Mathematics Policy

Approved: June 2025

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What is mathematics and why is it important?

Mathematics helps us to make sense of our world. It is a powerful, universal language used to explain, predict and represent events and tackle everyday problems. Mathematics is of central importance to our modern society. It is an essential part of everyone's daily life and critical to science, technology, finance and engineering. Mathematics is necessary for any employment or independent life. At Raddlebarn we aim not only to prepare our children for the next stage of their education, but also to lay the foundations for successful lives after school. Our aim is to prepare our children for the jobs of tomorrow, which will require greater mathematical skills than in the past, including thinking mathematically in order to use technology that doesn't yet exist. 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 hidden connections.

Vision

We believe that all children can learn and succeed in mathematics. We strive for every child to become fluent in the fundamentals of mathematics and to develop the mathematical language and conceptual understanding and skills necessary to reason and problem solve confidently. We aim to foster positive attitudes, fascination, confidence and creative thinkers who can effectively talk about their learning.

Aims and Objectives of Mathematics

- To ensure that every child acquires the basic skills in mathematics to provide a good and solid foundation.
- To develop a positive attitude and sense of excitement about mathematics.
- To develop a growth mindset towards mathematics.
- To develop fluency, confidence and competence in mathematical knowledge, concepts and skills.
- To develop enjoyment and enthusiasm for learning through practical activity, exploration and discussion.
- To develop an ability to explain and reason, using mathematical terminology.
- To develop an understanding of the importance of mathematics in everyday life, and develop the ability to apply mathematics across the curriculum and in real life.
- To develop an ability to solve problems, to reason, to think logically, and to work systematically and accurately.
- To develop initiative and an ability to work independently, in co-operation with others.

Time Allocation

- In EYFS, every day, all children have access to a mathematical-based activity.
- In Key Stage 1 all children have access to a daily mathematics lesson of at least 45 minutes.
- In Key Stage 2, all children have access to a daily mathematics lesson lasting approximately 60 minutes.

At Raddlebarn, we believe that every child has the ability to be successful if they are given the right tools and support, at the right time. It is for this very reason that we have adopted a mastery approach in our Maths lessons; an approach that is being adopted across the country to chase the success of children in Singapore and Shanghai. This approach puts an emphasis on the fluency of essential skills and the whole class having a deep understanding of a concept before moving on to the next 'small step'.

These are the key features that underpin the teaching of Maths through a Mastery Approach:

Whole class teaching of the same topic

We have a strong emphasis on keeping the class together until specific concepts or skills are mastered and then moving on together. This however does **not** mean that some children will be left behind or others not challenged. Interventions and deeper understanding are used to make sure that our lessons cater to and challenge **all children**.

Speedy, focused interventions

Those children that have not met the expected outcomes or have gaps in their understanding, will be helped by receiving immediate feedback and reteaching of concepts, usually on the same day. This is a positive opportunity to consolidate their understanding and short practice activities at home could certainly be part of this to follow intervention.

Emphasis on depth not breadth

Children that have mastered a skill, concept or procedure are presented with higher order thinking activities, rather than accelerating through the curriculum. We use problems and challenges that encourage mathematical thinking and reasoning to further deepen their understanding.

Focused and thorough teaching and planning

Within mastery, the idea is to focus on one small step at a time in a lesson, with an emphasis on the mathematical structures involved and the best way to represent these through models and images. We encourage you to ask your child to explain and show methods or strategies (rather than trying to help your child by demonstrating your own method) that they have learnt at school. Each small step is important as it builds towards a deep understanding of a concept and so it is vital that the methods that are being taught are consistent.

More time spent on teaching each topic

The same topic is likely to have the same focus until the class has mastered the concept, skill or procedure being taught. This is particularly the case for number and calculations. Although the focus areas are being taught over a longer time, there are smaller steps of progress and the extra time is for practice and depth, making the learning effective.

Planning / Curriculum Content

Alongside this policy, please also refer to the White Rose Documents and Raddlebarn's Written Methods Calculation policies, which have been adopted by the school.

EYFS - planning is based on the Statutory Framework for Early Years Foundation Stage (2021) (see link below for more information) and supplemented by the **Development Matters** (2021) document (see link below for more information).

Planning is carried out weekly. These plans include child-initiated activities and group/whole class maths, within the **Number** and **Numerical Patterns** strands.

Key Stage 1 and 2 - Planning is based on the 2014 statutory **National Curriculum** (see link below for more information)

It is undertaken at different levels:

Long Term Planning

The long-term plans (curriculum overviews) are organised into topic areas, based on White Rose Maths. They map out when in the year each year group will cover a particular unit of work. Progression within each mathematics topic is detailed. They contain cross-curricular links/themes where appropriate.

Medium Term Planning

Medium term plans (blocking documents) are informed by the long-term plans. They set out the weekly maths objectives. Teachers use assessment of children's prior knowledge and any gaps in learning to make decisions about the priorities for the teaching and learning for their class/year group, in discussion with the maths lead when appropriate. Teachers are beginning to use a maths mastery approach through the use of Power Maths White Rose Edition resources.

Short Term Planning

Planning is carried out weekly. These plans include:

- Mental and oral starters - learning objectives and activities
- Main lesson objectives
- Discover and share
- Practice activities (adaptations may be seen through the use of adult support, collaborative structures, additional resources, adapted/extended tasks or by outcome)
- A plenary section (which may be mini-plenaries or whole class feedback)
- An AfL focus may also be included, based on previously taught topics.
- Rapid recall may also be included, to ensure children remember more
- Arithmetic Warm Ups may also be used.

SEND & Inclusivity

Inclusive learning and teaching recognises all pupil's entitlement to a learning experience that respects diversity, enables participation, removes barriers and anticipates and considers a variety of learning needs and preferences.

To support children with SEND in maths, teachers at Raddlebarn use adapted resources to help children access the curriculum. Lessons are pitched accurately based on the outcome/learning needs of all children. Visual stimuli and concrete resources are used when appropriate to help support teaching and learning in mathematics. Models and image are kept consistent to reduce cognitive overload for some children. Misconceptions are picked up on verbally and in children's books to enable them to acquire sound mathematical knowledge. During lessons, SEND children always work with a mixed-ability group and benefit from the support of their peers. The assessment of concepts done during 'Chance to Shine' assessment quizzes are adapted for SEND children so they are realistic and achievable. Interventions are precisely planned, monitored and assessed for impact to ensure they are purposeful.

The teaching of maths at Raddlebarn Primary School provides opportunities for:

- Individual work
- Paired work
- Group work
- Whole class or set teaching

Pupils engage in:

- Development of mental strategies
- Written methods
- Practical work
- Investigational work
- Problem solving
- Mathematical discussions

Intervention Strategies/Groups:

- Times tables intervention (Year 2 upwards)
- Booster groups.
- Pre/Post Tutoring
- Other interventions are taking place in all year groups, dependent on need. These are identified by both SLT, SENDCO and the class teacher.

ICT

ICT is regularly used and linked to mathematics. Videos, iPads, audio visual aids, Apps and computer programs are integrated in to the curriculum. These however, are only used when it is the most effective way of meeting the lesson objectives. Calculators may also be used as a way of accessing a learning objective, but are no longer part of statutory assessments.

Assessment (see assessment policy)

- In Key Stage 1 and 2, Maths assessment against key objectives (recorded on 'Assessment Grids') is moderated each year.
- After each topic, children will complete a 'Chance to Shine'. This is a chance for children to show they have learnt and remembered their previous learning.
- Independent class work and set tasks, which assess previously taught topics, can be used as evidence towards a child's overall assessment.
- In EYFS, children are teacher assessed against the Statutory Framework for Early Years Foundation Stage, supplemented by Development Matters (2021)
- In Year 6, children will take part in statutory Standardised Assessment Tests (SATs) - arithmetic and reasoning/problem solving. Practice SAT tests are used to track progress during the year.
- In Year 4, children will take part in a statutory Multiplication Tables Check (MTC). The purpose of the MTC is to determine whether pupils can recall their times tables fluently, which is essential for future success in mathematics. It will help teachers to identify pupils who have not yet mastered their times tables, so that additional support can be provided. Children have chance to practice the test using our Timetables teaching platform called 'Times Tables Rockstars' and similar MTC platforms online.

Marking

Follows the school's policy.

Parental / community involvement

We value parent involvement in children's development of mathematics and promote a 'home school partnership' in the following ways:

- Sharing information – newsletters, parents' leaflets, discussions during parents' evenings, etc.
- Parent workshops
- Homework – in line with our homework policy

- Curriculum Evenings
- SATs guidance provided for parents of children in Y6

Dissemination of Policy

The Mathematics policy is shared with staff and ratified by the Governing body.

If you would like more information about the mathematics we teach at Raddlebarn Primary School, please speak to the Maths Leader, or class teachers.

Also, the following links show the curriculum content across the school in more detail:

National Curriculum (KS1 and 2) –
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/335158/PRIMARY_national_curriculum_-_Mathematics_220714.pdf

Statutory Framework for the Early Years Foundation Stage (EYFS)
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/974907/EYFS_framework_-_March_2021.pdf

Development Matters
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1007446/6.7534_DfE_Development_Matters_Report_and_illustrations_web__2_.pdf

White Rose Maths Hub
https://whiterosemaths.com/

Multiplication Tables Check
https://www.gov.uk/government/collections/multiplication-tables-check