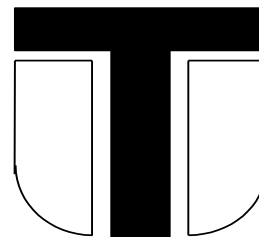


**Theale Church of England
Primary School**



*"I have come that they may have life and that they may have it more abundantly."
John 10.10*

Mathematics Policy

Vision Statement

The children come first.

Theale Church of England Primary School will provide the best academic, creative, spiritual and emotional education that we can. We will strive for excellence in all that we do.

Date approved	
Approval level	
Next review date	
Next reviewer	

Theale C of E Primary School

Mathematics Policy

“Mathematics is not just a collection of skills; it is a way of thinking. It lies at the core of scientific understanding, and of rational and logical argument.” Dr Colin Sparrow, Lecturer in Mathematics Cambridge University.

“Mathematics is truly a global language. With it, we convey ideas to each other that words cannot handle – and bypass our spoken Tower of Babel.” Professor Alison Wolf. Head of Mathematics Sciences Group, Institute of Education University of London.

A rationale for Mathematics- Why do we teach Mathematics?

Mathematics equips pupils with a uniquely powerful set of tools to understand and change the world. These tools include logical reasoning, problem-solving skills, and the ability to think in abstract ways. Mathematics is important in everyday life, in many forms of employment, science and technology, medicine, the economy, the environment and development, and in public decision making.

Different cultures have contributed to the development and application of mathematics. Today, the subject transcends cultural boundaries and its importance is universally recognised. Mathematics is a creative discipline. It can stimulate moments of pleasure and wonder when a pupil solves a problem for the first time, discovers a more elegant solution to that problem, or suddenly sees a hidden connection.

Vision for Mathematics

At Theale C of E Primary School, the teaching of Mathematics is regarded as a key part of the school curriculum. Skills and knowledge in Mathematics will equip children to participate effectively in public, cultural and working life. Children at Theale C of E Primary will understand and appreciate that mathematics is all around them and an integral part of their daily lives. To this end, our curriculum is designed to be accessible to all and to maximise the development of every child's ability and academic achievement. Children will make rich connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems.

Mathematics is a core subject of the National Curriculum. All teachers are required to have a good knowledge of the yearly expectations being taught, aligning with the appropriate statutory national standards expected for pupils. At Theale we combine the use of structured schemes with the statutory National Curriculum expectations. This is complemented through non-statutory suggested activities from within the NC and nationally recognised resources (such as Assertive Mentoring/ White Rose Hub) to structure, reinforce and assess pupils' work.

Intent

- To enable children to discover and study Mathematics to the highest level
- To ensure children make excellent progress in Mathematics, fulfil their potential and enable successful further study in the next stage of their education
- To ensure pupils enjoy and have positive attitudes towards the subject
- To ensure pupils experience a wide range of mathematical skills and concepts
- To teach children which mathematical skills are relevant to solve problems
- To teach children to make and apply mathematical links to other areas of the curriculum

We encourage pupils to develop the working skills of:

- using a systematic approach to their work and to problem solving
- independent thought and action
- co-operation
- persistence and resilience
- creativity
- flexibility

Implementation

Mathematical skills and knowledge are delivered, explored and revisited through conscious decision making and awareness of learning and progress, needs and abilities.

The school adopts a “Teach to the Top” approach to encourage lessons which provide challenge for all pupils, including pupils with SEND as well as more-able pupils. It is through providing good challenge that pupils become resilient, independent learners and we encourage pupils to be aware of their development of resilience and independence through the use of “learning gems” in lessons.

To ensure that pupils can reach the highest standards in Mathematics, teachers’ planning takes account of what we know about how pupils learn, how memories are formed, the importance of memory in bringing about a change in understanding and the impact of cognitive load upon learning. Teachers plan and structure lessons with an understanding of the principles of instruction (**Barak Rosenshine 2012**) to enable pupils to retain their learning. Sequenced curriculum plans which have identified key subject concepts from the National Curriculum ensures clarity regarding what pupils will learn and remember. Key knowledge has been captured in knowledge organisers along with technical subject specific vocabulary. Planned opportunities to recap and revisit previous learning as children develop ensures firm foundations on which children are able to build their knowledge and skills.

When teaching, teachers should:

1. Always carry out a daily review
2. Present new material using small steps and clear explanations
3. Ask effective questions to check for understanding and provide challenge
4. Provide models to demonstrate process and expectations
5. Guide children’s work
6. Check for children’s understanding throughout the lesson
7. Obtain a high success rate before allowing children to work independently
8. Provide scaffolds for difficult tasks
9. Provide sufficient independent practice
10. Regularly recap and review previous learning

Structure of Provision

All pupils are taught mathematics between 4 and 5 hours a week (1h per day 4 days a week, in addition to early morning basic skills sessions). Teaching is adapted from the requirements highlighted in the National Curriculum working on an individual, group or set basis according to the needs of the pupils and the nature of the work to be taught. Appropriate rigor is applied to achieving age-related expectations in number skills. There is also an expectation that these are utilised in investigative problem-solving and mental activities.

Planning

When planning Mathematics lessons for children, teachers refer to the yearly expectations within the National Curriculum for the appropriate Key Stage to ensure progression and continuity. As cited above, reference should also be made to appropriate teacher resources to support planning. The school adopts the Assertive Mentoring maths scheme to reinforce teachers' own planning delivering statutory expectations from the National Curriculum. Objectives being taught will reflect the key knowledge and skills identified and are included clearly within teachers' completed half-termly and weekly plans. The specific learning objectives for each lesson are to be shared with the children and reviewed during and at the end of the lesson to assess learning and understanding.

When planning experiences for children, teachers should aim to:

- develop mathematical skills including mathematical reasoning
- relate to the interests and abilities of the pupil
- appeal to boys and girls and to those of all cultural backgrounds
- be relevant to the world around us/in context

Staff should ensure that children:

- understand what needs to be done
- are able to follow instructions
- discuss difficulties and ask questions
- use appropriate materials and equipment
- experience problem-solving and investigation
- are encouraged to record in a variety of ways
- are given extended tasks to challenge
- make organisational decisions
- are aware of the use of mathematics beyond the classroom

Pupils should be taught to record their work in a variety of ways: using numbers, symbols, words (written and verbal), pictures, patterns, diagrams, graphs, models, maps, etc. The use of appropriate mathematical vocabulary should be taught consistently throughout the school. Year group appropriate vocabulary is highlighted within the National Curriculum and Assertive Mentoring planning resources.

Impact

As children progress through the school, they develop the knowledge and skills to understand the world around them; the ability to reason mathematically; the appreciation of the beauty and power of mathematics; and a sense of enjoyment and curiosity about the subject. They will achieve their full potential and have the skills to enable them to access further study in mathematics successfully. Children will develop resilience and self-confidence in applying their learning skills. The collaboration between peers, and the relationship between learners and their class teacher drive the learning and inform the content, strategies and real-world contextualisation to maximise on progress and learning opportunities.

Resources

Appropriate resources to support work should be readily available and accessible to both teachers and pupils. They should be clearly labelled, in adequate supply and in a good state of repair. Care of resources should be emphasised to both pupils and staff. The Co-ordinator should be informed of the need to replace or repair equipment.

Cross-curricular links

Cross-curricular links are embedded in the planning, teaching and learning of Mathematics. Mathematics should be taught so as to provide opportunities for children to use their knowledge and understanding to support learning across all ages and all curriculum areas.

Information and Communication Technology and Calculators

The use of ICT and the teaching of computing may enhance, develop and support pupils' learning of Mathematics. Relevant computer programmes / online interactive activities when appropriate may support children's maths learning in accordance with the programmes of study. Reference should be made to the ICT/computing Co-ordinator for the most appropriate software and resources to support the delivery of the subject.

Homework

Pupils in Key Stage 1 and 2 will be expected to do mathematics homework. This work should be supported by parents who are informed of the strategies used to check knowledge and understanding. Children are expected to practise their multiplication tables, taught at school, until they are fluent in all tables up to 12 x 12.

Equal Opportunities and Special Needs

Every pupil will be given equal opportunity to follow the National Curriculum or Foundation Stage Curriculum irrespective of their ethnic or linguistic background, gender, disability or religious beliefs. Children with Special Educational Needs will have full access to the Maths curriculum which will be modified to best meet their needs. Those identified as Able, Gifted and Talented in Maths will be given opportunities to develop their skills.

Assessment, Record Keeping and Marking

Assessment, record keeping and marking will be carried out according to the school's policies (see assessment policy). In alignment with National Curriculum requirements, teacher assessment will be the basis by which the performance of pupils' achievement in Mathematics is assessed. Pupils in the Foundation Stage will be assessed using teacher assessment. At the end of the FS2 year children are assessed using the Mathematics early learning goals. Pupils in Key Stage 1 and 2 will be assessed through teacher assessments which are informed by half-termly progress checks and optional SATs tests in the summer term. Children in Year 2 and Year 6 will be formally assessed using the national statutory SATs and multiplication tables in the annual Year 4 statutory check.

Monitoring

The monitoring of Mathematics will take the form of classroom observations, monitoring of planning, work scrutiny, interviews with children, learning walks and monitoring of displays. The subject leader, working with the head teacher, is responsible for the monitoring of Mathematics. The head teacher will report to governors through a termly report.

May 2022

Signature: Date:

Chair of Governors

Next review: 2025