



Curriculum Policy

Mathematics

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Mathematics Policy

What is our vision?

Within our school, all children develop a solid understanding of all areas of Mathematics, delivered through fun, enjoyable, engaging and interactive lessons. All children are encouraged to become independent and highly motivated mathematicians. Our progressive curriculum enables pupils to scaffold, support and challenge their own learning, which in turn will equip them with valuable numeric, reasoning and problem-solving skills that can be transferred and applied in a variety of different contexts and for used in real life situations too.

Curriculum Impact:

Children use their knowledge of known number facts to enhance and support their learning and functionality both inside and outside of the school setting. This will enable them to complete set learning tasks and also tackle everyday challenges within the wider world.

Children are able to recall a range of mental strategies to enable them to solve increasingly challenging calculations and problems. Children also draw upon a range of effective formal written methods to solve similar problems that range in complexity and challenge. When working at a higher level, children are able to independently select the most effective method to complete a calculation.

Children retain key skills and knowledge and build upon this progressively over time.

Children have the opportunity to solve problems and reason about number through a range of contexts that can increase in complexity and level of challenge. This can also link to the wider world and allow children to solve problems with real-life contexts.

Children explore features of shape and space, and develop their measuring skills to equip them with important life skills for the future.

Children practise and apply skills within the wider curriculum to ensure that they are retained and consolidated.

Children develop their mathematical communication skills through a number of different speaking and listening, hands on practical activities and focussing on an array of ways in which they record their work.

How do we achieve this?

In the Foundation Stage, children are given the opportunity to develop their understanding of number, measurement, pattern and shape and space through a combination of short, formal taught sessions as well as a range of planned structured play-based situations, where the children are provided with ample opportunities for exploration and application.

Teachers use their First4Maths curriculum overviews to structure the delivery of the maths topics that are taught. They also choose from a wide variety of resources to aid their delivery. This allows for appropriate differentiation and challenge whilst ensuring that the teaching is based around the children's needs.

Progressive steps towards efficient written calculations should be developed and applied consistently within each year-group across school.

Prior learning activities are completed before a new area/concept is taught to inform the teacher's planning for groups and individual children and to enable them to provide teaching that successfully targets and challenges the children's needs.

Assessment for learning should occur throughout the entire maths lesson, enabling teachers/teaching assistants to adapt their teaching/input to meet the children's needs. This 'on-the-spot assessment' gives instant feedback and should be incisive and regular. If further support and intervention is needed this can be put in place early and to maximum effect.

Whilst the content and nature of lessons will vary and be different depending on the needs of the class being taught, children should play an active role within all lessons; practising skills they haven't yet mastered, reviewing previous learning, learning something new or learning to apply their knowledge to a variety of different contexts. They should be working quickly, at a fast pace that allows them to be productive and stretch their capabilities and thinking. They should actively share and magpie methods and ideas with their peers and focus upon the ones that are the most

refined. The children should move from concrete, to pictorial to abstract representations before applying their knowledge to different situations.

Daily counting and mental strategies (number bonds, times tables facts and various strategies for taught calculations) are practised through morning activities, daily reviews and/ or targeted mental maths lessons. All children should access fluency, varied fluency and reasoning and problem-solving based activities over the course of a taught unit. This will progress as the skills that the children are taught are practised, enhanced and applied. Children should always be encouraged to communicate their understanding of maths so that it clarifies their thoughts and deepens their understanding, whilst stretching and challenging the thoughts of their peers. Termly summative assessments take place to provide a deeper understanding as to the level that a child is working at. This then enables our staff to make an informed and well-rounded judgement as to the child's current working capacities and abilities.

Scheme of Work:

Mathematics is a core subject in the National Curriculum, and we use the First4Maths Intent documents as the basis for implementing the statutory requirements of the programmes of study and to ensure that all objectives are covered. The class teacher adapts and tailors the planning to the needs of the children within their class whilst following the success criteria and sequence of learning to provide quality learning opportunities for the needs of the children. Activities and resources in mathematics are chosen so that they build on the children's prior learning. We give children of all abilities the opportunity to develop their skills, knowledge and understanding by providing differentiation and challenge for all ability groups in all parts of the daily mathematics lesson. Our calculation policy shows a progression of strategies/methods and resources, etc, throughout EYFS, KS1 and KS2. In line with the school policy marking and feedback supports children in making progress in their learning and allows ample opportunities to further stretch the children with differing challenges.

Resources:

Mathematics Resources that we use and have access to at Farington Primary School:

- First4Maths Intent documents
First4Maths assessment tags
- First4Maths planning and overviews
 - Testbase Maths resources
- White Rose Schemes of Learning
 - Calculation policies
 - Maths vocabulary

Other resources include:

- Practical resources are found in classrooms. Larger resources and games are found in the cupboards outside the year 6 classroom.
- CGP Workbooks – Bought for each UKS2 child this year and other copies available in the store cupboard at the back of year 6.
- Times Tables Rockstar's (<https://trockstars.com/>)

Assessment – How do we assess skills and understanding?

We assess children's work and progress in Mathematics in a variety of different ways:

- A range of strategies are used to assess children's knowledge and understanding throughout lessons e.g., questioning, low stakes quizzes, peer talk, group discussions etc. Misconceptions will be drawn out and addressed by the class teacher.

- A Marking and Feedback policy is followed by all staff.
- Verbal feedback, self and peer assessment is used throughout lessons. Children are asked to share work or opinions with the class and teachers and children work together to improve these. Children will also be asked to explain their reasoning behind answers; reasoning mathematically by following lines of enquiry, conjecturing relationships and generalisations, developing arguments, justification or proof.
- We use long-term assessments towards the end of each term and use them to assess progress against school based 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 and collating it in the child's end of year report.
- Termly pupil progress meetings are held with staff by the SLT where children can be further discussed and tracked regarding their attainment and progress.
- We make assessments with the help of on-going teacher assessment as well as the Early Learning Goals, key stage SATs tests (Year 2 and Year 6), commercial assessment schemes (Testbase), daily '10 minute maths' or Tough Tens and the multiplication tables check.
 - Children's work is moderated throughout the year to monitor progress. This ensures that the expected level of achievement in Maths for each year group is being delivered, applied and accurately assessed.
- In UKS2, weekly homework will be used as an assessment tool to assess whether children have understood the weekly work in school and can complete it independently at home.
 - Year 6 use previous SAT papers to track progress.

Health and Safety

When using practical resources, we ensure that all children use them safely and they are carefully tidied up afterwards. Younger children should be monitored by an adult if the teacher feels it is necessary when working with small objects. This may be the case during practical/concrete activities.

Inclusion and Safeguarding Considerations

See Maths SEND curriculum document for all adjustments and provision.

At our school, we teach Mathematics to all children, regardless of their ability, through a broad and balanced curriculum. We provide learning opportunities that are tailored to the specific needs of all children, including those with SEND and those learning English as an additional language. We provide appropriate, challenging planned work for those children who are deemed Gifted and Talented, where those children's abilities are further stretched.

Children identified as having additional Special Educational Needs have access to the full range of activities involved in the learning of mathematics. An individual TLP (Targeted Learning Plan) ensures that our teaching is matched to the child's needs with specific 'small step' learning objectives, which are reviewed half termly.

For children working significantly below the age related expectations of their year group, B-Squared is used to assess the child's progress in smaller steps.

Other Points/Considerations:

If additional intervention is required outside of school hours this needs to be discussed with subject leader and SLT prior to it taking place. Timetabling of intervention during the school day needs to be agreed with all year groups and agreed with SLT too.

Monitoring and Review:

Mathematics is monitored by the subject leader and by Toni Pridey (of First4Maths), who provide regular support and feedback to all colleagues. Monitoring includes lesson observations, which take place annually and are completed by SLT, drop ins, reviews of working walls, learning environment walks, book scrutinies and evidence of learning against the assessment tags. Internal moderation of books will also take place annually.