



At Whitley Lodge First School we aim to promote enjoyment and engagement in maths by learning through practical activities, exploration and discussion. We implement a mastery approach to the teaching of mathematics and endeavour to embed the belief that all pupils have the potential to succeed.



Maths Strategy





Intent

- To develop children's early understanding of number, shape, space, measure and pattern through practical, play-based experiences that build secure foundations for later mathematical learning.
- To be ambitious and have high expectations of all children, creating well rounded confident, mathematicians.
- To broaden children's mathematical vocabulary, providing the language for them to reason and problem solve confidently in maths.
- To ensure the children fluent in recalling number facts, such as number bonds and times tables.
- To teach a balance of fluency, reasoning and problem solving explicitly to all learners.
- To ensure the wider curriculum allows for transferable skills, for example data handling in Science and measuring in D.T.

Implementation - How do we achieve our aims?



Early Years Foundation Stage

In our Early Years mathematics curriculum, children develop strong foundations in number, shape, space and measure through a carefully planned, play-based approach. Daily routines such as signing in with a tens frame support early number recognition and composition, for example exploring the total number in class through a part-whole model and linking it to "one more" and "one less" using a number line displayed on the working wall. A daily book vote builds early counting skills and one-to-one correspondence, progressing to subitising up to six using familiar patterns such as dice and number blocks. Children are consistently encouraged to reason and explain their thinking through high-quality questioning such as "How do you know?" while adults model accurate counting and precise mathematical language to secure understanding. Each lesson begins with oral counting to build fluency, confidence and familiarity with number. This is reinforced through daily number line activities, identifying missing numbers and explaining their reasoning using mathematical vocabulary. Weekly focuses such as odd and even numbers, number bonds, doubles and shape further develop understanding, helping children make connections across mathematical concepts.

Our curriculum combines NCETM and White Rose guidance to ensure strong coverage and progression, delivered through a balance of discrete teaching, small group work and continuous provision. This includes carefully planned enhancements and tuff tray activities that allow children to revisit and apply learning independently through purposeful play.

Learning is sequenced across the year to build depth and confidence. In Autumn, children engage in Number Talk and subitising activities to strengthen early number sense. In Spring, Number Splat activities develop understanding of part-whole relationships and hidden quantities and in Summer, 'Esti-Mysteries' encourage estimation and reasoning skills. Assessment is ongoing through observation and questioning, supported by termly assessments which inform planning and targeted support. Overall, mathematics is embedded across daily routines and provision, ensuring children develop secure and confident mathematical understanding through meaningful, engaging experiences.





Implementation - How do we achieve our aims?

Key Stage One - Years 1 and 2

Knowledge: Children develop secure foundational mathematical knowledge through carefully sequenced teaching that builds understanding in small steps. This enables them to develop early automaticity and make connections between key mathematical concepts.

Practical Approach: A strong emphasis is placed on practical, hands-on learning using the Concrete, Pictorial, Abstract (CPA) approach. Children use concrete resources to introduce new concepts before progressing to pictorial and abstract representations

Sequenced Curriculum: Learning is carefully planned, sequenced and revisited to ensure key ideas are embedded and built upon over time using the White Rose curriculum. Concepts are broken into manageable steps, allowing pupils to consolidate understanding before moving on.

Fluency, Reasoning and Problem Solving: Fluency is prioritised at the start of each unit, ensuring children are secure in core skills before applying them to reasoning and problem-solving tasks. Once fluency is established, pupils are increasingly challenged to apply their knowledge in a range of contexts.

Retrieval: Lessons include retrieval practice through starters such as Flashback 4, rapid recall boards, number chat and 100 square activities to reinforce prior learning.

Assessment: Teachers assess continuously during lessons and provide immediate feedback and intervention where needed. Post-unit assessments are used to update Sonar Tracker and inform next steps and targeted support. If further intervention is required, Mastering Number and the First Class@Number1 programmes are delivered outside of maths lessons.



Key Stage Two - Years 3 and 4

Knowledge: Children deepen their mathematical understanding by building on prior learning. They are encouraged to recognise patterns, make links between concepts and apply their knowledge with increasing independence and precision e.g in floor book activities.

Practical Approach: Teaching continues to use the Concrete, Pictorial, Abstract (CPA), particularly when introducing new or complex concepts. Children are encouraged to move between representations, enabling them to visualise and explain their understanding.

Sequenced Curriculum: We continue to follow the coherent sequence of White Rose to ensure progression in knowledge and skills. Learning is structured in small, connected steps and revisited, allowing pupils to consolidate understanding and retain key concepts.

Fluency, Reasoning and Problem Solving: A strong emphasis is placed on developing fluency of multiplication tables in preparation for the Year 4 Multiplication Tables Check. They are then expected to apply this fluency to a range of reasoning and problem-solving tasks.

Retrieval: Retrieval practice is embedded through daily starters such as Flashback 4 and arithmetic tasks, ensuring key knowledge is retained. Homework is used to consolidate understanding, either through current topic work or standalone practice such as times tables.

Assessment: This is ongoing, with teachers adapting teaching in response to pupils' needs. Post unit assessments are used for recorded on Sonar Tracker to monitor progress and inform interventions. First Class@Number2 is used for more specific intervention, when appropriate.



Whole School Initiatives to Promote Enjoyment in Maths

At Whitley Lodge First School, we embed mathematics across the curriculum through hands on, investigative experiences that promote reasoning, collaboration and problem-solving. We do this in the following ways:

- Annual whole-school Maths Day focused on a key mathematical theme e.g. time, shape, number, promoting engagement, enjoyment and cross-phase collaboration.
- Use of outdoor learning environments, including the beach and local areas such as Brierdene, to apply mathematical skills in real-life contexts such as measuring, estimating, and comparing.
- Development of orienteering-style maths trails around the school grounds, including shape hunts and problem-solving challenges to promote active learning and spatial awareness.
- STEM Fortnight providing opportunities for pupils to apply mathematical skills in purposeful, real-world contexts, such as measuring and constructing working turbines.
- Designing and making symmetrical paper aeroplanes to explore properties of shape, symmetry and measurement.
- Using accurate measurement and cutting skills when working with wood to construct functional models such as merry go rounds, applying maths in practical engineering contexts.



Impact

At Whitley Lodge, our ultimate goal is to help children understand the importance of maths in everyday life and to foster a lifelong love of maths and learning. Teachers have a strong subject knowledge and deliver lessons which promote a passion for Maths, which means the majority of the children will:

- Talk confidently about their work using precise mathematical vocabulary.
- Show enjoyment and curiosity in mathematics, particularly when solving problems.
- Confidently apply fluency, reasoning and problem-solving skills across a range of contexts.
- Demonstrate secure conceptual understanding, enabling them to explain and justify their mathematical thinking clearly.
- Apply mathematical knowledge independently within continuous provision and real-life contexts.
- Complete pre and post unit assessments, which are used to track progress against National Curriculum objectives using Sonar Tracker.
- Make clear connections between different areas of mathematics to support efficient problem solving.
- Leave EYFS on track in mathematics, demonstrating secure number sense, strong counting skills and an emerging understanding of number relationships.
- Demonstrate fluent and accurate recall of multiplication facts, enabling strong performance in the Year 4 Multiplication Tables Check (MTC).