Maths and Calculation Policy

Shirland Primary School

October 2022

Last Reviewed	October 2022
Written By Reviewed By	Sam Flanagan Chair of Governors
Next Review Date	October 2025

Maths Curriculum Policy

Intent

The intent for our math curriculum is to design a mastery approach, which is accessible to all and is effectively structured, to spark the learners' natural curiosity. Through challenging and engaging lessons we seek to maximise the development of every child's ability and academic achievement. Leaners should demonstrate a deep, conceptual understanding of the topic and be able to build on this over time by making links, through carefully planned coherent small steps, between previous and current learning.

Our goal is for all learners to develop their mathematical fluency in order to master key knowledge and be able to make connections across mathematical concepts. In doing so they will have the tools, confidence and perseverance to reason mathematically, communicating their ideas through precise terminology and varied representations. Learners should then be able to fearlessly tackle mathematical challenges, with the belief that maths can be achieved and enjoyed by all; enabling them to foster ambitious and aspirations towards pursuing STEM careers.

Implementation

To ensure whole consistency and progression, the school uses the White Rose scheme. Mathematical topics are taught in blocks through carefully sequenced small steps in learning, to enable the achievement of mastery over time.

Assessment of key concepts is developed through pre-teach sessions to inform planning to ensure coherence and sufficient time is given to allow children to master these areas.

Teachers reinforce an expectation that all children are capable of achieving high standards in Mathematics.

Each lesson phases exposes all learners to intelligent practice, through conceptual and procedural variation and use of a variety of representations and structure, allowing them to move towards achieving greater depth within each mathematical concept. All learners who are able to master a concept are offered rich and sophisticated problems to promote challenge and demonstrate deep conceptual understanding.

Teachers use precise explanations and accurate terminology and promote learners; ability to communicate ideas and through the use of stem sentences embed key concepts and scaffold learners' reasoning of mathematical concepts through discussion.

The large majority of the children progress through the curriculum content at the same pace. Differentiation is achieved by emphasising deep knowledge and through individual support and carefully planned pre and post intervention, ensuring learners have mastered previous concepts before moving on.

Questioning in class is used to challenge learners' ability to reason mathematically, allowing opportunities to demonstrate conceptual and procedural knowledge and make connections to empower learners to choose efficient methods.

Teachers and TAs assess learners regularly, through questioning, discussion and work, to identify those requiring intervention, so that all learners are enabled to progress rapidly.

Fluency is promoted through regular additional sessions to enhance learner' mathematically agility and confidence to enable them to make connections and make their own decisions about how to work efficiently and intelligently rather than rely on set procedures.

Continuous provision activities are planned for both indoor and outdoor learning within EYFS and observations are carried out and recorded. EYFS use White Rose to support teaching and learning.

Key Stage 1 and EYFS are part of the Mastering Number Programme and complete daily 10 minute number activities to secure learning.

Calculation Methods

At Shirland Primary School we adopt the calculation policy set out by the White Rose scheme of work.

The documents are broken down into addition and subtraction, and multiplication and division. At the start of each policy, there is an overview of the different models and images that can support the teaching of different concepts. These provide explanations of the benefits of using the models and show the links between different operations. Each operation is then broken down into skills and each skill has a dedicated page showing the different models and images that could be used to effectively teach that concept.

The calculation polices are attached at the end of this Maths policy.

Impact

White Rose ensures that all children experience challenge and success in Mathematics by developing a growth mindset.

Mastery supports the children in developing both their collaborative and independent skills, as well as empathy and the need to recognise the achievement of others.

Regular and ongoing formative and summative assessment informs teaching, as well as intervention, to support and enable the success of all learners. Through regular tracking on OTrack, learners' progress is monitored and steps are rapidly put in place and regularly monitored, to ensure progress of all learners is good or better.

Pre-teach is used to ensure that sufficient time is spent to ensure that all children demonstrate deep conceptual understanding of key concepts.

Teachers are supported and aided in their roles ensuring confidence in the planning, teaching and assessment of maths. Through the East Midlands Maths Hub, teachers are provided with regular opportunity to develop their subject knowledge and pedagogical strategies, collaboratively, in line with the mastery approach.

Through peer-teaching and learning walks, all teachers are able to teach lessons which are good or better.

Teachers and governors are kept regularly informed, through reviews of the Maths Action Plan, SIP of developments in our curriculum.

Barriers to learning are reduced through annual well-attended parents' meetings, which aim to inform parents of the strategies taught in school to empower them to assist learning and talk positively about maths within the home environment.

The maths subject leader has allocated time to carry out the vital task of reviewing the curriculum, the children's work and for carrying out learning walks and pupil interviews.