Maths

Kindness Respect Resilience Independence Community Bravery

Vision

At Willow Bank Infant School, we aspire to see our children confidently develop the basic skills of mathematics which are vital for future life opportunities. At Willow Bank, our Mathematics Mastery curriculum has been developed to ensure every child can achieve excellence in mathematics. Our aim is for all children to think mathematically, enabling them to reason, solve problems.

Intent – We aim to…

Our teaching for Mastery Maths curriculum **aims** to ensure that all children will leave us with a lifelong love of Maths for the future. Our curriculum is ambitious and we have high expectations of all pupils so they will:

- Acquire a positive relationship with mathematics
- Gain fluency with number facts and times tables
- Use and understand mathematical vocabulary confidently speaking in full sentences
- Explain their understanding, what they notice and make connections between concepts
- Develop an understanding of the importance of mathematics in everyday life.
- Develop a deep understanding of maths and number
- Have high expectations of all the children in our school regardless of their attainment levels

Implementation – How do we achieve this?

Children are taught using a Mastery approach. This involves the children being introduced to different methods and representations as they move through school, giving them the confidence and knowledge to solve problems in a variety of ways. At Willow Bank, we have taken the key components of the mastery approach to teaching mathematics and adapted these to suit the specific needs of our children. This looks slightly different in EYFS and KS1. There are **5 Core Principles** agreed by the **whole school** which should be apparent in **every classroom** for **every mathematical concept.** Every lesson starts with a **revisit** a starter that revisits previous learning (this may be previous knowledge relevant for the learning objective of the maths lesson being taught) **A purposeful and meaningful hook** to give children with a real life scenario/context. **Guided/episodic teaching –** otherwise known as 'ping pong', featuring Stem sentences ,Oral rehearsal ,resources which are providing the appropriate structures, Challenge language and questioning throughout, Use of the Concrete resources. **Independent practice,** which is the same for all children, with conceptual and procedural variation. During the independent practice some children may require additional adult support or scaffolding through questioning and resources. **APE (Analyse it, Prove, Explain)** – a challenge to deepen children's thinking.

A carefully sequenced curriculum

Our curriculum is carefully sequenced into small manageable steps that build concepts overtime. We are a user of the White Rose resources which we have adapted to suit the needs of our children. Our curriculum is progressive and is designed around blocks of learning. Our blocks are carefully planned out with small steps for learning. Each year carefully builds upon the skills that have been taught before. Our curriculum is designed to allow time for revisiting previous learning.

Mastering Number Programme

At Willow Bank we are actively participating in the NCETM's Mastering Number Work Group through our local Mobius Maths Hub. The Mastering number programme is used as additional fluency sessions in KS1 and is used as the main curriculum in EYFS. The aim of the programme is for all children to develop number sense and secure core knowledge. This enables them to make connections This is similar to supporting pupils with phonics knowledge!

Fluency, Reasoning and Problem solving

The aims of the National Curriculum are to develop fluency and the ability to reason mathematically and solve problems. Children are encouraged to reason in every lesson using their sound number sense.

Implementation ctd. – How do we achieve this?

Assessment

During lessons, feedback is instant and assessment is ongoing throughout. In EYFS children are assessed of part of on going assessments and observations. Key check points are used to ensure all children are on track to meet the early learning goals. The children are assessed at the end of the year against the early Learning Goals. In KS1 end of unit quizzes provide valuable assessment information to inform next steps and any gaps in learning . At the end of each term children complete assessment quizzes, again this data is carefully looked at to analyse any gaps in learning and to plan future next steps. Assessment happens daily during our maths lessons through our careful questioning and checking of the key learning .

Lowest 20%

Those pupils behind age-related expectations are supported with pre-teaching and same day or next day support to keep up. Teachers targeted questioning and targeted support in lessons from adults. Work is scaffolded or differentiated to allow pupils to be more independent.

Professional development

We are currently at the sustaining phase of our Mastery journey. Our maths lead attends regular training run by Maths mastery specialists. Teachers have had a chance to see Mastery lessons in action. Staff have regular updates from the Maths lead regarding best practice and mastery pedagogy. Teaching support staff have attended maths mastery training. Supportive coaching is used and the best practice is shared regularly.

SEND and Disadvantaged Progress

Our small step curriculum enables all children to meet the expectations for their year group. Teachers carefully scaffold learning so it is accessible to all children through the use of concrete resources and additional support. Where children are

Cultural capital, inclusion and diversity

When beginning their primary school journey in the EYFS, many children arrive to school with different and sometimes more limited experiences than others. Therefore, our aim is to give children the knowledge and skills to prepare them for what comes next in their lives. This includes the relevant vocabulary needed throughout their education and the opportunity to link maths to real world problem solving such as shops and everyday routines.

Curriculum links

Maths is evident across many subjects in History – children should develop an awareness of the past, using common words and phrases relating to the passing of time. Throughout the school day referring to when events occur such as the start and end of the school day, lunchtime, etc. In ICT children learn about statistics.

Impact – How will we know we have achieved?

Children meet or exceed their age related expectations.

Children are able to talk confidently about their work and use mathematical vocabulary confidently.

High Levels of Engagement: Children enjoy the range of activities provided for them in maths and are able to complete challenges they are set.

All children develop fluency in calculation and a flexibility with number that exemplifies good number sense.