

Shenington Church of England Primary School

Stocking Lane, Shenington, Oxon OX15 6NF

Telephone 01295 670273

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POLICY DOCUMENT

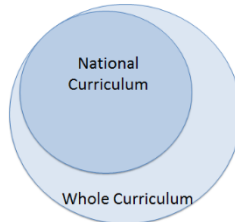
Excellence Through Endeavour
"Let your Light Shine" – Matthew 5:16

MATHEMATICS POLICY

Introduction

Mathematical activities occur throughout everyday life in a wide range of situations and it is therefore essential that children are taught to understand, explain and apply mathematical skills and concepts confidently to the best of their ability. The subject itself helps to develop skills such as communication, perseverance, problem solving and observation. These are important attributes not only in mathematics, but also in other curriculum areas.

As part of our strategy to raise pupil attainment, this school uses 'The national curriculum in England: mathematics programmes of study: key stages 1 and 2' (2013) as a basis for planning teaching and to fulfil the government's statutory requirements; this ensures continuity and progression throughout the school. Our school embraces the statement: "The school curriculum comprises all learning and other experiences that each school plans for its pupils. The national curriculum forms one part of the school curriculum." (2.2, National Curriculum 2013, Key Stages 1-4)



Assessment for Learning, a focus on investigative and problem solving approaches, plus the development of mathematical thinking are at the heart of our school's approach. A rigorous and planned commitment to the development of teacher and teaching assistants' subject knowledge complements and strengthens this.

Aims

Our school believes that every child is entitled to a high quality mathematics education, which will provide a foundation for them understanding the world. As a result, they will have an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject. It is our belief that our pupils should:

- **become fluent in the fundamentals of mathematics**, so that they:
 - have a well-developed sense of number values
 - know by heart key number facts, e.g. times-tables and related division facts, number bonds – in line with the latest programmes of study

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- apply knowledge of the above to work out connected facts
- **reason mathematically**, so that they:
 - are able to follow a line of enquiry
 - provide generalisations and proof of findings around their investigations
 - are able to justify their thinking, e.g. as to why a particular calculation strategy is the most efficient
- **solve problems by applying their understanding of mathematics**, so that they:
 - encounter a variety of both routine and non-routine problems
 - are able to select specific maths skills and/or operations
 - persevere with a line of enquiry, breaking down increasingly complex problems into a series of smaller steps

Coverage:

In order that our children get a broad and balanced mathematical curriculum, we will ensure that the following domains are covered each year:

- Number:
 - number and place value
 - addition and subtraction
 - multiplication and division
 - fractions, including decimals and percentages
- Measurement:
- Geometry
 - properties of shape
 - position and direction
- Statistics
- Ratio and proportion (Year 6)
- Algebra (Year 6, although the foundations will be taught from Key Stage 1)

Our school is committed to fostering positive attitudes towards the subject, whilst ensuring that all pupils develop deep conceptual understanding (in part, through exposure to a range of models and images) and mastery across the domains listed above, and in line with their age group. Teachers will actively diagnose and address perceived 'gaps' in conceptual understanding. How pupil learning is then developed as a result will be monitored. In line with the new curriculum's focus on children making connections, our school will provide regular and stimulating cross curricular enrichment opportunities.

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Organisation

- Every class has a daily maths lesson which lasts for 45-50 minutes in Key Stage 1 and approximately 60 minutes in Key Stage 2.
- Children in the Foundation Stage have daily Mathematical activities that contain a range of whole class, group and individual learning opportunities and an emphasis is placed upon speaking and listening skills. Mathematical learning also takes place in cross-curricular work and during child/adult initiated play. Throughout the year, children work towards the development of mathematical skills, language and understanding based on the Early Learning Goals and the National Curriculum.
- Children are taught maths within their class. The children complete mathematical tasks in various sized groups, as well as learning as a whole class and as individuals. Groupings are usually based on mathematical ability.
- Maths-related activities are also embedded in other curriculum areas wherever possible and often form the basis of the school's enquiry based learning style.
- Children in all classes practise mental recall and key objective skills in a daily 10 minute quick fire oral session.

Teaching and Learning Styles

- The mathematical objectives taught in class are defined in the National Curriculum. Teachers use the NC to ensure the correct balance of these objectives.
- In accordance with the NC a typical Maths lesson begins with a short mental/oral maths starter, the main teaching activity, including pupil consolidation follows and the lesson ends with a plenary that recaps and evaluates learning and sets further challenge. An out-of-class or homework activity is given where appropriate to consolidate, develop or extend their skills and knowledge or to prepare for future learning (See homework policy). On occasion, the time structure of the lesson is adapted to accommodate ongoing projects and pupil presentations.
- Teachers employ a breadth of teaching techniques, including explaining, questioning, demonstrating, observation, listening and instructing. There is a balance between direct and indirect teaching methods.

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- Mathematical skills and concepts are learnt through a variety of games, role play situations, investigations, practical and problem solving activities together with written work.
- (ICT) including computers, interactive whiteboards, internet based teaching resources, calculators, thermometers, balances and audiovisual aids, is used to explore and develop children's understanding of mathematical ideas and as a way of handling/communicating information effectively.
- In each classroom, there is an interactive maths display area (working wall) that shows vocabulary and strategies relevant to the current teaching
- Pupils are encouraged to refer to the Maths working wall and resource area for help with vocabulary and to collect equipment independently.

Special Educational Needs

- The Special Educational Needs of children are considered in all maths planning. The needs of the More Able child are also addressed at this stage and enhanced with enrichment activities.
- Teachers aim to include all pupils fully in their daily maths lessons. Children's learning activities are differentiated in a variety of ways to assist knowledge and understanding.
- Children requiring extra support may be supported one or more of these measures; a differentiated level of work, practical reinforcement, adult support, Outcomes on Pupil Profiles, precision teaching, extra homework, targeted questioning, a maths intervention e.g. Springboard, wave 3, Overcoming Barriers
- More Able Mathematicians may be nurtured and extended by; targeted questioning, extended enquiry/research tasks, working from advanced objectives, additional homework, open-ended problem solving, and more challenging homework tasks using resources from the NRIC website.

Inclusion

- We believe that all children, irrespective of gender, race, culture and capability, should have equal access to the mathematics curriculum.

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Assessment and Recording- Assessment for Learning (AfL) & Assessing Pupil Progress (APP)

- Ongoing assessment is essential to inform the next stage of learning and is administered/recorded using a variety of methods, which may be informal or formal.
- All children are fully involved in Maths assessment processes and take responsibility for their learning. Written, verbal and oral feedback is provided immediately in the current or next lesson and is based on clear and shared learning objectives. Children are often encouraged to respond to teacher comments in a way that will advance their learning. Children use this information to work towards their own targets.
- Children are encouraged to evaluate and reflect upon their own and their peer's learning using a range of Assessment for Learning strategies.
- Pupil attainment is recorded and Individual pupil attainment is shared with parents during parents' meetings, SEN progress meetings throughout the year. Individual pupil attainment is also tracked, monitored and discussed in bi-termly Pupil Progress meetings with the class teacher and Head teacher.
- At the end of each unit and wherever relevant in their cross-curricular work, children are assessed, with a focus on the Key Objectives for their year group and their individual Maths targets. Records are kept by the teacher to pass on at the end of each year.
- Throughout the year, children complete 'maths-rich' activities and are assessed using the Age-Related Outcomes and Statutory coverage of key objectives.
- Year 6 children are assessed through the end of key stage statutory requirements. Children in year 2, 3, 4 and 5 are assessed through key skills audits. Year 2 will now be assessed using the non-statutory assessments provided.
- Book monitoring is conducted 3 times a year by the Maths Coordinator and the senior leadership team.

Coordination/Management

- It is the Mathematics Subject Leader's responsibility to liaise with and advise individual staff members of new curriculum developments and training opportunities and to provide cascade training to the whole staff through INSET when required. The Maths Coordinator also holds information on current developments in the field of maths, together with training offered by

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the Primary Maths Team. A Maths Coordinator job description is available for further details.

Resources

- All classrooms have a supply of resources relating to number activities and display and further resources are kept in the Resources Cupboard in the main corridor. This includes practical teaching equipment relating to investigative work, ICT use, and games for use in all mathematical areas.
- Teachers in each year group use a range of internet based resources, textbooks and other published maths material.
- All classrooms are equipped with interactive whiteboards and teachers regularly use Maths Interactive Teaching Programs and a range of Maths software to aid learning and attainment.

Health and Safety

- Health and safety regulations in class-based lessons apply as for any other subject. When working with tools, equipment and materials in practical activities and in different environments, children are taught to understand and develop correct safety practice to ensure the health and safety of themselves and others.

Monitoring and Review

- Through classroom observation, evaluation of pupil's work and monitoring of medium term plans, the Mathematics Subject leader and Head teacher maintain an overview of the teaching and learning of maths throughout the school, with particular regard for continuity, achievement and progression and challenge.
- Analysis of assessment, including SATs, by the class teachers, Mathematics Subject leader and Head teacher aids this process and provides information on whole class and individual trends and attainment to the present and the next year's teacher.

Our Christian values underpin every aspect of this policy.

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Policy approved by:	The Full Governing Body
Policy adopted:	February 2024
Policy review date:	February 2027