



Kirkby & Great Broughton Church of England Voluntary Aided Primary School

“Shine among them like stars lighting up the sky” (Philippians 2:15-16)

Mathematics Policy May 2022

To be read alongside the Teaching, Learning and Assessment policy

Intent:

At Kirkby and Great Broughton school we aim to provide a high-quality mathematics curriculum that is challenging, enjoyable, creative and engaging for all pupils and allows them to reach their full potential. We want to ensure that pupils are confident mathematicians who are encouraged to persevere and take risks and to become independent learners so that children have enquiring minds and the skills to question, debate and back up their thoughts with secure mathematical understanding.

Sessions will include explicit reference to vital mathematical vocabulary and we promote all children to communicate their ideas with mathematical precision and clarity. We will provide a variety of mathematical opportunities across the curriculum so that pupils can apply skills to different contexts and recognise the importance of mathematics in everyday life.

Implementation:

Mathematics is a high priority across our school and therefore it is taught to children on a daily basis through whole class, small group and / or individual tasks (depending on the age and needs of the children). We follow the White Rose Scheme of Learning which is a blocked scheme allowing for depth and breadth of learning within each strand of mathematics.

Our mathematical approach is based on a concrete, pictorial and abstract learning model which encourages children to engage with a wide and varied range of concrete manipulatives, pictorial representations and abstract methodologies within and across sessions. This means that learning is meaningful and progressive for children, allowing them to see the steps required and then take this knowledge forward to a range of different scenarios.

Every lesson provides children with the opportunities to develop their fluency skills, construct chains of reasoning using relevant knowledge alongside appropriate terminology and solve increasingly complex problems in a systematic and coherent way.

EYFS: Maths is taught daily with whole class inputs and interactive, concrete activities as well as encouraged continually whilst children are playing and learning. Adults, whether teaching a discrete maths session or playing with children, consistently model the use of mathematical vocabulary in a variety of contexts so that children become confident with using it themselves. Opportunities for maths are threaded through areas of provision and areas of learning are enhanced by making real-life links to maths. This encourages all children to remember and apply their mathematical knowledge across both number and shape, space and measure strands.

Interleaving learning: To ensure that pupils' knowledge is being constantly re-visited, re-enforced and common identified misconceptions are addressed we carry out low stakes 'fluent in five', 'terrific in ten' or rapid recall times tables practise sessions at the beginning of a mathematics lesson on a daily basis.

Fluent Recall: we are committed to ensuring that pupils secure their knowledge of times tables and related division facts by the end of year 4. Our pupils engage (from year 2) in regular low stakes testing through Times Tables Rock Stars to practise fluent recall.

Impact:

Formative Assessment- teachers carry out formative assessment in each session and feedback is given through 'live' marking, verbal feedback, peer/ self-assessment and marking after a session. Teachers then use this assessment to influence their planning. Children are rapidly identified as needing further challenge or additional support and we ensure that this is provided in a timely manner.

Timely Interventions- teachers believe that all children can achieve in mathematics and focus on whole class teaching. Where prerequisites are not secure, timely interventions will be carried out. This is done as pre-teaching using the 'shine' resources that identify gaps in learning through the NTS assessments (From Year 1 summer term).

Low Stakes Quizzing and Fluent recall- we use a range of low stakes testing throughout the teaching cycle to assess attainment and progress. From Year 2 to Year 6, children complete regular tests in arithmetic, previous learning and times tables.

Summative Assessments- Our assessment calendar includes 3 key dates for capturing progress and attainment against National Curriculum Objectives. Assessments are carried out in Autumn, Spring and Summer terms using the NTS assessment tool for year 1 (summer term only), Year 2,3,4 and 5 and past SAT papers for year 6.

Subject Monitoring- regular monitoring of the quality and impact of our mathematics curriculum through targeted learning walks, books scrutiny and pupil voice. In addition to this, surveying of staff to identify their perception of mathematics and identify CPD needs.

Teaching and Learning:

At Kirkby and Great Broughton School we believe that everything starts with high quality teaching.

In all lessons there are core expectations that form the basis of our view of effective practice.

Effective teaching requires...

Challenge All children have high expectations of what they can achieve

Explanation Children acquire knowledge and skills and understanding

Modelling Children know clearly how they can apply their knowledge and skills

Practice Children have opportunities to practice, apply and develop their abilities

Questioning Children are made to think hard with depth, breadth and accuracy

Feedback Children think about the ways that they can further develop their skills, knowledge and understanding

Each of the core expectations are outlined further in the teaching and learning policy.

The Classroom Environment:

The Mathematics Learning wall shows relevant, up to date learning and is used as a support for the children's learning in fluency, reasoning and problem solving. The learning wall should display the learning focus for the half term/unit of work, subject specific vocabulary, models and images helping children to see the steps needed to move from concrete, pictorial to abstract and examples of work/shared work from lessons.

Planning:

The Headteacher and Mathematics lead teacher monitors effective planning and consistency of approach by teachers in accordance with the National Curriculum. It is expected that teachers follow the White Rose objectives but these will be adapted to meet the needs of a class, group or individual child in consultation with the lead teacher as required.

Cross-Curricular Links:

Teachers consider the opportunities for developing mathematical skills across the curriculum.

All teachers are aware of and capitalise on opportunities, for children to develop their reasoning and problem-solving skills across the curriculum in subjects such as science, geography, history and design and technology.

SEND:

Pupils with difficulties in basic skills are given extra support, either daily or on a regular basis by teaching assistants and class teachers. Class teachers monitor these children and discuss any concerns to the SEND lead teacher to ensure that the individual needs of pupils with special needs are met and that appropriate targets are set and regularly reviewed. Outside agencies may be consulted where appropriate. Interventions are researched when needed, for specific children or when other interventions are not having the desired effect.

Children working at Greater Depth

Teachers plan effectively to ensure individuals' needs are met and that appropriate targets are set and reviewed regularly. Teachers are mindful of the extra need's children working at greater depth and will differentiate questions and activities to allow for further progression and challenge.

Marking and Assessment

- Marking is carried out regularly in accordance with the school's marking policy. It is expected that live marking and verbal feedback is used where possible.

- Once a term, teachers in Y3,4,5 use NTS assessments for mathematics. Y2 and 6 teachers use past SATS papers to assess children in mathematics. Results are inputted and gaps identified. The analysis from the assessments helps to inform interventions (SHINE) required and inform planning for the next term. Results from the assessments also indicated if children are working towards, working at expected standard or working at greater depth.

- SATS tests in Year 2, form part of the overall teacher assessment. The outcomes of SATS tests are recorded for the child's records and for her or his next class teacher.

- Parents of Year 2 children will be informed of the teacher assessments and parents of Year 6 children will be informed of the test results as well as the teacher assessment for mathematics.

Equal Opportunities:

This policy should read in conjunction with school's Equality Policy under the Equality Act 2010.

Home School Links and Challenges:

- Children in KS2 are encouraged to practise their times tables regularly at home using the Times Table Rockstar resource. Teachers inform parents of weekly focuses so that additional support can be provided if required.
- Parents in EYFS and KS1 are given weekly updates of curriculum coverage and are provided with useful additional activities or website links in order to support their child further.
- Reporting to parents takes place twice yearly at Parents Evening and also in an annual written report.

Monitoring and Review:

We are aware of the need to regularly review our policies to take account of the new initiatives, changes in curriculum or developments in technology. The Headteacher and Mathematics Lead teacher complete regular monitoring of Mathematics through a triangulation of monitoring including: lesson observations, book scrutinises and data analysis. The Mathematics link governor visits the school to meet with the Mathematics lead regarding progress towards the Mathematics action plan.

Agreed: May 2022

Review Date: May 2024