



Mathematics

"The only way to learn mathematics is to do mathematics."

– Paul Halmos

Intent

When teaching mathematics at St Wilfrid's, we intend to deliver a rich, balanced and progressive curriculum, which inspires children and equips them with the skills, knowledge and understanding to be confident, accurate, flexible, curious mathematicians. Instead of learning mathematical procedures by rote, we want pupils to build a deep conceptual understanding of mathematical concepts which will enable them to become fluent in their maths and apply their learning in a variety of situations.

A wide range of mathematical resources are available in all classrooms and pupils are taught to show their workings using concrete resources, before moving on to pictorially and formally representing their understanding to then be able to tackle more abstract problems. With a focus on fluency, reasoning and problem solving, children will develop the ability to use mathematical vocabulary to articulate, discuss and explain their logic and reasoning and develop resilience when tackling more complex concepts.

Implementation

To ensure full topic coverage and continuity and progression across the school, teachers use the White Rose schemes of learning but also incorporate additional high-quality resources, such as NCETM, NRICH, Deepening Understanding, Third Space Learning and I see Reasoning to ensure sustained levels of challenge. Practice and consolidation play a central role to ensure children are secure and confident with a concept. Carefully designed variation within this builds fluency and understanding of underlying mathematical concepts. To support conceptual understanding, we encourage a progressive concrete, pictorial, abstract approach; using concrete manipulatives and pictorial representations, before tackling more complex mathematical problems. We have a range of manipulatives in classrooms including Numicon, Base 10, place value counters and double-sided counters to support children practically.

Children may work independently, in pairs and in groups to encourage mathematical discussion, develop problem solving and reasoning skills and share efficient methods.

Through high quality teaching and assessment, we continuously monitor pupils' progress against expected attainment and use this to inform our planning and update our summative school tracker. The main purpose of all assessment is to always

ensure that we are providing excellent provision for every child and using quality first teaching to support and allow all children to become fluent mathematicians.

Impact

The impact of our mathematical philosophy for teaching and learning can be seen across the school through learning walks, book looks, pupil voice and data. Our children have a growth mindset and make measurable progress. Children have the confidence to 'have a go' and can choose the equipment they need, choosing the strategies they think are best suited to each problem. Children are developing skills in being articulate and are able to verbally, pictorially and in written form reason well. Through modelling of accurate language, prompting questions and child led exploration, children are more confident and skilled when discussing and explaining their mathematical thinking.

Formative assessment takes place on a daily basis and teachers adjust their planning accordingly to meet the needs of each child. Our maths books show a range of activities, demonstrating evidence of fluency, reasoning and problem solving. Through moderation of lessons and books and Summative assessment, we can be sure that progress is made across all year groups and provide interventions where necessary.