

WELFORD, SIBBERTOFT AND SULBY ENDOWED SCHOOL

POLICY FOR MATHEMATICS

Policy Statement for Mathematics (Maths)

This policy has been designed in accordance with the National Curriculum 2014 and helps to develop the three main aims of Fluency, Reasoning and Problem Solving in Mathematics. This policy should be used in close reference to the Calculation Policy 2014.

Mathematics is a creative and highly interconnected discipline that has been developed over centuries, providing the solution to some of history's more intriguing problems. It is essential to everyday life, critical to Science, Technology and Engineering, and necessary for financial literacy and most forms of employment. A high-quality Mathematics education therefore provides a foundation for understanding the world, the ability to reason Mathematically, an appreciation for the beauty and power of Mathematics, and a sense of enjoyment and curiosity about the subject.

This Mathematics Policy refers to,

- Aims for Maths
- Equal Opportunities
- Time Allocation
- Teaching and Learning
- Mental Recall and Homework
- Mathematics Subject Planning
- Middle of the Month Maths
- Resources
- Inclusion
- Marking
- Assessment, Recording and Reporting
- Health and Safety

Aims for Mathematics

The National Curriculum for Mathematics and this policy aims to ensure that all learners:

- Become fluent in the fundamentals of Mathematics, including carried and frequent practice with increasingly complex problems over time, so that learners 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 learners need to be able to move fluently between representations of Mathematical ideas. They should also apply their Mathematics knowledge to Science and other curriculum areas.

Equal Opportunities

All learners, irrespective of ability, gender or ethnic origin are entitled to an education that will provide the opportunity for them to develop, to the best of their abilities, a competence in all aspects of Maths. Staff provide a variety of experiences / activities during a topic and during a lesson, employing teaching methods and resources that allow all learners to have equal access to Maths and to experience success and enjoyment in their work.



Time Allocation

We plan to deliver regular Mathematics lessons at least 4 age appropriate sessions per week, around 45 minutes at Key Stage 1 and 60 minutes at Key Stage 2. EYFS have one weekly adult focussed session for Mathematics. Opportunities are also planned for child initiated learning within the EYFS and learners are involved in incidental Mathematics such as counting learners present and completing the daily calendar.

Teaching and Learning

The programme of study as outlined in the National Curriculum are, by necessity, organised into apparently distinct domains, but learners should be taught to make rich connections across Mathematical ideas to develop fluency. Mathematical reasoning and competence in solving increasingly sophisticated problems.

The national expectation is that the majority of learners will move through the programmes of study broadly at the same pace. However, decisions about when to progress should always be based on the security of learners understanding and their readiness to progress to the next stage. Learners 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.

Mathematics is taught at WSSSES through a balance of different teaching methods. Learners will be given the opportunities to learn through real life experience and practical tasks and through progressive focused work on the 4 main Mathematical operations (See Calculation Policy). Appropriate use of information technology is encouraged as a way of enhancing learning in Mathematics.

Mathematics is a core subject of the National Curriculum. In Key Stage 1 and 2 the objectives for the teaching of Mathematics are taken directly from the National Curriculum and individual class teachers plan sequences of lessons for their classes, which both deliver these objectives and provide breadth of Mathematical experiences.

In the EYFS we relate the Mathematics aspects of the children's work to the objectives set out in the Early Learning Goals which underpin the curriculum planning for children aged three to five. Mathematics development in EYFS involves providing children with opportunities to practice and improve their skills in counting numbers, calculating simple addition and subtraction problems, and to describe shapes, spaces and measures.

Mental Recall and Homework

Research shows that learning key facts 'by heart' enables learners to concentrate on the calculation which helps them to develop calculation strategies. Many learners who are not able to recall key facts often treat each calculation as a new one and have to return to first principles to work out the answer again.

At WSSSES we recognise the importance of rapid recall of key numbers facts including knowledge and application of times tables. We support learners in this through opportunities to revisit, learn, apply and practice them regularly.

All learners are given weekly Mathematics homework which usually focuses on the learning of these key facts 'by heart'. Learners in EYFS and KS1 are given a weekly Maths game to share at home to continue to develop their basic Mathematics skills.



Mathematics Subject Planning

Teachers long and medium-term plans give details of the main Mathematical teaching objectives for each term of the academic year. These plans define what is taught and ensure an appropriate balance and distribution of work across each term. Class teachers also complete a weekly (short-term) plan for Mathematics. This lists the specific learning objectives for each lesson and gives details of how the lessons are to be taught. It also includes details of what each group of children will be learning and the deployment of support staff.

Middle of the Month Maths

Middle of the Month Maths is a picture or statement to develop the learners Mathematical talk, thinking and application; all learners will be looking at an everyday picture or investigating an always, sometimes, never statement each month and discussing what they notice. By doing this, they are learning to make connections in Mathematics. This will be shared with the wider school community in a combined display in a communal area and through the newsletter.

Resources

There are a wide range of resources for the teaching and learning of Mathematics in school including access to IT based resources. Age and stage appropriate resources are stored in relevant classrooms and other resources are stored in clearly labelled drawers in the Resource room. Learners should be actively encouraged to use concrete resources to help consolidate their knowledge and understanding where appropriate.

Inclusion

There are children of differing abilities in all classes, staff recognise this and provide suitable learning opportunities for all children by matching the challenge of the task to the ability of the learner. This is achieved through a range of strategies. In some lessons it is achieved through differentiated group work, while in other lessons staff ask children to work from the same starting point before moving on to develop their own ideas. Teachers use teaching assistants to support some children and to enable work to be matched to the needs of individuals. Learners who are identified as under achieving or under attaining in Mathematics are recorded as part of the school's provision mapping process. Appropriate plans are put in place to address the Mathematical needs identified, through focused intervention groups targeted at particular areas of need.

Currently all learners with identifiable SEN have an individual education plan (IEP) which details any Mathematics needs and how these are to be addressed. Please refer to the SEN policy for more detailed information regarding how we need the needs of learners currently on the SEN register.

More able and gifted and talented learners in Mathematics are actively encouraged to be challenged through being offered rich and sophisticated problems before any acceleration through new content.

Marking

All Mathematics work is marked regularly by class teachers and highlighted/comments made in green and pink refer to how well the child has met the learning intention as well as suggestions for future ways in which their work can be improved. Book scrutiny is carried out by the subject leader to ensure quality of marking.

Assessment, Recording and Reporting

Teachers assess the learners' work in Mathematics regularly and in a variety of different ways. Learners are informally assessed by adults working with them in each Mathematics lesson and comments/annotations to plans are made which assists in planning objectives for future lessons.



Currently (2017) at the end of Year 2 learners are assessed in Mathematics to determine their level of attainment. At the end of Year 6 learners complete compulsory tests in Mathematics (SATs Tests). These are used alongside teacher assessment to determine their level of attainment. Assessment in other years is a non-level based system of assessment and reports where learners' progress is assessed against the national expectation for their year group (similar to that of assessment in the EYFS.)

Assessment in EYFS informs everyday Mathematics planning and is based on on-going observational assessment of each learner's achievements, interests and learning styles. Formative assessments make take the form of anecdotal observations, focused observations, baseline assessment, and other focused assessments e.g. annotated examples of work, photographs, video footage and information from parents. Most evidence is collected electronically using Tapestry App on the I pad but each learner has an individual EYFS Profile in which this evidence is printed and collated. The EYFS profile summarises all of the formative assessment undertaken and makes statements about the learner's achievements against the 2 Mathematical assessment scales (Number and Shape, Space and Measures.) It summarises learners' progress towards the Early Learning Goals. It is completed at the end of each term by the class teacher. The teacher also undertakes local cluster moderation.

Assessment documentation including learners progress data stored on I track is reviewed regularly by the Head Teacher, class teacher and Mathematics subject leader to track learner's progress, identify trends and highlight vulnerable learners requiring intervention and support.

Policy Review and Monitoring

Monitoring of the standards of the learner's work and of the quality of teaching in Mathematics is the responsibility of the Mathematics 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. The subject leader gives the Headteacher a summary report in which they evaluate the strengths and weaknesses in the subject, and indicate areas for further improvement.

Health and Safety

The school has a Health and Safety policy which is followed. Teachers are responsible for assessing the risk before all activities to determine where close supervision may be required, suitable group size, suitability for whole class participation, where personal protective clothing or levels of hygiene are required. Teachers will familiarise themselves with all the risks which might arise from the tools, equipment, materials and processes they plan for the children to use and take appropriate action to minimise risk.

Policy reviewed: May 2017

Next review date: May 2019

