

Tow Law Millennium Primary School

Mathematics Policy 2023



Intent

Mathematics teaches us 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 cultures to the development and application of mathematics.

The aims of mathematics are:

- to promote enjoyment and enthusiasm for learning through practical activity with manipulatives and representatives, exploration and discussion;
- to promote confidence and competence with numbers and the number system;
- to develop the ability to solve problems through decision-making and reasoning in a range of contexts;
- to develop a practical understanding of the ways in which information is gathered and presented;
- to explore features of shape and space, and develop measuring skills in a range of contexts;
- to understand the importance of mathematics in everyday life.

Implementation

The school uses a variety of teaching and learning styles in mathematics lessons. Our principal aim is to develop children's knowledge, skills and understanding in mathematics. We do this through a daily mental maths session during registration, daily reasoning and a daily lesson that has a combination of reasoning whole-class and group-direct teaching. During these lessons we encourage children to ask as well as answer mathematical questions. They have the opportunity to use a wide range of resources such as number lines, number squares, digit cards, 10 frames and small apparatus to support their work. Children use IT, including interactive whiteboards in mathematics lessons where it will enhance their learning, for example: in modelling ideas and methods. Wherever possible, we encourage the children

to use and apply their learning in everyday situations. This supports the development of life skills involved with money and various measures.

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. We achieve this through a range of strategies - in some lessons through differentiated group work and in other lessons by organising the children to work in pairs on open-ended problems or games. We use classroom assistants to support some children and to ensure that work is matched to the needs of individuals.

Mathematics Curriculum Planning

Mathematics is a core subject in the National Curriculum, and we use the National Curriculum 2014 as the basis for implementing the statutory requirements of the programme of study for mathematics. We carry out the curriculum planning in mathematics in three phases (long-term, medium-term and short-term). The 2014 National curriculum document gives detailed objectives and from this we follow our class long term plans which is organised so that we build on prior learning.

Our medium-term mathematics plans have been developed from the long-term plan to ensure continuity and progression from year to year. They are also based on the needs of the children from analysis of their work and teacher knowledge. They give details of the main teaching objectives for each half term and define what we teach. These plans are kept in the subject leader's file and then annotated by teachers as they are used. Following this, they are moved to the school planning file in the Headteacher's office.

The class teacher then completes the weekly plans for the teaching of mathematics. These weekly plans list the specific learning objectives for each lesson and give details of how the lessons are to be taught as well as a daily reasoning focus or challenge. The class teacher annotates these plans and keeps them in the class planning file until the end of the half term when the medium and weekly plans are moved to the school planning file in outside the Headteacher's office.

The Foundation Stage

We teach mathematics in our Early Years Foundation Stage Unit as part of the Early Years Foundation Stage Curriculum. We relate the mathematical aspects of the children's work to the objectives set out in the Early Learning Outcomes and Early Learning Goals in the specific area of mathematics, which underpin the curriculum planning for children aged three to five. We give all the children ample opportunity to develop their understanding of number, measurement, pattern, shape and space through varied practical activities that allow them to enjoy, explore, practise and talk confidently about mathematics; during focused adult led and child-initiated activities. Various activities, manipulatives and representations can be found in the foundation stage so that mathematics is integrated throughout the day. These activities change according to the needs and development of the children.

Teaching Mathematics to Children with Extra Needs.

We teach mathematics to all children, whatever their ability. It is part of the school curriculum policy to provide a broad and balanced education to all children. We provide learning opportunities that are matched to the needs of children with learning difficulties. Children who are on the more able register are challenged within their year group's curriculum with greater depth challenges involving reasoning. In addition, children do at times move to the next class for their basic skills mental maths. Work in mathematics also takes into account the targets set for individual children within their Support Plans or EHIC.

Impact

The impact we hope to achieve is that pupils at Tow Law Millennium Primary School will leave the school achieving their full potential within their Math's work. Children will make at least good progress in Maths from their last point of statutory assessment, or from their starting point in EYFS.

Assessment and Recording

We assess children's work in mathematics from three aspects (long-term, short-term and medium-term). We make formative assessments, which we use to help us adjust our daily plans. Guidance on marking and feedback is found in the Assessment and Marking Policy.

We use Testbase papers yearly for years 3-5 as a summative assessment and twice yearly for year 6. In addition, we created arithmetic papers to support formative assessments during the year. We use a range of observations and work scrutiny to measure progress against the objectives, and to help us plan the next unit of work. We highlight the children's individual copies of the new 2014 mathematics Durham stranded sheets, which can be found in their numeracy book. Each half term a progress meeting is held with each pupil where progress is discussed and new outcomes are set. Early Years progress is monitored throughout the year by professional judgement from the Teacher. We record data 4 times during the year, initially September for baseline, end of Autumn 1, end of spring 1 and end of the summer term. For reception, the end of summer term data is used to assess if children have met their Early Learning goals.

We make 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 make the assessments with the help of end-of-year tests combined with teacher assessments. We are also continuing to use the national tests for children in Year 2 and Year 6 and optional yearly tests from Testbase for years 3-5. We are now assessing the children against the emerging, developing, secure and working at greater depth criteria, which links to their pupil profile and assessment sheets. The children in year 4 will be completing an online times table test in June. The purpose of the check is to determine whether pupils can fluently recall their times tables up to 12, which is essential for future success in mathematics. It will also help us to identify pupils who may need additional support.

Resources

There are a range of resources to support the teaching of mathematics across the school. All classrooms have an interactive whiteboard, a number line and a wide range of appropriate manipulatives and representations. A range of audio visual aids are available from the central storage area. Classes 1,2 and 3 have a set of class laptops so we can incorporate the use of IT within mathematics: this includes using Times Tables Rockstars throughout the school and My Maths in KS2.

Where required, CPD is provided to staff members to increase confidence and knowledge when teaching mathematics. The subject leader attends the termly network meeting to support their professional development.

Monitoring and Review

Monitoring of the standards of children's work and of the quality of teaching in mathematics is the responsibility of the mathematics subject leader and senior leadership team. The work of the mathematics 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. In addition, they will work and undertake lesson observations of mathematics.

If you require this information summarised in another language or format please contact the school office on:



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Signed:
2023

Date: Autumn 2021

Policy to be reviewed: Autumn