

Maths POLICY

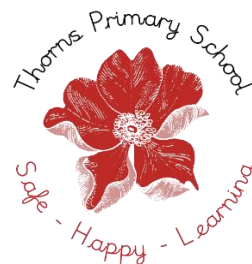
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Date: April 2022
Review Date: April 2024

Our vision is for all children to be safe, happy and learning. We deliver this vision through clear aims that are underpinned by our school commitments.

Every child is safe, happy and learning because every adult is caring, happy in their work and skilled.

We value:

working **T**ogether
happiness
achieve without limits
fairness and equality
kindness
safety and **s**ecurity



Our aim is for every child to:

- feel safe and secure at all times, and to know that the adults in school will help them if they are worried, frightened or feel unsafe;
- be an independent, resilient learner who sees mistakes as an opportunity to learn, is not afraid to try and seeks help when they need it;
- be an excellent communicator: able to listen and understand, speak with clarity and with a broad vocabulary;
- be a reader: finding pleasure in books and reading and with the skills to read fluently and accurately and to understand a range of texts;
- be a writer: writing fluently and with detail for a specific purpose and an understanding of the audience, using and applying a range of skills;
- be a mathematician: solving problems in a range of contexts by applying fluent knowledge and recall of number facts;
- develop the knowledge, skills and understanding of scientists, artists, designers, geographers, historians, linguists, musicians and performers;
- value being physically active and healthy;
- have the skills required to thrive in a technological age;
- be self-aware, emotionally intelligent and accepting of others, showing kindness and respect and an understanding of differences;
- acquire the skills and desire to contribute positively to the wider community.

Our commitment is to provide every child with:

- a school that is well led and managed by a strong team of leaders and governors;
- school staff who will keep them safe and who know what to do to protect them from harm;
- a sense of justice and knowledge of right and wrong;
- high-quality teaching from skilled professionals;
- teachers and support staff who have opportunities to grow and develop, extending their own expertise through training and development;
- access to specialist services to support additional needs;
- buildings and grounds that are safe, welcoming, clean and tidy;
- a learning environment that promotes and supports active learning;
- challenges that stretch and encourage higher-order thinking, team work and creativity;
- exciting and stimulating resources that encourage the acquisition and deepening of knowledge, understanding and skills across the curriculum;
- enrichment opportunities, including after-school clubs, exciting trips and visitors to broaden their experience of the wider world;
- a voice – where their views and opinions matter and are listened to;
- opportunities for their parents and carers to spend time in school and be involved in school activities;
- the chance to try new things and have a go, developing the resilience that will prove valuable throughout life;
- ambitions and aspirations;
- a 'can do' attitude, and the 'powers' for lifelong learning and success.

Maths Policy April 2022

Intent

It is common these days to hear people say that they are 'no good' at maths or state that they 'can't do' maths. At Thorns Primary, we are looking to develop a 'can do' attitude to maths. Using Learning Powers, the children will develop the right attitude to maths. This mind-set gives the children the belief that they will be able to do it, they just haven't learned the right skills to solve the problem yet. This will give the children the confidence to achieve more than they think they can.

The new National Curriculum states:

"Mathematics is a creative and highly inter-connected discipline that has been developed over centuries, providing the solution to some of history's most 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 of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject."

Aims and Objectives:

The National Curriculum for mathematics aims to ensure that all pupils:

*become **fluent** in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils 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.*

(New National Curriculum July 2014)

The three key elements of the curriculum, **fluency, reasoning and problem solving**, are intrinsically linked together. As such, we will provide opportunities for all three, linking them together as much as possible.

At Thorns Primary School, the teaching of maths is geared towards enabling each child to develop their learning and achieve their full potential. We endeavour to not only develop the mathematics skills and understanding required for later life, but also to foster an enthusiasm and fascination about maths itself. We aim to increase pupil confidence in maths so they are able to express themselves and their ideas using the language of maths with assurance. We want the children to see mathematics as being relevant to their world and applicable to everyday life as well as being something that they will need as they move on through their school life and ultimately to the world of employment.

Our aim is to ensure that all children:

- Become **FLUENT**

• **REASON** and **EXPLAIN** mathematically

• Can **SOLVE PROBLEMS**

Children need to be regularly exposed to increasingly complex problems to solve, which allow them to apply their maths knowledge. In doing so they are encouraged to develop an argument and line of enquiry which they can prove and justify using mathematical vocabulary. This includes the ability to break down problems, both routine and non-routine, into a series of steps.

Implementation

Children at Thorns Primary School can expect:

- A daily maths lesson
- A daily opportunity to develop mental maths skills
- Daily opportunities to practise times tables (Y2-Y6) and number skills (YR and Y1)
- Daily retrieval practise
- Opportunities to use maths across all areas of the curriculum
- Use of high-quality mathematical vocabulary
- Opportunities for reasoning and problem solving in line with the National Curriculum
- Time for explaining their thinking with a partner, a group, their class or an adult
- A stimulating mathematical environment
- Use of high quality and well-matched resources
- Use an agreed set of representations
- To acquire the maths knowledge and skills that provide the foundation to understand the world around them
- A Programme of Learning that is closely matched to the National Curriculum 2014

We will use a variety of resources to support the teaching and learning of maths. The White Rose Maths Hub schemes of learning adapted to our learners and additional resources from NCETM, NRich and iSeeReasoning (Gareth Metcalfe). This will ensure progression across the school.

The school Calculation Policy shows the progression in addition, subtraction, multiplication and division across school. This document is available on the school website and on request from the school office.

As a school, we follow a Concrete, Pictorial, Abstract approach to teaching and learning maths (CPA). It is vital that children are given opportunities to explore their learning using each of these approaches in conjunction with each other. Children should be allowed to see the maths with concrete resources, make their own visual representations and use abstract methods. Concrete resources are available in all classrooms through school.

The maths curriculum is delivered by class teachers. Children are taught in class groups from EYFS to Year 6 (unless it is appropriate to have a different group). Teaching Assistants will support individual children and groups where directed by the class teacher. In line with the National Curriculum, we will use a mastery approach that has been adapted for our children.

Teachers plan lessons following the school medium-term plan. They will use their professional judgement to plan suitable learning for the individual learning styles of the children in their classes. They will use daily formative assessments to ensure the sequence of learning is closely matched to the needs of the children. Teachers will adapt a flexible approach to ensure that the pace of lessons is appropriate for all learners. Teachers will monitor the progress of the children on the school's assessment tool and will report on progress at regular Pupil Progress Reviews. This monitoring of children's attainment against the year

group objectives will allow teachers to make judgements about a child's attainment at the end of each year.

Following summative assessments at the end of the year, teachers will assess against the school's KPIs and make a judgement about the children's end of year attainment based on the outcome of the assessments and KPIs.

Children are provided with regular feedback in line with the school Feedback Policy. Timely interventions may then be necessary to ensure that learning can continue as planned. Where there is written feedback, children will be given the opportunity to respond.

All children have equal access to the maths curriculum. Teachers will plan to ensure that all children are able to access the learning and if necessary then planned interventions will be delivered to ensure children continue to progress.

Impact

Children will be mathematically **fluent**, able to **reason** and **problem solve**.

Children will be prepared for the next stage of their education and have vital life skills for the future.

Leaving primary school with a fundamental grasp of basic numeracy is as important as leaving being able to read.

Nick Gibb Schools Minister

The Role of the Maths Lead

Take responsibility for the Maths curriculum: Intent, Implementation, Impact

To include:

- devising long-term plans and curriculum maps
- developing, demonstrating and/or promoting teaching and learning activities appropriate to full age and ability range
- ensuring full coverage of EYFS and National Curriculum requirements for mathematics
- ensuring resources are maintained and updated as required
- leading staff INSET
- supporting colleagues, including NQTs, and students with the delivery of mathematics
- devising action plans and contributing to School Development Plans and the school improvement process
- reviewing action plans and contributing to School's self-evaluation process (monitoring effectiveness and impact of SDP)
- providing reports for the HT and governors (written and verbal)
- Be an innovative classroom practitioner and school leader

Monitoring and assessment

- As a member of the Strategic Leadership Team (SLT) of the school, contribute to, monitor and review the impact of teaching and pupil progress through the analysis of data, ensuring the use of information for planning and target setting across your responsibility area
- Monitor standards, including recorded work, across the school, including reviewing long and medium term planning
- Based on monitoring and assessment, identify clear actions for self and school community and regular monitor the progress and impact of these
- Maintain a clear oversight of progress and attainment data (in-school and statutory assessment) and of national comparators, using this to inform action/school improvement planning
- Be involved in pupil progress meetings as requested by HT

Manage resources

- Be responsible for the organisation, planning and evaluation of maths resources
- Manage, monitor and accurately account for any budget
- Evaluate, organise and monitor the use of resources

Staff development

- Take a lead role in identifying group and/or individual training needs and provide support for colleagues for maths promoting a whole school approach
- Act as a role model, mentor or consultant to colleagues as appropriate and encourage collaboration, co-operation and teamwork
- Ensure you keep up to date with current developments in maths and disseminate information as appropriate

Ensure you keep up to date with developments and research pertaining to teaching and learning (pedagogy and effective practice), and disseminate information as appropriate