

Maths

Intent Implementation Impact Statement

Intent

We believe that every child can achieve in maths and offering our children a rich and progressive mathematics curriculum is at the forefront of everything we do. Mathematics is a process of enquiry, reasoning and problem solving – all valuable skills that help children to make sense of the world around them. We use a range of learning strategies to allow all children to become confident mathematicians and encourage a high-quality mathematical dialogue in the classroom. We want our children to see the importance and purpose mathematics has in their everyday lives.

Our curriculum is mapped by the White Rose Scheme of work. We focus on breaking down objectives into smaller more manageable steps; building coherence and fluency with each step. For each objective the children focus on a progression from concrete resources to pictorial representations and finally into the numerical abstract. Mathematics Mastery places emphasis on the cumulative mastery of essential knowledge and skills in mathematics. It embeds a deeper understanding of maths by utilising a concrete, pictorial, abstract approach so that pupils understand what they are doing rather than just learning to repeat routines without grasping what is happening.

Key features of our Maths Mastery curriculum

- High expectations for every child
- Fewer topics, greater depth
- Number sense and place value come first
- Focus on mathematical thinking and language
- Resources to support
- Calculate with confidence

Aims

To implement the current legal requirements of the Foundation Stage (FS) and the National Curriculum (NC).

To foster positive attitudes, fascination and excitement of discovery through the teaching and learning of mathematical concepts.

To ensure children become fluent in the fundamentals of mathematics, developing conceptual knowledge and an ability to recall and apply knowledge rapidly and accurately

To ensure that children can reason mathematically and solve problems

For our children to develop a 'can do' attitude and perceive themselves as mathematicians.

To broaden children's knowledge and understanding of how mathematics is used in the wider world.

For our children to use and understand mathematical language and recognise its importance as a language for communication and thinking.

Implementation

Organisation of teaching and learning

Badgers, Class 1 & 2

Daily opportunities in mathematics are provided for the children to join in singing and signing whilst using number nursery rhyme sacks. They are taught mathematics through adult directed teaching which follows a clear plan which is differentiated and has some links to the White Rose Maths scheme, together with exciting exploration within the learning environment. Where possible we aim to incorporate real life opportunities and

children are encouraged to take part in regular cooking sessions where they read the recipes, weigh and count the ingredients and follow instructions whilst taking turns and talking or signing about what they are doing. Our outdoor environment ensures that our children are enabled to develop their maths knowledge outside of the classroom through the use of a range of exciting resources.

Classes 3-13

In Key Stage 1 (KS1) and 2 (KS2), teaching follows the National Curriculum and teachers take support from the White Rose Schemes of learning.

The White Rose Maths scheme of work aims to show children that everyone can do maths and inspire children's love for the subject. It covers all school years and it aims to develop pupils' reasoning, fluency and problem-solving skills.

The Schemes of Learning (SOL) outline yearly frameworks that break down what children need to learn during each week of each term to master the learning objectives laid out by the National Curriculum. Resources that are aligned with the White Rose Maths frameworks are designed to be enjoyable, engaging and varied, to help pupils develop a love of learning and work towards mastery with differentiated resources.

Planning

Long Term Plans – Teachers are encouraged to follow the White Rose Maths Schemes of Learning which gives them guidance on the order and length of teaching of different aspects.

Medium Term Plans - Identify learning objectives and outcomes for each year group/aspect.

Short term Plans - Prepared by each teacher, they highlight the objectives of the lesson, activity to be completed and plenary. They identify resources and appropriate differentiation.

Resources

- Each class has a range of resources to support learning. These are easily accessible for the children so that they can lead their own learning.
- Maths cupboard for use of all classes located centrally in school.
- Different environments - classrooms, outdoor learning spaces and the hall.
- A range of ICT software to support the teaching of specific concepts including Numbots, BusyThings, TimesTable Rockstars and PurpleMash which can be used at home.

Assessment

In Mathematics Mastery assessment is continuous. From the beginning of every lesson, teachers and teaching assistants will be assessing what their children are, or are not understanding and use this to scaffold each segment of the lesson. Interventions will be both planned for and 'live', meaning that misconceptions are dealt with immediately and high attaining children are challenged appropriately. Pre and post teaching is built into each lesson to ensure that all children can achieve and are prepared for the following lesson. This is done during the lesson introduction and plenary.

Teachers use the iASEND assessment system, to mark if a child has shallow, developing or deepening understanding in all aspects of the maths curriculum. Teachers are encouraged to use iASEND regularly to assess children's learning to help with planning, differentiation and look for gaps in learning that need to be addressed. Evidence of lessons and the children's work are collected in maths books, books are looked at as part of the whole school teaching and learning monitoring process.

Badgers

Children are assessed in relation to their progress towards the Cherry Garden Branch Maps on Tapestry if they are in EYFS or IASEND if they are in Year 1. These judgements are made on the accumulative observations and in-depth knowledge of the children acquired through ongoing assessment. These ongoing assessments are used to inform planning and next steps in teaching and learning for all children throughout the year.

KS1 and KS2

- In the daily mathematics lesson, formative assessments are made on a day-to-day basis. Teachers and teaching assistants observe, question and evaluate lesson objectives to further determine progress made and the next steps in learning.
- Pre/ post assessments take place for each new unit of work.
- Summative assessments are made at the end of each term to monitor children's knowledge and understanding of concepts taught.
- Statutory assessments are made at the end of each key stage if appropriate.

Monitoring Procedures

The senior leadership team and maths subject leader play a central role in the monitoring and evaluation of the quality of teaching and learning of mathematics in the school. The monitoring strategy:

1. Children's work and teacher's planning are looked at regularly.
2. Learning walks and observations take place in all classes throughout the year.

Teaching and learning is monitored at a time indicated in the School Improvement Plan: Monitoring and Evaluation timetable.

Impact

Maths lessons are engaging and well-resourced with the children acknowledging that the journey to finding an answer is the most important factor.

Children demonstrate a quick recall of facts and procedures. This includes the recollection of the times tables.

Children show confidence in believing that they will achieve and are keen to attempt a range of problems and demonstrating flexibility and fluidity to move between different contexts and representations of maths.

Children are developing skills in being articulate and are able to reason verbally, pictorially and in written form.

Children are developing the ability to make connections between mathematical topics.

Well-planned sequences of learning support children to develop and refine their maths skills. Children show a high level of pride in the presentation and understanding of the work. Children are able to independently apply their knowledge to a range of increasingly complex problems.