



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 math's 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 view these as 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.

Our curriculum identifies the declarative knowledge needed, clearly sequencing facts, concepts, formulae and vocabulary as we believe these are the key foundations for all learning. We also believe in importance of procedural knowledge and we identify and sequence the most efficient and systematic methods for calculation ensuring these are mastered for automaticity.

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 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.

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.
- In the WFF, we feel that EYFS learning should not be limited to only the Early Learning Goals. Using our White Rose scheme, each unit furthers pupils learning by linking to the recommended statements in the non-statutory 'Development Matters' and 'Birth to 5 Matters' documentation.
- 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. However, we recognise the need for consolidation at times so this can be adapted with consultation with the Maths lead.
- 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.
- Maths interventions make use of Number Stacks intervention scheme, a high-quality, evidence based support package which uses a manipulative heavy approach.
- Year 3, 4, 5 & 6 complete a weekly arithmetic test. This is assessed, tracked and used to identify gaps in existing knowledge by teachers.
- 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.
- Teachers and support staff where appropriate make use of specialist CPD such as through the NCTEM's Glow Maths provision and White Rose.

Lesson Structure

- All our maths lessons in KS1 & KS2 at the WFF follow a basic lesson structure, this includes: -
- Lessons should begin with a focus on revisiting prior learning. This will involve questions on learning they have already completed. For this, we use Flashback 4; however, this may be adapted to close identified gaps in learning.
- 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: I do, we do, and 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

consolidation task for them to do while they work with the other year group. This task should be consolidation of previous learning and most often use Target Your Maths or CGP resources although this is not exclusive.

- All lessons should end in a plenary making use of a True or False question.

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 WR end of unit check, which shows the knowledge they have retained 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 checks are conducted several weeks after the unit is finished.
- Pupils are also assessed three times a year at the end of the autumn, spring and summer terms in the form of end of term test. For years 2, 3, 4 and 5, this uses the NTS test documentation while Year 6 (and Years 5 in the Summer Term) make use of SATs resources to assess.
- This assessment data is then inputted into NTS website which provides clear gap analysis teachers can use to support their classes.
- These WR checks, 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. We aim for pupils to score over 70% on these tests.
- KS2 makes use of a weekly arithmetic test in which we aim for pupils to get over 75% by the end of the school year.
- Due to their age, Year 1 are instead assessed through teacher judgement and supported by White Rose end of unit checks.
- In Reception, Teachers assess as pupil complete the WR scheme of learning. This is then supplemented with additional EYFS assessment material focused on ELGs.
- In Nursery, teacher assessment is used against the Development Matters targets for ages 3 & 4.

Number bonds, multiplication facts and Times Table Rockstars.

- 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 at home and in school using the apps 'Numbots' (YR, Y1 and Y2) and 'Times Tables Rock Stars' (Y2 onwards).
- Pupils in Year 1 – 4 have regular timetabled time to practice their times table/number bonds knowledge in school each day for at least 10 minutes. Year 5 & 6 pupils with identified gaps in this area will also be given time to close these.
- 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.
- We recognise at the WFF no single approach suits all pupils and those identified as struggling with their times tables on TTRS will have interventions put in place to address this.
- By adopting this approach, we aim for all pupils to achieve well in the National Multiplication Check at the end of year 4.

- 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.
- In the WFF, our progression of times table knowledge is expected to look like this.

Year 1	Count in multiples of 2, 5 and 10. Recall and use doubles of all numbers to 10 and corresponding halves
Year 2	Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers
Year 3	Recall and use the multiplication and division facts for the 3, 4, 6, 8 multiplication tables
Year 4	Recall and use multiplication and division facts for multiplication tables up to 12 x 12
Year 5	Recall and use multiplication and division facts for multiplication tables up to 12 x 12
Year 6	Recall and use multiplication and division facts for multiplication tables up to 12 x 12

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 have met our clear benchmarks for proficiency to ensure they are ready for Year 7 and beyond. Pupils' impact is evidenced by the automaticity they display in retrieving declarative and procedural knowledge, allowing them to focus their working memory on complex reasoning and problem-solving. 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.