

Intent & Policy

At Westfield Community School we value the role that mathematics plays in our children's education. We aim to provide all children with the opportunity to experience a range of fluency, problem solving and reasoning activities which enable them to become enthusiastic, confident, and independent mathematicians. Our aim is to deliver a curriculum which ensures that children develop a healthy and positive attitude towards mathematics.

The primary purpose of our curriculum is to guarantee a successful learning experience for all. With this in mind, we are committed to ensuring that every child is developed to achieve their full potential within maths.

Aims for our pupils.

- To develop a positive attitude towards mathematics.
- To become confident and proficient with number, including fluency with mental calculation and look for connections between numbers.
- To become problem solvers, who can reason, think logically, work systematically, and apply their knowledge of mathematics.
- To develop their use of mathematical language.
- To become independent learners and to work co-operatively with others.
- To appreciate real life contexts to learning in mathematics.

At Westfield Community School, these skills are embedded within maths lessons and developed consistently over time. We are committed to ensuring that children can recognise the importance of maths in the wider world and that they are also able to use their mathematical skills and knowledge confidently in their lives in a range of different contexts.

We are passionate about arithmetic skills, which children regularly rehearse. We are constantly reviewing and enhancing our fluency knowledge through recall of mental strategies and number facts. We want all children to enjoy mathematics and to experience success in the subject, with the ability to reason mathematically. We are committed to developing children's curiosity about the subject, as well as an appreciation of the beauty and power of mathematics.

Implementation

In September 2022, Westfield Primary School began to embed a mastery approach to the teaching and learning of mathematics. We understood that this would be a gradual process and take several years to embed. The rationale behind changing our approach to teaching mathematics lay within the NCETM Maths Hub Programme as well as the 2014 National Curriculum, which states:

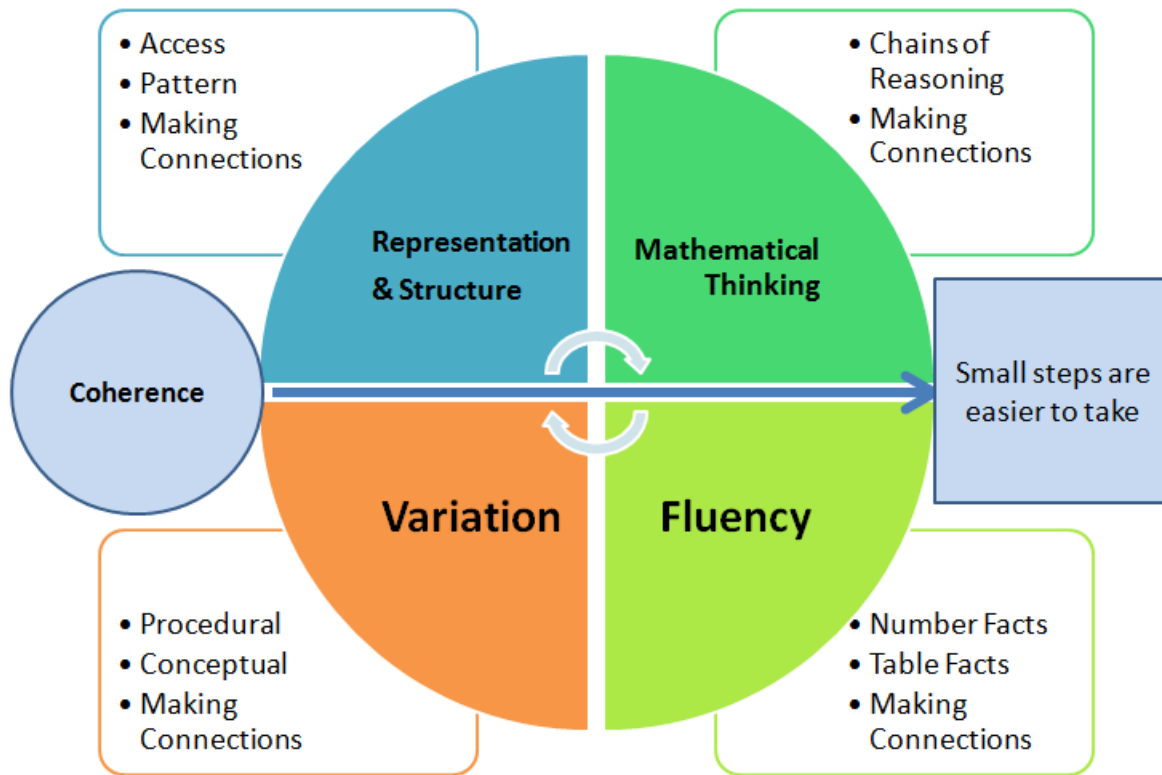
- *The expectation is that most pupils will move through the programmes of study at broadly the same pace.*
- *Pupils who grasp concepts rapidly should be challenged through being offered rich and sophisticated problems before any acceleration through new content.*
- *Those who are not sufficiently fluent with earlier material should consolidate their understanding, including through additional practice, before moving on.*

The three key aims of the National Curriculum should be addressed in each sequence of learning.

FLUENCY – REASONING – PROBLEM SOLVING

Teaching for Mastery

Our mathematics curriculum is underpinned by 'The 5 Big Ideas of Mastery'.



The 5 Big Ideas of Mastery are defined as follows:

Coherence- mathematical concepts are broken down into small steps that gradually allow children to an understanding of a given concept. This is then applied to a range of different concepts.

Representation and Structure- a variety of models and images are used to support the understanding of the concept, the aim that the children will eventually be able to visualise the concept in order to support them when using the concept.

Mathematical Thinking- in order for taught ideas to be understood deeply, they need to be: thought about, reasoned with and discussed with others.

Fluency- Quick and efficient recall of facts and procedures and the flexibility to move between different contexts and representations of mathematics.

Variation- Firstly about how the teacher represents the concept being taught, often in more than one way, to draw attention to the main aspects, and to develop a deep understanding. An example would be exploring a concept using multiple representations to deepen the children's understanding and underpin mathematical idea. Secondly, it is also about the children practising the concept, paying attention to what remains the same and what changes. This also allows children to develop an understanding of mathematical relationships and structure.

Teaching and Learning

- Staff use White Rose Maths Schemes of Learning as a starting point to develop a coherent and comprehensive conceptual pathway through the mathematics curriculum. If appropriate, the focus is on the whole class progressing together. Collaborative planning with year group colleagues is encouraged to ensure consistency.
- Learning is broken down into small, connected steps, building from what pupils already know. The lesson journey should be detailed and evident on flipcharts (Active Inspire or PowerPoint) as there is no requirement for teachers to produce detailed paper plans.
- Key questions should be incorporated into lessons to challenge thinking and develop learning for all pupils.
- Lessons should include the use of concrete resources where necessary to allow pupils to explore the mathematical concepts practically and to help children to link the ideas to abstract mathematical concepts.
- During lessons, children are organised into mixed-ability groups/ pairs. Children are encouraged to work on a variety of activities alongside a shoulder partner to discuss their thinking.
- Fluency, problem solving, and reasoning should be interlinked and taught side by side, as well as being taught discretely.
- The use of high-quality materials to support teaching and learning, is integrated into lessons. These may include White Rose Hub Schemes of Learning and Assessment Materials, WRH premium resources, Primary Stars, NRICH, NCETM, Number Stacks, Master The Curriculum, Mastering Number, NFER Assessment materials visual images, and a range of concrete materials.
- Mathematical fluency and recall of key facts are developed daily, children complete a 5 in 5 activity, answering five different maths questions in five minutes.

Inclusion and Special Needs

Westfield Primary School aims to meet the needs of all, considering gender, ethnicity, culture, religion, language, disability, age, and social circumstances. The provision for children with special needs is detailed in the SEND Policy. SEND pupils may be supported by additional adults, different resources, differentiated activities. They may also complete additional activities outside of the mathematics lesson or be taught in a smaller class size. We have high expectations of all children and strongly believe that all children can achieve in mathematics. Some may take longer to grasp concepts and may need careful scaffolding or extra time/support.

Impact

The impact of our mathematics curriculum is that children understand the relevance and importance of what they are learning in relation to real world concepts. Children know that maths is a vital life skill that they will rely on in many areas of their daily life. Children have a positive view of maths due to learning in an environment where maths is promoted as being an exciting and enjoyable subject in which they can investigate and ask questions. They know that it is reasonable to make mistakes because this can strengthen their learning through the journey to finding an answer. Children are confident to 'have a go' and choose the equipment they need to help them to learn along with the strategies they think are best suited to each problem. Our children have a good understanding of their strengths and targets for development in maths and what they need to do to improve. Our maths books evidence work that reflects the components of the teaching sequences and demonstrates good coverage of fluency, reasoning and problem solving. Our feedback and interventions support children to strive to be the best mathematicians they can be.

Assessment- see Assessment Policy

Marking- see Marking Policy