



WOOD FOLD PRIMARY SCHOOL

MATHS POLICY

Rationale

‘Mathematics is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment. A high-quality mathematics education therefore provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject.’ (National Curriculum, 2014)

Aims

At Wood Fold we aim to provide the pupils with a mathematics curriculum and high quality teaching to produce individuals who are numerate, creative, independent, inquisitive, enquiring and confident. We also aim to provide a stimulating environment and adequate resources so that pupils can develop their mathematical skills to the full.

The National Curriculum (2014) for mathematics aims to ensure that all pupils:

- Become **fluent** in the fundamentals of mathematics, including the varied and regular practice of increasingly complex problems over time.
- **Reason mathematically** by following a line of enquiry, understanding relationships and generalisations, and developing an argument, justification or proof using mathematical language.
- Can **solve problems** by applying their mathematics to a variety of problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

Planning and Teaching structure for Mathematics

We are committed to ensuring that all pupils achieve mastery in the key concepts of mathematics, appropriate for their age group, in order that they make genuine progress and avoid gaps in their understanding. Teachers follow the Focus Education Comprehensive scheme of work. The materials within Focus Maths help teachers to plan and deliver mathematics teaching and learning in a way which is challenging and aligned with end of year curricular expectations. The mathematics curriculum is broken down so that teachers can plan for units of work in a progressive way.

Pre- Learning task-

For each mathematical objective a 'pre-learning task' is provided. The pre-learning task has been designed to help assess whether children have the relevant prior knowledge to access the new learning. These are aligned with the end of year expectations. From this pre-learning task, the children are grouped according to their specific next steps of learning.

Once marked the children and teachers can then put the code 'PLT' (Pre-learning Task) on the Pupil and Teacher Assessment Ladder to show which elements have already been met.



Practice and Consolidation-

Children who struggle on the initial pre- learning task will then 'practice and consolidate' a particular objective. This may include mental and oral rehearsal alongside concrete (Pencil and paper) activities. At this stage of learning, pupils will usually be supported by the teacher and guided through the mathematical content in a scaffolded way.

Children who have shown strength in the pre- learning task will 'leap frog' this stage of learning as the teacher assesses they are already familiar with this particular objective.



Deepening Understanding-

Children working at this stage of learning take learning beyond evidence of pencil and paper into evidence of deeper understanding of the mathematical objective. The focus at this stage is Problem Solving and Reasoning. Children are exposed to a variety of the '5 types of problem solving' (Finding all possibilities; Logic; Visual; Rules & Patterns; Word Problems) to ensure they are able to apply their understanding when faced with different types of problems.



Working at Greater Depth-

At this stage of learning, children are working at a 'deeper' level. This means that children are able to transfer their learning and apply it to different contexts, explain their reasoning and draw upon higher level thinking skills. Activities provided at this stage are all designed to deepen understanding of the end of year expectation rather than move pupils on to learning from the year group above. A range of different kinds of activities are included throughout to provide variety and opportunity to assess learning in different ways.



Pupil and Teacher Assessment Ladder-

As children progress through the teaching sequence of a particular objective, both pupil and teacher can use the assessment ladder to date when they have achieved a particular element. These ladders are intended to be used by pupils and teachers to assess current learning against the end of year expectation. For each expectation, the learning steps are listed (bottom to top) in child appropriate language.

Teaching & Learning-

- The expectation is that the majority of pupils will move through the programmes of study at broadly the same pace. However, decisions about when to progress will always be based on the security of pupils' understanding and their readiness to progress to the next stage.
- Pupils who grasp concepts rapidly will be challenged through being offered rich and sophisticated problems before any acceleration through new content.
- Effective use of formative assessment will ensure that groupings are fluid and dependent upon the emerging needs or next steps of each group of learners. Therefore, there are no set groupings as they will change on a day-to-day basis.
- Those who are not sufficiently fluent with earlier material will consolidate their understanding, including additional practice, before moving on.
- In addition, pre-teaching will also be provided to children who have shown to struggle on the same area of mathematics the previous year.

Lesson Structure-

In addition, each lesson has the following structure:

1. Times Tables
2. Arithmetic session ('Inside out / upside down maths objectives')

3. Review previous learning
4. Main Lesson

Times tables-

Particular attention is placed on the children having security and fluency with times tables. Each child has a Times Tables Booklet which is taken through school, identifying the times tables they are working at. For each of the times tables they are awarded a 'Bronze', 'Silver' or 'Gold' standard.

Children complete a short times table quiz every Monday.

Arithmetic-

As with Times Tables, Arithmetic forms part of the daily Mathematics session. Each child completes an 'Assertive Mentoring' assessment independently- once marked the teacher uses the arithmetic slot in each Mathematics session to teach common misconceptions. The children then re-do the same assessment the following week.

Marking and Feedback-

Marking of Maths work will be done using ticks for correct responses and a 'c' for anything that needs correcting.

At the end of each piece of Maths work a stamp will be used to show whether the learning objective has been met. The 3 statements used are:

- You have achieved the learning objective
- You are working towards the learning objective
- You have not yet achieved the learning objective.

At appropriate times during the objective, these stamps will be accompanied by a task set for the children.

- If the children has met the learning objective, this will be an additional challenge.
- If the children has made some errors and is working towards the objective, it might be corrections that are set.

Where the child is up to in achieving the objective will then be used to decide where the child should move to next in their learning journey.

If they have not met the learning objective, the next piece of work should show that they have been given support, e.g. through re-teaching, to enable them to achieve it the next time.

Early Years Foundation Stage (EYFS)

We follow EYFS curriculum guidance for Mathematics. However, we are committed to ensuring the confident development of number sense and put emphasis on mastery of key early concepts. Pupils initially explore numbers to 20 and the development of models and images for numbers as a solid foundation for further progress.

Equal Opportunities

As a school we endeavour to maintain an awareness of, and to provide for equal opportunities for all our pupils in mathematics. We aim to take into account cultural background, gender and Special Needs, both in our teaching attitudes and in the published materials we use with our pupils.

Children with special educational needs

All children receive high quality inclusive teaching. We aim to fully include SEN pupils in the daily mathematics lessons so that they benefit from the emphasis on oral and mental work and by listening and participating with other children in demonstrating and explaining their methods. There are high expectations for all pupils. Resources are provided to encourage children to learn independently and support their learning. Specialist resources, such as numicon are also used, where appropriate.

Where necessary teachers will, in consultation with the Inclusion Leader and members of the SLT, draw up programme of support for a child. If a child's needs are particularly severe they will work on an individualised programme written in consultation with the appropriate staff.

Homework

(Please see Homework Policy)