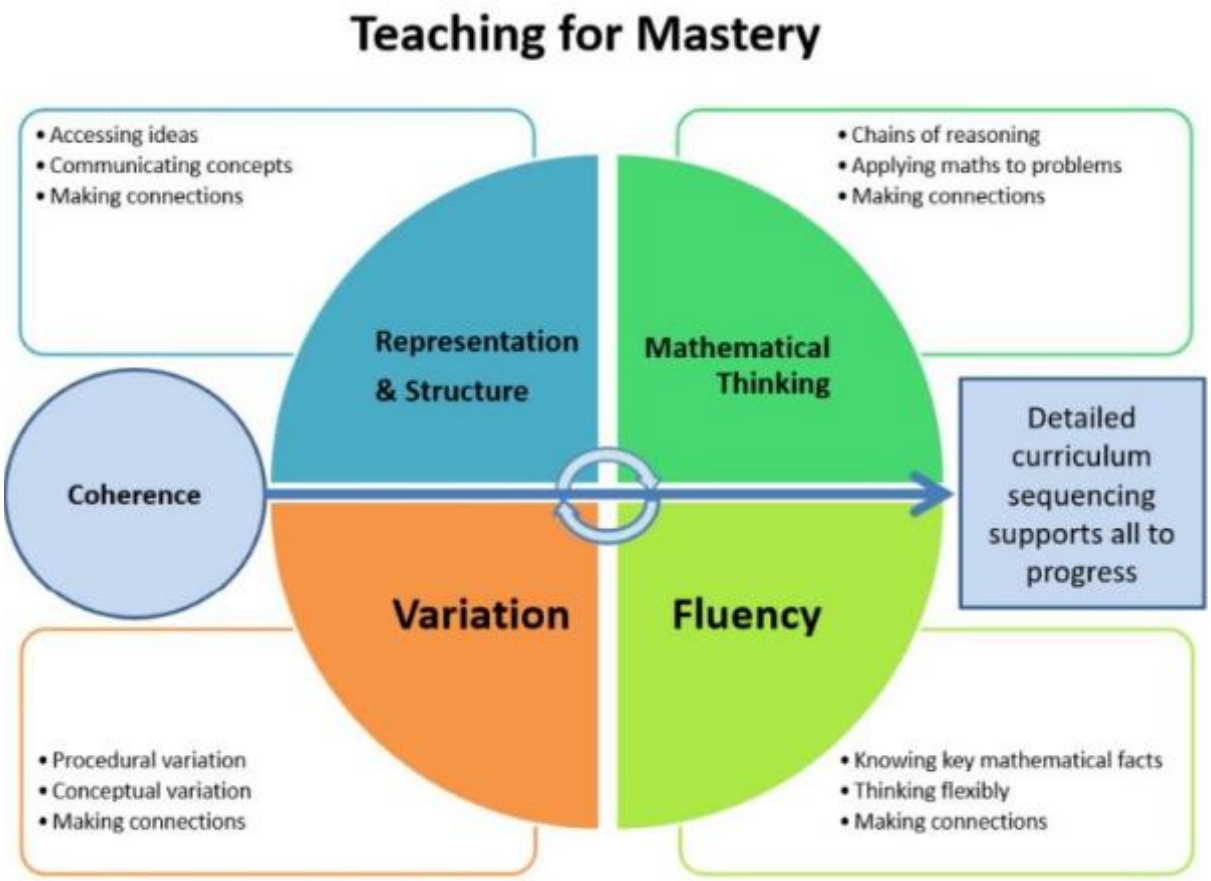
With a secure grasp of fundamental number facts and skills, pupils will leave Priory as resilient problem solvers who are able to take on challenges. They will be able to calculate efficiently and can identify when answers don't make mathematical sense. Due to the use of sentence stems in class and the explicit teaching of problem solving, pupils are able to reason about maths and other topics. We always strive to ensure that Priory children leave primary school with a love for maths and confidence to use it in the outside world.

Priorities for effective teaching and learning in maths

In order to improve outcomes for all pupils, teachers must focus on these key priority areas:
Modelling
Active learning
Times tables
Hands on – making use of manipulatives
Shape the curriculum to the needs of all learners

Maths Mastery Approach

The 5 Big Ideas in Teaching Maths Mastery are the fundamental characteristics that underpin teaching for mastery in all school phases.



Coherence

Teaching is designed to enable a coherent learning progression through the curriculum, providing access for all pupils to develop a deep and connected understanding of mathematics that they can apply in a range of contexts.

Representation and Structure

Teachers carefully select representations of mathematics to expose mathematical structure. The intention is to support pupils in 'seeing' the mathematics, rather than using the representation as a tool to 'do' the mathematics. These representations become mental images that students can use to think about mathematics, supporting them to achieve a deep understanding of mathematical structures and connections.

Mathematical Thinking

Mathematical thinking is central to how pupils learn mathematics and includes looking for patterns and relationships, making connections, conjecturing, reasoning, and generalising. Pupils should actively engage in mathematical thinking in all lessons, communicating their ideas using precise mathematical language.

Fluency

Efficient, accurate recall of key number facts and procedures is essential for fluency, freeing pupils' minds to think deeply about concepts and problems, but fluency demands more than this. It requires pupils to have the flexibility to move between different contexts and representations of mathematics, to recognise relationships and make connections, and to choose appropriate methods and strategies to solve problems.

Variation

The purpose of variation is to draw closer attention to a key feature of a mathematical concept or structure through varying some elements while keeping others constant.
Conceptual variation involves varying how a concept is represented to draw attention to critical features. Often more than one representation is required to look at the concept from different perspectives and gain comprehensive knowledge.
Procedural variation considers how the student will 'proceed' through a learning sequence. Purposeful changes are made in order that pupils' attention is drawn to key features of the mathematics, scaffolding students' thinking to enable them to reason logically and make connections.
The Five Big Ideas were first published by the NCETM in 2017.

The **White Rose Maths** schemes of learning

Teaching for mastery

Our research-based schemes of learning are designed to support a mastery approach to teaching and learning and are consistent with the aims and objectives of the National Curriculum.

Putting number first

Our schemes have number at their heart.
A significant amount of time is spent reinforcing number in order to build competency and ensure children can confidently access the rest of the curriculum.

Depth before breadth

Our easy-to-follow schemes support teachers to stay within the required key stage so that children acquire depth of knowledge in each topic. Opportunities to revisit previously learned skills are built into later blocks.

Working together

Children can progress through the schemes as a whole group, encouraging students of all abilities to support each other in their learning.

Fluency, reasoning and problem solving

Our schemes develop all three key areas of the National Curriculum, giving children the knowledge and skills they need to become confident mathematicians.

Concrete – Pictorial – Abstract (CPA)

Research shows that all children, when introduced to a new concept, should have the opportunity to build competency by following the CPA approach. This features throughout our schemes of learning.

Concrete

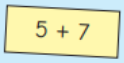
Children should have the opportunity to work with physical objects/concrete resources, in order to bring the maths to life and to build understanding of what they are doing.

Pictorial

Alongside concrete resources, children should work with pictorial representations, making links to the concrete.
Visualising a problem in this way can help children to reason and to solve problems.

Abstract

With the support of both the concrete and pictorial representations, children can develop their understanding of abstract methods.



If you have questions about this approach and would like to consider appropriate CPD, please visit www.whiterosemaths.com to find a course that's right for you.

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