



Picknalls First School

Maths Curriculum Statement 2024-2025



Intent

When teaching mathematics at Picknalls, we intend to provide a curriculum which caters for the needs of all individuals. We incorporate sustained levels of challenge through varied and high-quality activities with a focus on fluency, reasoning and problem solving. Pupils are required to explore maths in depth, using mathematical vocabulary to reason and explain their workings. A wide range of mathematical resources are used, and pupils are taught to show their workings in a concrete fashion, before establishing ways of pictorially and formally representing their understanding. They are taught to explain their choice of methods and develop their mathematical reasoning skills. We encourage resilience and acceptance that struggle is often a necessary step in learning. Our wider Mantle is *'Everyone can do Maths.'*

Implementation

At Picknalls Maths is taught as a discrete subject. We recognise that in order for pupils to progress to deeper and more complex problems, children need to be confident and fluent across each yearly objective. We follow the Maths Hub White Rose schemes of learning to ensure that the coverage for the year is completed and as a MAT we have written our own Calculation Policy that is used by all staff and shared with all stakeholders. To support us we have a range of mathematical resources in classrooms including Numicon, Base10 and place value counters. We also use a range of planning resources including those provided by the White Rose Hubs, NCETM, NRICH and Deepening Understanding. Our Maths curriculum is organised into blocks. These blocks are broken down into small achievable steps. White Rose have updated their schemes of work for 2024-2025 (Version 3.0) where moved topic areas around between terms and year groups. Wherever possible we follow a CPA approach...

Concrete- all children have opportunity to use concrete objects and manipulatives to help them understand what they are doing

Pictorial- children then build on this concrete approach by using pictorial representations, which can then be used to reason and solve problems

Abstract- With the foundations firmly laid, children can move to an abstract approach using numbers and key concepts with confidence.

Lessons provide opportunities for children to practise recalling facts (varied fluency) and to engage in reasoning and problem solving. Our Maths teaching provides breadth and challenge. We strive to improve children's recall of important facts with our Weekly Mental Maths challenges and the children thoroughly enjoy using Mathematical APPs such as Emile, Sumdog and TT Rockstars.

We continuously strive to better ourselves and frequently share ideas and things that have been particularly effective. We also take part in training opportunities and regional networking events. Through our teaching we continuously monitor pupils' progress against expected attainment for their age. We use summative assessments such as the White Rose end of block and termly assessments, making notes where appropriate and using these to inform our discussions in termly Pupil Progress Meetings and update our summative school tracker. We enter results into 'Smartgrade' which provides data for a variety of stakeholders. The main purpose of all assessment is to always ensure that we are providing excellent provision for every child and adapt our teaching to ensure understanding.

Impact

Through moderation of planning, lessons and books, we can be sure that progress is made across all year groups. If progress is not being made, support is immediate, and steps/interventions provided to ensure all pupils achieve and make progress.

Summative assessment takes place at the end of each term and children's progress and attainment is discussed with school leaders in pupil progress meetings. Formative assessment takes place on a daily basis and teachers adjust planning accordingly to meet the needs of their class. The teaching of mathematics is monitored by leaders through lesson observations and book scrutinies.

Cultural Capital in Mathematics

Cultural capital refers to the essential knowledge, skills, and experiences that enable students to engage fully with society and the world around them. In our maths curriculum, we aim to enhance students' cultural capital by:

1. **Real-World Applications:** Integrating real-world problems and scenarios into our maths lessons to demonstrate the relevance of mathematics in everyday life. For example, students might explore budgeting for a family holiday, planning a school event, or designing a simple garden, all of which require mathematical thinking and problem-solving.
2. **Historical Context:** Teaching students about the history of mathematics and significant mathematicians from diverse cultures. This includes learning about contributions from ancient civilizations such as the Egyptians and Greeks, as well as mathematicians from various cultural backgrounds, such as Srinivasa Ramanujan and Katherine Johnson.
3. **Cross-Curricular Links:** Making connections between maths and other subjects, such as geography, science, and art, to show how mathematics underpins many aspects of the world. For instance, students might use geometry in art projects or apply statistical methods to scientific experiments.
4. **Global Awareness:** Incorporating global issues and data into lessons to help students understand the role of mathematics in addressing challenges such as climate change, population growth, and economic development. This might include analysing data on carbon footprints, population densities, or economic indicators.
5. **Problem-Solving and Critical Thinking:** Developing children's problem-solving and critical thinking skills through challenging and engaging mathematical tasks. This approach not only enhances their mathematical abilities but also prepares them for future challenges in both academic and real-world settings.
6. **Mathematical Communication:** Encouraging students to communicate their mathematical thinking clearly and confidently. This includes using appropriate mathematical language, presenting findings, and justifying their reasoning. These skills are crucial for effective participation in society and various professional fields.
7. **Cultural Awareness and Diversity:** Promoting an understanding of different cultural approaches to mathematics and valuing diverse perspectives. For example, exploring how different cultures use patterns, shapes, and numbers in their daily lives and traditions.

Implementation Strategies

To achieve these goals, we will:

- Use a variety of teaching methods and resources to make maths engaging and accessible to all children.
- Plan and deliver lessons that include opportunities for real-world problem-solving and cross-curricular connections.
- Celebrate mathematical achievements and contributions from various cultures through displays, assemblies, and special projects.
- Provide professional development for teachers to ensure they are equipped to deliver a culturally rich maths curriculum.
- Foster a positive attitude towards mathematics by encouraging curiosity, creativity, and resilience in all our students.

Maths Action Plan 2024- 2025

- 🔗 Continue to purchase hands-on resources for each class, e.g. Place Counters, Base 10, clocks, money.
- 🔗 Continue to use updated White Rose Scheme of learning 3.0.
- 🔗 Embed a more formal scheme approach in EYFS using White Rose.
- 🔗 Continue to use White Rose Maths workbooks where appropriate, but integrate more fluency, written methods and problem solving in maths exercise books.
- 🔗 Embed 'Fluency Bee'. Ensure 15-minute daily programme is being followed. (3 times a week)
- 🔗 Carry out skills audit of all staff within classroom and use WRM online CPD to address any areas of need.
- 🔗 Complete the Maths **Times Table Check** with Year 4.
- 🔗 Use White Rose Assessments throughout the year. Use 'Smartgrade' software to give staff lots of data, enabling them to monitor progress throughout the year.
- 🔗 Gain a better understanding of Maths across the school through Subject Team meetings, lesson observations, book scrutinies and learning walks.

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