Stradbroke CE Primary School

Maths Policy

Intent

We believe that Maths is everywhere, and therefore we are passionate about the development of children's mathematical understanding. We aim to develop children's mathematical fluency through the National Curriculum, by using a range of concrete, pictorial and abstract resources and models. Mathematical reasoning and problem-solving will be modelled and taught to encourage children to make links between concepts and develop their logical thinking. Fluency and reasoning skills will progress throughout the school. Children will revisit concepts regularly to ensure embedded understanding, and mathematical vocabulary will be modelled and used extensively to ensure children's understanding of the language.

Our aim is for our children to be confident Mathematicians so that they have strategies to tackle problems in the wider world around them. We intend to promote children's curiosity so that there is a more positive culture around Maths.

Implementation

Maths is delivered in a discrete lesson daily and opportunities for cross-curricular links within other subjects are planned for. Throughout a week of Maths lessons, we aim to include a range of revisiting previous skills, direct teaching of a new skill, modelling, guided work and independent application. We would expect this to be delivered using a range of concrete, pictorial and abstract methods, dependent on the individual needs of the children. We follow the National Curriculum and long-term plans based on class structures. We use resources such as White Rose and NCETM to ensure we provide children with a range of representations and models. We provide challenge and support through adaptation of numbers given to children to work with, the resources they use and through open-ended investigation work.

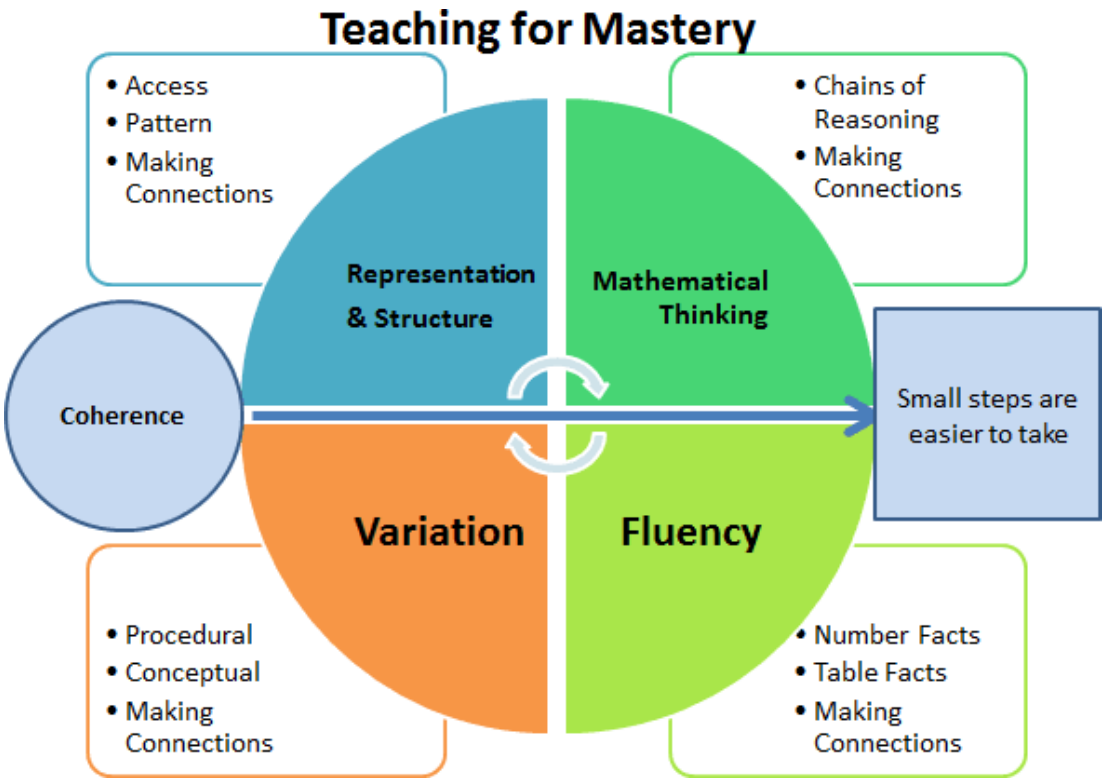
Teaching styles are aimed to promote children's love of learning and developing confidence throughout the children's understanding of maths. Children can be taught as a whole class, mixed-ability and adapted groups as well as independent learning and paired or grouped activities. This is intended to support and challenge the children's learning and promote Maths talk and discussion to deepen their understanding by consolidation.

Curriculum design and planning

- Long-term plans are designed alongside White Rose schemes of learning to support a mastery approach of teaching and learning.
- Learning is broken down into small, connected steps, building from what pupils already know.
- Difficult points and potential misconceptions are identified in advance and strategies to address them planned.
- Key questions are planned, to challenge thinking and develop learning for all pupils.

- Contexts and representations are carefully chosen to develop reasoning skills and to help pupils link concrete ideas to abstract mathematical concepts.
- The use of high quality materials and tasks to support learning and provide access to the mathematics, is integrated into lessons.
- White Rose Maths is supported by the use of daily maths meetings and regular arithmetic lessons.

5 Big Ideas of Mastery



Teaching for Mastery Principles

- It is achievable for all – we have high expectations and encourage a positive 'can do' mindset towards mathematics in all pupils, creating learning experiences which develop children's resilience in the face of a challenge and carefully scaffolding learning so everyone can make progress.
- Deep and sustainable learning – lessons are designed with careful small steps, questions and tasks in place to ensure the learning is not superficial.
- The ability to build on something that has already been sufficiently mastered – pupils' learning of concepts is seen a continuum across the school.

- The ability to reason about a concept and make connections – pupils are encouraged to make connections and spot patterns between different concepts (E.g. the link between ratio, division and fractions) and use precise mathematical language, which frees up working memory and deepens conceptual understanding.
- Conceptual and procedural fluency – teachers move mathematics from one context to another (using objects, pictorial representations, equations and word problems).
- Problem solving is central – this develops pupils' understanding of why something works so that they truly have an appreciation of what they are doing rather than just learning to repeat routines without grasping what is happening.
- Challenge through greater depth - rather than accelerated content, (moving onto next year's concepts) teachers set tasks to deepen knowledge and improve reasoning skills within the objectives of their year group.

Stradbroke Blueprint

Organisation

Classes should aim to include at least 4 maths lessons per week. Pupils are taught in their specific year groups, even in mixed-age classes, although if learning objectives align, they may be taught together. Teachers plan lessons to ensure that each year group receives appropriate content and challenge according to their year group objectives.

Use a Variety of Approaches:

- Maths should incorporate a variety of methods, such as hands-on activities with manipulatives, visual representations, and abstract problem-solving. Teachers plan the use of these resources to ensure that all children develop a secure understanding of key concepts.
- Manipulatives and visual resources provide effective support in teaching mathematics by helping model and explain underlying principles. These are widely used in school, by learners of all ages and abilities, often progressing through all three stages within a session. At Stradbroke, we commonly use Base 10, Numicon, place value counters/grids, number lines and number frames. Once understanding is deepened through these models, children confidently move to abstract approaches.

Explore Mathematical Vocabulary:

- Ensure students understand the key mathematical terms used in the lesson. Regularly introduce, explain/define and display (where appropriate) new vocabulary, and check for understanding by asking students to explain terms in their own words.

Encourage Active Participation:

- Engage all students by encouraging them to participate in discussions, share strategies, and explain their thinking. Use paired talk or small group discussions to allow children to reason together and compare methods or answers.
- Provide opportunities for pupils to justify their reasoning and challenge others' ideas in a supportive environment.

Practise Retrieval:

- Use precise closed questions to consolidate basic number facts and calculation skills, ensuring regular practice of retrieval techniques such as quick recall, number bonds, and multiplication tables.
- In order to be fluent mathematicians, children need to recall a range of key mathematical facts appropriate to their age. These include number bonds to 10/20/100 and multiplication tables up to 12.

Develop Problem-Solving and Reasoning Skills:

- Focus on developing skills like identifying patterns, making predictions, reasoning, and justifying solutions. Use Concrete-Pictorial-Abstract (CPA), to build deeper understanding of mathematical concepts.
- Encourage children to explain their thinking using key questions such as ‘What do you notice?’ and ‘What is the same/different?’.

Modelling:

- Regularly modelling methods and use of resources to embed children’s understanding. Using an ‘I do, We do, You do’ approach to support children with practising methods, addressing errors and misconceptions and opportunities for independent learning to embed understanding.

Make Connections to Prior Learning:

- Make links to prior learning, ensuring students understand how today’s lesson builds on previous lessons. Where possible, link maths to real-world examples or other subjects in the curriculum to show relevance and application.

Use of Manipulatives and Visuals:

- Provide access to manipulatives (where appropriate) to support understanding of abstract concepts. Use pictorial representations like number lines and bar models, to represent mathematical problems in different ways.

Adaptations and Scaffolding:

- Adapt tasks or support pupils based on students' abilities. Scaffold more challenging tasks by providing structured steps or extra guidance. Where necessary, provide additional practice for students needing to reinforce fundamental skills.

Additional Guidance for Reception/Early Years:

At Stradbroke, we understand the importance of early mathematical encounters, and our staff provide a range of both adult- and child-initiated activities to build strong foundations in pattern-seeking and the concept of number. Counting is particularly important in the EYFS, helping children understand quantity. Concrete manipulatives are a key resource for scaffolding learning in Reception.

- Active exploration and play-based learning of mathematical concepts.
- Use hands-on, practical experiences to build foundational skills such as counting, sorting, and shape recognition.
- Encourage children to use manipulatives (e.g., counters, beads) to explore number sense and simple addition or subtraction.
- Use games and play-based activities to develop understanding of early maths concepts, such as pattern recognition, matching, and comparing quantities.
- Sing a variety of songs and rhymes linked to different mathematical concepts, eg. counting and shapes.
- Foster curiosity by asking open-ended questions like, "How many ways can you make 5?" or "What happens if we add one more?".

Maths Meetings

Maths meetings occur at least four times a week for approximately 10 minutes across the school. These sessions:

- Recap important mathematical knowledge, revise key vocabulary, and practice mental/written skills to develop fluency.
- Revisit areas such as measures, geometry, and statistics, which are unlikely to be covered more than once a term or once a year.
- Build a classroom culture where knowing and remembering key mathematical concepts is valued.

Further Provision

Interventions

While we prefer a 'keep up' approach to support less confident mathematicians, there are times when individual or small group interventions are necessary to address significant gaps in learning. Programmes might be used to support individual children's needs, such as Nessy Number Sense, or teachers may plan small group interventions to target key areas, eg. pre-teaching vocabulary or concepts.

Help for Parents

We organise annual sessions for parents to help them understand the school's approaches to teaching maths. We also send home calculation posters for each year group for parents with examples of written methods, to support parents with supporting their children at home.

Marking

Marking of mathematics books should be completed in line with the marking policy. Marking picks up and addresses any misconceptions/mistakes and thorough questioning ensures children have clarified their thinking clearly. Children respond to marking in purple pen to address errors and misconceptions.

Impact

Teachers check for understanding in each session and quickly identify those children in need of additional teaching. We find that the most powerful feedback is given to children verbally and through live marking during the lesson so that children can correct their work at the time. Self and peer assessment are also used when appropriate, although teachers will oversee this and acknowledge the work. If necessary, teachers will adapt their planning if particular misconceptions need to be addressed or if children are over performing.

We use a range of low stakes testing approaches (Can You Still's and weekly arithmetic lessons) both to help children remember key information and to identify those in need of additional help and support. Some of these, such as Times Table Rock Stars, are very pupil centred and give children instant feedback on their performance.

We assess children summatively at the end of each term. We use a combination of NFER tests and past SATs papers for this purpose. Data is entered into our online database Arbor and used to inform target setting and for reporting to parents. Our data is also collated at Trust level which enables benchmarking to take place between schools.

Role of the Subject Leader

- Ensures teachers understand the requirements of the National Curriculum and supports them to plan lessons. Leads by example by setting high standards in their own teaching.
- Leads continuing professional development; facilitates joint professional development – especially Lesson Study; provides coaching and feedback for teachers to improve pupil learning.
- Leads the whole-school monitoring and evaluation of teaching and learning in mathematics by observing teaching and learning in mathematics regularly; analysing assessment data in order to plan whole school improvement in mathematics; conducting work scrutiny to inform evaluation of progress; conducting pupil interviews.
- Takes responsibility for managing own professional development by participating in external training, independent private study, engaging in educational research and scholarly reading and keeping up-to-date with Teaching for Mastery developments.
- Keeps parents informed about mathematics.
- Ensures that senior leaders and governors are kept informed about the quality of teaching and learning in mathematics.
- Works in close partnership with senior leaders to ensure the learning needs of all pupils in mathematics are met effectively.
- Keeps the school's policy for mathematics under regular review.

Subject Monitoring

We monitor the quality and impact of our mathematics curriculum through learning walks/drop ins, subject leader interviews, teacher interviews, book looks, and pupil perception meetings. Moderation meetings across Trust schools ensure consistency in learning outcomes.

Evaluation:

This policy will be reviewed every two years.

Updated: October 2026