

Town Farm Primary School & Nursery Mathematics Policy 2026/27



TOWN FARM PRIMARY Mathematics Policy

Aims and objectives

Mathematics teaches children how to make sense of the world around us through developing a child's ability to calculate, to reason and to solve problems. It enables children to understand and appreciate relationships and pattern in both number and space in their everyday lives. Through their growing knowledge and understanding, children learn to appreciate the contribution made by many people to the development and application of mathematics. A high-quality mathematics education provides the foundation for understanding the world, the ability to reason mathematically, and a sense of excitement and curiosity about the subject. Mathematics is a creative and highly interconnected subject. As pupils learn mathematics, they need to acquire fluency in procedures and develop a conceptual understanding to be able to solve increasingly complex problems. Town Farm are committed to delivering enjoyable, engaging and varied learning experiences that helps pupils to develop a love of learning and work towards mastery – 'Everyone Can Do Maths, Everyone Can!'

White Rose Maths, Mastery approach – concrete, pictorial and abstract

Adopting a White Rose Maths approach to teaching means making sure all pupils have the same opportunities to learn and the support they need to fully grasp concepts. The philosophy behind White Rose Maths also focuses on making maths fun for children and helping them to find enjoyment in number problems.

White Rose Maths aims for pupils to become fluent in the fundamentals of maths, to be able to reason and solve problems. The CPA approach helps pupils understand mathematics and make connections between different representations.

The White Rose Maths curriculum is cumulative - each school year begins with a focus on the concepts and skills that have the most connections, which are then applied and connected throughout the school year to consolidate learning. This gives pupils the opportunity to master maths; by using previous learning throughout the school year, they are able to develop mathematical fluency and conceptual understanding.

Our curriculum is designed to make sure that the requirements of the 2014 National Curriculum for England are fully met. Each year's curriculum includes all of the National Curriculum objectives for that year, plus a small number of recap lessons from the year before (at the beginning of new modules) and once a topic is covered it is met many times again in other contexts.

The aims of the national mathematics curriculum are:

1. To promote enjoyment and enthusiasm for learning through practical activity, exploration and discussion.
2. To develop logical thinking and reasoning skills through a natural curiosity and investigative approach.
3. To promote confidence and competence so that children are 'proud to shine' about their achievements.
4. To develop a thorough knowledge and understanding of numbers and the number system.
5. To develop the ability to solve problems through decision-making and reasoning in a range of contexts.
6. To develop a practical understanding of the ways in which information is gathered and presented.
7. To explore features of shape and space and develop measuring skills in a range of contexts.
8. To understand the importance of mathematical skills in everyday life.

Town Farm Key principles for quality Mathematics Teaching are:

1. A whole class approach to teaching
2. C.P.A. (concrete, pictorial and abstract) approach to teaching
3. Encourage and model the use of manipulatives and resources.
4. Daily 'Flash Back' or 'Fluent in Five' slide to help close gaps and consolidate our learning.
5. High expectations of pupils' language, engagement and potential.
6. A CPD approach to mathematical teaching

'Success For All' philosophy

Town Farm believes that children receive an exceptional mathematics education through a secure combination of high-quality teaching, the creation of a positive learning environment and accurate assessment. These fundamentals sit at the heart of our school ethos, and our inspiring, enthusiastic and dedicated staff are committed to providing this for every child. To ensure our standards remain excellent, we provide a programme of weekly professional development for staff which incorporates subject coaching, teacher reflections, regular staff training, masterclasses and regular feedback. This is delivered by our lead teachers with regular supplemented sessions from professionals possessing a wide range of educational expertise.

As a consequence, our staff are expected to have the highest expectations for every child, not just to achieve strong academic results, but also to become highly successful learners. The White Rose Maths programme endorses a Growth Mind-set. Pupils are shown to see success come from learning, which requires time and effort. When things get difficult, they try harder, try another approach, or seek help. Town Farm endeavour to develop a growth mind-set within our pupils as we believe pupils perform better in school, thrive on adversity, and develop new ways of coping and progressing.

Teaching and learning style

The school uses a variety of teaching and learning styles in mathematics lessons. Our key aim is to develop children's knowledge, skills, understanding and application in mathematics. Mathematics is taught daily through whole-class teaching, group work and investigative approaches. Throughout all lessons, an open dialogue between the teacher and pupil is always encouraged to aid understanding and identify next steps. To cater for all learners, a wide range of resources are readily available for the children to use. In addition to this, ICT supports mathematics teaching and enhances the learning of all children. Wherever possible, we encourage the children to use and apply their learning in everyday situations.

In all classes there are children of differing mathematical ability. We recognise this fact and provide suitable learning opportunities for all children by matching the challenge of the task to the ability of the child. Throughout lessons, a range of strategies are used to ensure appropriate levelled learning takes place. Children are asked to undertake independent work, but other strategies are also utilised. In some lessons group work is undertaken, and in other lessons, children are organised to work in pairs on open-ended problems or games. We use teaching assistants to support or extend the learning of some children and to ensure that work is matched to the needs of individuals.

Children are set a weekly homework task in order to strengthen their learning in mathematics. This task directly links with the current unit of learning and is differentiated for each maths group.

Mathematics curriculum planning

Mathematics is a core subject in the National Curriculum. We carry out the curriculum planning in mathematics in three phases (long-term, medium-term and short-term). Our yearly teaching programme identifies the key objectives in mathematics that we teach in each year and how the objectives are mapped out across all year groups.

Our medium-term mathematics plans define what we teach. They ensure an appropriate balance and distribution of work across each term. Medium term planning consists of unit overviews which are available from the White Rose Maths toolkit and provide a sequence for all individual units which are taught within the long-term yearly plan. These plans are viewed, learned and kept by the class teachers and stored on the school network.

Finally, the class teachers complete weekly planning overviews in preparation for their lessons, identifying the key learning taking place for the upcoming week alongside other important factors including resources required, key vocabulary and additional opportunities for assessment or mathematical activities. The purpose of this is to identify the specific learning objectives for each lesson and provide details of the structure and content for the lesson. Teachers from each year group have access to lesson plans for each unit of work delivered as set out by their curriculum overview which can be downloaded and printed. Our teachers are expected to reflect and review each lesson, making annotated notes which are then kept on file for future use or scrutiny. Individual lesson guides are made available from the White Rose Maths toolkit and can be downloaded when required.

Contribution of mathematics to teaching in other curriculum areas

English

Mathematics supports the English curriculum in our school by actively promoting the skills of reading, writing, speaking and listening. For example, we encourage children to read and interpret problems in order to identify the mathematics involved. The children explain and present their work to others during lessons.

Younger children enjoy stories and rhyme that rely on counting and sequencing and older children encounter mathematical vocabulary, graphs and charts when using non-fiction texts.

Science

During science lessons, children are able to use and apply their data handling skills when creating tables and graphs of scientific measurements. Whole class discussion of data also highlights the importance of recording information clearly and appropriately in relation to the purpose. Children are also able to use a wide range of measuring devices in a real-life context. Children are required to read the scales on force meters, measuring cylinders, weighing scales and a variety of other instruments.

Computing

Children use and apply mathematics in a variety of ways when solving problems in computing. Younger children use computing to communicate results with appropriate mathematical symbols. Older children use it to produce graphs and tables when explaining their results or when creating repeating patterns, such as tessellations. When working on control, children use standard and non-standard measures for distance and angle. They use simulations to identify patterns and relationships. All year groups have access to Times Tables Rock Stars (TTRS) online to support their times table fluency.

Personal, social and health education (PSHE)

Mathematics contributes to the teaching of personal, social and health education. The work that children do outside their normal lessons encourages independent study and helps them to become increasingly responsible for their own learning. The planned activities that children do within the classroom encourage them to work together and respect each other's views. We present older children with real-life situations, for example, problem solving in the context of money and in projects involving managing budgets.

Spiritual, moral, social and cultural development

The teaching of mathematics supports the social development of our children. We encourage collaborative working by giving them the chance to discuss their ideas and solutions to calculations, as well as more complex word problems and investigations.

The teaching mathematics to children with special needs

It is part of the school curriculum policy to provide a broad and balanced education to all children. We provide learning opportunities that are carefully matched to the needs of children with learning difficulties. Work in mathematics takes into account the targets set for individual children in their Pathway plans.

Assessment and recording

Children's work is marked regularly in line with the school's marking policy. Their work is deep marked at least twice a week against the learning objective and success criteria. Feedback is given and next steps identified. Children are expected to respond to the marking in designated independent response time (DIRT).

We assess children's work in mathematics from three aspects (long-term, short-term and medium-term). We make short-term assessments which we use to help us adjust our daily plans. These short-term assessments are closely matched to the teaching objectives. We make medium-term assessments to measure progress against the key objectives and to help us plan the next unit of work. We use termly assessments as a way of recording children's progress in objectives covered across that specific term. We are now assessing children alongside their age-related expectations (AREs).

We make long-term assessments towards the end of the school year, and we use these to assess progress against school and national targets. We can then set targets for the next school year and make a summary of each child's progress before discussing it with parents. We pass this information on to the next teacher at the end of the year, so that s/he can plan for the new school year. We assess the pupils termly using standardised assessments through Rising Stars, specifically PUMA (Progress in Understanding Mathematics). We make the long-term assessments with the help of end-of-year tests and teacher assessments. We use the national tests for children in year 6.

Monitoring and review

Monitoring of the standards of children's work and of the quality teaching in mathematics is the responsibility of the maths subject leader. The work of the maths 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 maths subject leader gives the Head teacher an annual summary in which strengths and weaknesses in the subject are evaluated and indicates areas for further improvement. The head teacher allocates regular management time to the mathematics subject leader so that s/he can review samples of children's work and undertake lesson observations of mathematics teaching across the school. A named member of the school's governing body is briefed to oversee the teaching of maths. This governor meets regularly with the subject leader to review progress.

To ensure that the quality of Mathematics teaching and learning is consistently high, regular monitoring will take place in the form of:

- Teacher CPD support which includes providing guidance, co-planning and co-teaching.
- Learning walks undertaken by the school leaders, governors and external visitors.
- Lesson observations undertaken by school leaders.
- Pupil voice and staff voice surveys.
- Internal moderation of books and planning.

Equality statement

"The governors and staff are committed to providing the full range of opportunities for all pupils, regardless of gender, disability, ethnicity, social, cultural or religious background. All pupils have access to the curriculum, and the right to a learning environment, which dispels ignorance, prejudice or stereotyping."