



Maths

Intent

At the Wye Forest Federation (WFF) we recognize the importance of mathematics throughout each child's every day and future life. Mathematics is an important creative discipline that deserves **respect** and helps us to understand and contribute to our ever-changing world. Our aim as a federation is that all pupils experience the beauty, power and enjoyment of mathematics and that we ignite a sense of curiosity and **compassion** about the subject. We want the children to see that maths is an interconnected subject, making connections across different areas of the wider curriculum.

Across our federation, we foster positive attitudes, we teach for secure and deep understanding of mathematical concepts, and we believe all children should have a sense of achievement in mathematics. We use mistakes and misconceptions as a way to build **resilience** and are an essential part of learning - allowing these to be made by all without fear of failure and encourage children to show **courage** through tackling different challenges. We provide challenge through rich and sophisticated problems before acceleration through new content and believe children should not be rushed on before they are secure with concepts. We want children to feel confident about expressing their mathematical understanding through communication, collaboration and reflection.

Implementation

At the Wye Forest Federation, we promote a love of maths and celebrate learning. We have high expectations and through quality lessons believe all children can achieve their best in maths working independently or collaboratively.

In order to further improve the quality and consistency of our maths teaching, we have implemented the White Rose Maths scheme which is designed by expert teachers and rooted in research on the teaching for a mastery approach.

We recognise the value of making a coherent journey through the national curriculum and each year group follow a medium-term plan where small, cumulative steps build on a solid foundation of deep mathematical understanding. Formative assessment is threaded throughout both each lesson and unit of work; and appropriate revisions to planning are made by the class teacher to ensure all lessons are tailored to best meet the needs of the pupils.

It is essential that children have a deep understanding of the most important elements that underpin the mathematics curriculum so that there is consistency and continuity as children move from one year group to the next. Therefore, if necessary, time may be weighted towards those objectives set out in the read-to-progress criteria (non-statutory guidance provided by the Department for Education).

In order to meet our aims above and the requirements set out in the EYFS framework and the Primary National Curriculum, we will implement the following.

Courage

Resilience

Respect

Compassion

Teaching & Learning

- We use the White Rose Maths scheme to support our learning in EYFS, KS1 and KS2. In addition, we also use the Mastering Number programme to further develop confidence and fluency with calculation and number sense for all children in Reception, Year 1 and Year 2.
- Maths in the Wye Forest Federation is taught in individual year groups (Kingfisher is an exception and has a 2-year rolling programme), so that children achieve depth in their learning.
- The schools use a detailed maths **curriculum map** illustrating the concepts taught across our classes. This curriculum map blocks out the time needed to cover each concept while giving teachers time to consolidate or extend learning if needed.
- Maths is taught discretely across our classes and differentiated based on our **progression of skills map**, which lays out our skills from Nursery to Year 6.
- Teachers use White Rose **schemes of learning** to help them identify the key information that children need to learn for each topic and to help support their own subject knowledge. These contain key questions, possible misconceptions, sentence stems and guidance on the key learning required.
- Year 3, 4, 5 & 6 complete a weekly arithmetic test, which is assessed and used to set what the focus of prior learning recap is focused on.
- Lessons are active and practical where appropriate and teachers use manipulatives to support pupils understanding where appropriate.
- Cross-curricular links will be made where possible and is conducive to learning.
- Misconceptions in books are addressed in line with the school-marking scheme.

Lesson Structure

- All our maths lessons at the WFF follow a basic lesson structure this includes: -
- Lessons should begin with a focus on revisiting prior learning. This will involve a couple of questions on learning they have already completed. In KS2, this is informed by their weekly arithmetic test.
- The next small step in learning is then introduced and explained to pupils. This input uses the resources from White Rose scheme where appropriate to support learning.
- This input involves explanation, questioning, teacher modelling, shared modelling with pupils and opportunities for pupils to have a go at questions on whiteboard with the teacher prior to starting the independent task. Teachers using formative assessment will have identified pupils that need additional support and work with them.
- This input is structured around the I do, we do, you do format.
- In KS2 (exception of Poppy Class), due to the mixed age classes, maths is taught in a split format where the teacher will work with a year group for their lesson before setting an independent task for them to do while they work with the other year group. This task is should be consolidation of previous learning and most often use Target Your Maths resource although this is not exclusive.

Assessment & Feedback

- Assessment in Maths in the WFF is undertaken using a mix of formative and summative techniques.
- Teachers will use a range of formative assessment strategies to ensure misconceptions are identified and addressed, active feedback is given to pupils and sequences of learning are adapted in response to pupils' emerging needs so that everyone can learn to the best of their ability.

- At the end of each unit of work pupils are given a small test which highlights the information they have retained from their learning and highlights for teachers the areas in need of further consolidation. At the WFF we recognise the importance of long-term memory retention and so to ensure we have an accurate view of pupils retained knowledge these tests are conducted several weeks after the unit is finished.
- Pupils are also assessed three times a year in the form of end of term test. These in combination with end of unit tests are then used to assess where pupils stand in relation to being on track or not to meet the end of year expectations.

Number bonds and multiplication facts

- At the WFF, we believe that to achieve well in maths throughout school, children need to be able to recall number bonds and times tables (up to 12x) and answer within two or three seconds. This leaves no time for counting up to the answer and this is called 'fluency'.
- Children throughout the federation are encouraged to practise these facts online, at home using the apps 'Numbots' and 'Times Tables Rock Stars'.
- Teachers use their professional judgement to decide the frequency and duration which pupils will access these programmes in order to help them commit these essential facts to long-term memory.
- In terms of multiplication facts, every pupil's progress will be tracked through the use of the TTRS app which requires all pupils to conduct a monthly 'gig' game.
- By adopting this approach, we aim for all pupils to achieve well in the National Multiplication Check at the end of year four.
- In years five and six, pupils who have met this standard will be challenged to apply this knowledge to wider areas of the mathematics curriculum.

Impact

The impact of our mathematics curriculum is evident in the progress made by our pupils. By the end of their time at the WFF, we expect pupils to have a secure understanding of the key mathematical concepts and skills. They will be able to reason mathematically, solve problems effectively, and apply their knowledge confidently in a range of contexts. In addition, they are happy learners who talk enthusiastically about their learning and eager to further their progress in maths.

Pupils will demonstrate a clear progression in their mathematical abilities, regardless of their starting points. They will exhibit resilience, perseverance, and independence. Furthermore, our pupils will have a positive attitude towards mathematics, considering it as an enjoyable subject. They will have developed a sense of curiosity, creativity, and appreciation for the beauty and power of mathematics. This will equip them for success in their further education and future careers, while also contributing to their broader personal development.