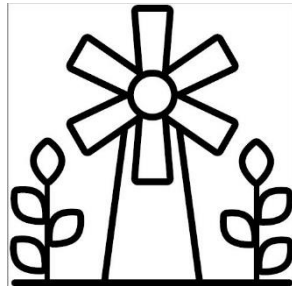


Sibsey Free Primary School



Mathematics Policy

Approved by: Governing Body

Date: March 2023

Next review due by: March 2025



Introduction:

This policy outlines the teaching, organisation and management of mathematics taught and learnt at Sibsey Free Primary School. The policy is based on the 2014 expectations and aims of the 'New Curriculum' for mathematics and the Early Years 'Development Matters' EYFS document. This ensures continuity and progression in the learning and teaching of mathematics. The policy has been drawn up by the mathematics leader, shared and discussed with all staff and has the full agreement of the Governing Body.

Purpose:

Mathematics is a creative and highly interconnected discipline that has been developed over centuries, providing the solution to some of history's most intriguing problems. It is essential in all curricular areas and to everyday life; it is critical to science, technology and engineering, and necessary for financial literacy and all forms of employment. A high-quality education in maths therefore provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject.

Aims: (Embracing the New curriculum)

The new National Curriculum for mathematics aims to ensure that all pupils:

- become fluent in the fundamentals of mathematics, including through varied and frequent practise with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately;
- reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language;
- can solve problems by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

Mathematics is an interconnected subject in which pupils need to be able to move fluently between representations of mathematical ideas. The programmes of study are, by necessity, organised into distinct domains, but pupils should make rich connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems. They should also apply their mathematical knowledge to science and other subjects.

The expectation is that the majority of pupils will move through the programmes of study at broadly the same pace. However, decisions about when to progress should always be based on the security of pupils' understanding and their readiness to progress to the next stage. Pupils who grasp concepts rapidly should be challenged through being offered rich and sophisticated problems before any acceleration through new content. Those who are not sufficiently fluent with earlier material should consolidate their understanding, including through additional practice, before moving on.



Planning, learning and teaching: (Implementation)

We carry out curriculum planning in mathematics in three phases (long-term, medium-term and short-term). Our mathematics curriculum is delivered using the White Rose schemes of work which have been adapted to meet the needs of the year groups and classes. This coverage is reviewed continually by the maths subject leader and class teachers and planning is adjusted accordingly to ensure appropriate coverage of all mathematical strands.

Each teacher has responsibility for the planning and teaching of Mathematics in their class.

Currently, the school is able to teach mathematics on a year group. If this is not available to us, we revert to the following setup: In our mixed age classes, work will normally be planned using the material that is appropriate for the mathematical stage of the majority of the children, taking into account year group specific objectives, with tasks being differentiated according to need.

Although the majority of mathematics teaching may be 'whole class' lessons, teachers group their children in a variety of ways according to the nature of the activity, for example, individual, ability groups, mixed ability groups and as a whole class. Teachers ensure that the way the class is organised is appropriate to the activity so all children have the best possible learning opportunities.

Wherever possible teachers will plan tasks that have a strong problem solving element, and be practically based, this is to take account of Bruner's enactive, iconic and symbolic learning stages and ensure children develop a conceptual understanding of the mathematics involved ; and are able to reason mathematically and explain their ideas.

Teacher will focus on developing children's mental maths skills so they are able to use numbers fluently and accurately, whilst develop confidence.

Maths lessons will be taught on a daily basis.

Progression of calculation methods:

White Rose individual lesson plans provide structured calculation methods using the maths mastery approach. This is also mapped out in a long term plan completed by the maths subject leader and held by all class teachers supporting with consistent methods of calculation.

Resources

The school subscribes to and uses the White Rose Maths programme to consistently implement the Maths curriculum. All classes have access to the appropriate resources for their varying topics of learning in Maths, either within their classrooms or as shared resources across the school. When additional resources are required, further items are ordered through the Maths subject leader.

Computing and technology:

Technology is used to enhance and support the teaching and learning of PSRN/Mathematics. Interactive Whiteboards are used in every classroom by the teacher to present information and support direct teaching of a concept. They may also used by the children as an interactive learning tool where they can be set a task and activities to complete on the board, individually or in groups.



The children have regular access to the laptops and tablets in their classroom to support their learning in all areas of Mathematics using a variety of programmes or apps for example: Excel for use in handling data such as graphs, tables, pie charts. Teachers are encouraged to integrate these programs in a cross curricular way as well as teaching the children the skills needed to understand and use them. Children also have access to programmable “toys” to develop spatial and directional skills and knowledge. Numbots and TTR is direct subscription software used to support Mathematics.

Spoken language:

The national curriculum for mathematics reflects the importance of spoken language in pupils’ development across the whole curriculum – cognitively, socially and linguistically. The quality and variety of language that pupils hear and speak are key factors in developing their mathematical vocabulary and presenting a mathematical justification, argument or proof. They must be assisted in making their thinking clear to themselves as well as others and teachers should ensure that pupils build secure foundations by using discussion to probe and remedy their misconceptions.

Early years:

Work undertaken within the Foundation Stage is guided by the requirements and recommendations set out in the Early Years ‘Development Matters’ EYFS document. All children are given ample opportunity to develop their understanding of mathematics. Lessons in the Early Years aim to do this through varied activities that allow children to use, enjoy, explore, practise and talk confidently about mathematics.

Differentiation and support: (Including provision for SEND, G&T, E.A.L, and P.P pupils)

This is incorporated into all mathematics lessons and is done in various ways, such as:

- setting challenging age related knowledge, reasoning and problem solving tasks based on systematic, accurate assessment of pupils’ prior skills, knowledge and understanding;
- small, differentiated target steps for all children to move through at a pace that suits their needs;
- timely support and intervention; systematically and effectively checking pupils’ understanding throughout lessons;
- ensuring that marking and constructive feedback is personal, frequent and of a consistently high quality --- enabling pupils to understand how to improve and develop their work --- with planned in time for children to respond to feedback;
- real life, practical links throughout all knowledge, reasoning and problem solving tasks, with whole class activities planned at the end of each unit;
- range of practical---real life resources used to support all stages of learning within the class;
- regular homework set--- differentiated through the 3 aims; (knowledge, reasoning and problem solving);
- intervention programmes/extra teacher support delivered where needed both in class and through extra sessions planned outside the sessions;
- visual stimulus/aids are provided for our hearing impaired and English as additional language pupils. Specialist support staff are also employed to develop and target these pupils further.



Marking:

The main purpose of our marking policy is to ensure that as children progress through the school they benefit from constructive guidance and next step questioning to challenge and consolidate their learning further. Marking can take a range of forms, from a simple tick or dot to show a calculation is correct or incorrect, to more extended feedback which shows examples and possible next steps. We use a one/two/three tick system to show if a child has not met/met/exceeded the learning intention.

Assessment:

Assessment is regarded as an integral part of teaching and learning and is a continuous process. It is the responsibility of the class teacher to assess all pupils in their class. This is mainly achieved through mini-plenaries, questioning, marking, feedback and pupil self-assessment. This information informs subsequent planning and next steps in teaching and learning.

Assessment for Learning is fundamental to raising standards and enabling children to reach their potential. Learning objectives and steps to success are shared with the children in every lesson (although not always at the beginning!). Children are provided with opportunities for self/peer-assessment and improvement. Marking is developmental and children are provided with next steps to extend their learning. Teachers monitor the acquisition of skills, knowledge and understanding through appropriate teacher intervention, observations and discussions with groups and individuals, and records of achievement in the key skills in maths for each year group are updated termly.

Detailed assessment of pupils' progress is affected by means of an assessment grid correlated to the Maths curriculum and the school's medium term plans for Mathematics. By tracking progress continually, all teachers have a clear understanding of how their class are progressing and where development is needed. This tracking also includes termly tracking of standards for each child.

Teachers keep one example per year of Numeracy/Mathematics work in each child's best work folder to show elements of progress made.

Parental links:

Each class sends out termly up-dates to parent's informing them of the Key Areas being covered by that class group. Curriculum and assessment updates are put up on the school website; and a copy of medium term planning is also available.

Workshops are organised with relation to the new curriculum, assessment and supporting children's mathematical learning. All parents are invited to attend and dates will be included on the newsletters and on the website.

Links are provided on the website to support with homework and mathematical development. Any relevant information will also be sent when appropriate.

Homework:

Homework is sent home with the children on a regular basis in a variety of forms. All homework builds on concepts and skills already undertaken in class sessions.



Monitoring and Review:

The monitoring of the standards of children's work and the quality of learning and teaching mathematics is the shared responsibility of the Headteacher, the S.L.T, and the subject leader. The work of the subject leader also involves supporting colleagues in the teaching of mathematics, being informed about current developments in the subject, and providing a strategic lead and direction for the subject in the school. A named member of the school governing body is briefed to overview the teaching of mathematics in the school.

This policy must be read and used in conjunction with the:

- Sibsey's Long Term Maths plan
- New Maths Curriculum 2014 government documentation;
- The Early Years 'Development Matters' EYFS document;
- The curriculum unit overviews and unit documents;
- Intervention timetables (updated regularly);
- Teaching, learning and target setting policy;
- Assessment, marking and monitoring policy.
- Equal Opportunities

