

Maths Policy and Expectations:

Intent:

At Rainbow Forge Primary School, we believe that all children can achieve in Maths. Our Maths curriculum is designed with the intent that each child experiences a broad, balanced and engaging curriculum that fosters a positive, 'can do' attitude and confidence in ability. All children should have a deep understanding of maths and number; a positive and resilient attitude towards mathematics; competence and confidence in mathematical knowledge, concepts and skills; an ability to solve problems, to reason, to think logically and to work systematically and accurately; a range of learning strategies: working both collaboratively and independently; fluency in mathematics where children can express ideas confidently and talk about the subject using mathematical language; an understanding of the importance of mathematics in everyday life; the opportunity to become independent learners who take responsibility for their own learning; an understanding of suitable mathematical language, recognising its importance for communication and deeper thinking; and an ability to use a wide range of models, visual manipulatives and practical resources to develop a deep conceptual understanding alongside procedural fluency.

We aim to provide children with a high-quality maths education that allows children become fluent in the fundamentals of mathematics through daily practice to ensure fluency of number facts.

We aim for children to be able to reason mathematically and solve problems by ensuring problem solving is embedded in every lesson and variation of questions are used to enable children to apply their knowledge to different situations.

We aim to build through concepts to allow children to make rich connections across mathematical ideas to develop fluency, which are encouraged through variation and depth of questions. Children will be encouraged to apply these to a variety of real-life situations so that children develop an appreciation of the importance of Maths to daily life.

At Rainbow Forge Primary, we aim to teach Maths in a way that:

- creates a lively, exciting and stimulating environment in which the children can learn Maths
- promotes high standards in number sense and a range of other mathematical skills which can be applied with confidence and understanding when solving problems
- gives opportunities to apply mathematical learning in everyday situations and enable children to use and apply their knowledge in the world outside.
- ensures children /can calculate accurately and efficiently, both mentally and with pencil and paper, drawing on a range of calculation strategies, representations and understanding of the required concepts and procedures.
- encourages children to use mathematical vocabulary to reason and explain and to judge whether their answers are reasonable and have strategies for checking them.
- allows time for partner talk in order to stimulate and develop a curiosity for Maths.
- challenges children to stretch themselves and take risks in their learning

- creates a sense of awe and wonder surrounding Maths and to be inspired to appreciate the mathematics of other cultures
- ensures children are secure in their understanding of number and number relationships - have a sense of the size of a number and where it fits in the number system and know by heart number facts such as number bonds, multiplication facts, doubles, and halves.
- provides children with the opportunity for low entry-high ceiling challenges encouraging children to go deeper with their thinking.

Maths in EYFS

Our Maths curriculum has been developed using the Development Matters guidance (2021) and White Rose EYFS planning to ensure the children are able to explore and experiment with Maths and achieve at the expected level.

- Children all take part in 'Maths meetings' daily where the children discuss the day, date, month and weather as well as some type of daily counting and looking at a numeral line. This develops over time in the EYFS.
- Children in FS2 also have a daily Math's lesson in mixed ability groups where language is a vital part of the session and children are encouraged to work closely with a partner explaining their reasons for answers. This is supported with the White Rose EYFS materials.
- Maths areas are well resourced and continuous provision is planned for the week, which will relate to the teaching points of the week, a concept that needs reinforcing or a gap in learning. Staff question the children to move their learning forward and support children where appropriate.

KS1 and 2 Planning and Assessment:

Teachers will use the National Curriculum and White Rose Premium resources to plan and deliver lessons to respond to the needs of the children within mixed age classes. Teachers will use the Power Maths textbooks and White Rose Premium resources to ensure that there is progression through fluency, reasoning and problem solving. In Y1/2, Power Maths Workbooks are used to support children's learning. This is to be further supported the SPINE documents produced by the NCETM and other resources to ensure that children are given a range of activities that encourage Greater Depth.

They will use their own judgement and use of formative assessment to ensure a flexible approach is adopted which recognises the pace of learning within the classroom. Individual, paired and group work will be used across a series of lessons and children will be given the opportunity to work through varied fluency, reasoning and problem-solving tasks at an appropriate pace.

Children will be given an opportunity at the start of each lesson to recap previous learning.

Maths is taught through a Teach, Do structure. Children will mark each Do activity with the teacher and those, who complete it successfully, then move on to the independent activities. These activities will work through varied fluency questions and reasoning and problem solving questions. When they have mastered a concept, children will also be given

the opportunity to access Greater Depth tasks designed by the teacher in line with government guidance. Appendix A shows the lesson structure.

In order to inform planning and to assess children's progress, teachers will maintain the assessment grid on DCPRO which tracks the children's progress and understanding across a range of assessment criteria objectives. This will be updated regularly and informed by work in children's books.

Termly, children will be assessed through the application of NFER tests. The White Rose end of unit test and summative assessment will be used in conjunction with the assessment grids to identify next steps and therefore inform planning.

Children will be provided with feedback either verbally or through written marking. Often, in order to clarify understanding of a concept, children will be asked to correct work or complete additional tasks, but not for every lesson; these should be completed by the children at the next earliest opportunity after the lesson. Children will mark most of their work at the end of the lesson with the teacher using the agreed symbols and making corrections.

- VF – verbal feedback – when a misconception has been addressed in lesson.
- AS – adult support – when a child has received support on a question during the lesson.
- Discussion/SLAM – if a child has provided a verbal explanation of an answer they have given or to question.
- Intervention – to be written at the start of all same day or 1:1 intervention sessions

KS1 and KS2 Maths Lesson Structure:

Each Maths lesson, from Y1-Y6, will follow this structure:

1. Read - Power Maths Text Books – Re-read pages that link to the previous day's learning from the textbook. Children that need a bit of pre-learning could read the pages for the lesson. Resources – Children could use the concrete resources during this time to help them link to the pictorial representations used in the textbooks. KS1 Books – Use the suggested fiction and non-fiction books within the taught lesson from the WR schemes. These can be substituted with similar texts if the suggested ones are unavailable.
2. Review/Revisit - Review (Get Ready) slides from the White Rose Premium resources. This does not need recording in books and should be white board work.
3. Teach/Practise/Do - This is the main teaching part of the session but should be teach/do in structure. This should be taken from the White Rose slides with some support from the Power Maths textbooks for extra examples and activities. During this section, children should have access to a range of concrete resources (especially when introducing a concept for the first time or revisiting for the first time. All children should be given the chance to use concrete resources regardless of ability.) Concrete/Pictorial/Abstract approach here is great for dual coding. C alongside P and then P alongside A.

Apply - This is the independent learning task. These activities are taken predominately based on the White Rose schemes of learning but are supplemented with the Power Maths books to ensure there is a range of activities to challenge children. To support mixed age planning and progression, some tasks may be adapted for lower years where they are working on the next year's objective.

Where needed you may split this with teach/do activities. Children should still have access to concrete resources and should be encouraged to draw a representation if they need to.

4. Reflect - Whole class question that recaps the work they have done in the lesson. This could be a worked example where the children come up with a generalisation, a question from earlier in the lesson that they complete again, a similar question that has a couple of numbers changed. It should not be any harder in difficulty and should be accessible to all the children. This does not need to be recorded.
5. Marking: any misconceptions need to be re-addressed and noted in children's books.
 - a. This could be approached in different ways depending on the misconception:
 - i. Correcting an answer independently or with a 1:1 discussion
 - ii. Small group intervention
 - iii. Verbal feedback and discussion of the error

KS1 and KS2 Maths Book Presentation:

Year 1 will write in Power Maths books.

Years 2-6 will write in Maths books. Children will use pencil in their Maths books. Digits and mathematical signs need to be one per square. Writing needs to follow the handwriting policy and sit neatly on the lines of the squares to ensure it straight.

Short Date to be written in the top write hand corner. (DD.MM.YY)

The small step for the lesson will be written on the line below the date starting at the left of the page. The small step must be underlined using a ruler. (Sort Objects)

Question numbers will be written at the left of the page with a . following the number. One square will be left before writing the answer.

Calculations should be written out in full. ($45 + 13 = 58$)

When required, written answers should be written in full sentences.

Lines for Bar models, shapes, graphs or other representations should be drawn using a ruler. These should be drawn along the lines of the squares in the book.