



St. John's
CE Primary School

Maths Curriculum

Intent

The Mathematics curriculum is designed to enable all children to learn the vocabulary, knowledge and skills needed to be able to understand number, reason, think logically, work systematically and accurately and problem solve with resilience so they are prepared for the future and ready for the next phase of education being able to work fluently and independently. We believe that all pupils can succeed in mathematics and encourage a growth mind set through the promotion of the culture that 'everyone can do maths.'

Our Mathematics curriculum follows a mastery approach from EYFS to Year 6 and meets NC requirements. Whole school values and curriculum drivers shape our curriculum which is ambitious and carefully sequenced, allowing for all children to be connected so that children build on prior learning. It is a progressive curriculum and learning is deepened through connections to prior learning. Mathematical talk is highly valued and children are encouraged to answer in full sentences, using sentence stems and sentence starters to help organise their thinking.

When introducing new mathematical concepts teachers use a 'Concrete, Pictorial, Abstract' approach with a variety of manipulatives to help expose the mathematical concepts, allowing children to have a hands on approach to discover and understand new concepts. This allows pupils to have clear models and images to aid their understanding in future lessons.

It is our intention at St John's that children, regardless of their starting point, will maximize their academic achievement and leave with an appreciation and enthusiasm for Mathematics, resulting in a life-long positive relationship with number.

Implementation

Mathematics is taught daily in each year group following the White Rose Maths Hub Schemes of Learning. These are supplemented for EYFS and KS1 by additional Mastering Number sessions with a focus on developing a deep understanding of number. Maths is planned and delivered following a small step approach which allows for misconceptions to be remediated at early stages using same day keep up or pre-teaching sessions.

Teachers use a mastery approach planning format which also considers metacognitive approaches as well as the sequence of learning and misconceptions. Teaching sequences take into account pre-requisites for learning, incorporating the Ready to Progress (RTP) and Curriculum Prioritisation materials in order to plan clear sequences of learning for all including a clarity of expected and essential vocabulary for each unit of learning.

Reasoning and problem solving tasks and opportunities are integral to the day to day mathematics lessons.

New units of learning start with an elicitation task to identify the starting point for the learning sequence. Learning objectives are clear and precise so that children can see what they are learning and how these fit together in a sequence of lessons. Daily opportunities are built in for practice to aid fluency, either Mastering Number (NCETM) for EYFS and KS1 or daily fluency tasks for KS2 and this is

used to activate prior learning and knowledge. There are frequent opportunities for recall and retrieval including at other times, teaching informed by continuous assessment of and for learning, misconceptions are elicited and remediated through live marking and assessments opportunities. All children work towards the same learning intention; scaffolding is in place to enable all children to access the mathematics independently. Children are expected to secure new learning with some children having 'keep up' sessions after the daily maths lesson. Rapid graspers are provided with greater depth tasks to deepen their mathematical thinking and understanding. End of unit assessments supports teacher knowledge and allows for planning of future learning.

Following the schemes of Learning from White Rose Maths enables teachers to plan and deliver maths sequences of learning following a small step approach, when appropriate these are supplemented with the Ready to Progress materials from NCETM. Mathematical concepts are taught using a Concrete, Pictorial, Abstract approach across the school using a range of manipulatives for all year groups. Lessons are taught linking to real life contexts which helps children to notice and understand the importance of number, statistics and geometry in the wider world.

Live marking by teachers and teaching assistants provide opportunities for in the moment feedback to address misconceptions. Sometimes making mistakes is a part of the process learners need to go through to solve complex problems and mathematics at St John's uses these 'marvellous mistakes' to help develop a growth mind-set culture. Children are provided with time to address errors and respond to marking and feedback in their lessons, using purple pens. Children are encouraged to think about what they already know and how this can be used to help solve problems. Teachers encourage answers to be formed in full sentences using a wide range of mathematically precise vocabulary. Pre-teaching is used for key children who may need to be secure in a specific area prior to a lesson, this is carried out by teachers or teaching assistants prior to the lesson.

Monitoring and evaluation takes place at least half termly, using a variety of strategies- book scrutiny, planning consultations, pupil voice and learning walks. This helps to assess the impact of teaching and learning within classes and across the year groups.

There are regular opportunities for staff CPL opportunities. EYFS and KS1 teachers are currently taking part in the NCETM Mastering Number Programme (Embedding) to embed QFT. Our ECT is also working with the Jurassic Maths Hub completing an ECT programme for Maths Mastery. Jurassic Maths Hub information is disseminated by the maths leader, a NCETM Maths Mastery Specialist Teacher. Teaching Assistants have opportunities to take part in the DSAT CPL programmes on offer.

Impact

As a result of our mathematics curriculum, you will see happy, engaged children who are challenged. Maths journals will show a range of fluency, problem solving and reasoning tasks which show variation but also reflect our school's CPA approach. Interventions such as Dynamo Maths, 5 minute box, pre-teaching and keep up sessions support children to be the best mathematician they can be by addressing misconceptions and gaps in understanding of mathematical concepts.

Children can explain their thinking and learning, they use new vocabulary and knowledge in their reasoning and problem solving, they can explain how this adds on to what they already knew. Daily fluency tasks help to activate prior learning, keeping key skills, knowledge and vocabulary fresh in the minds of the pupils. Reasoning and problem solving shows that pupils are expected to articulate their mathematical thinking and reasoning in full sentences, using stem sentences and sentence starters to aid their written or oral work.

As the children grow in confidence through using manipulatives and a CPA approach to see and develop a deeper understanding of mathematical concepts, they are able to explain their thinking more precisely, using varied representations and key mathematical vocabulary.

Children are encouraged to think about what they already know and how this can be used to help solve complex problems. We use assessment for and assessment of learning to track progress and identify and address gaps.

End of unit assessments, along with PUMA and SATS papers for Year 2 and 6 ,show children are working at or towards age related expectations. Children with SEND and the lowest 20% are monitored carefully and interventions such as keep up or pre-teaching are identified to help close the gap. Crucially, children can access the full curriculum and are therefore ready for future learning as they move up through the school and onto KS3 provision.