



Mathematics Policy

The Department for Education states in the National Curriculum (2013) that: Every state-funded school must offer a curriculum which is balanced and broadly based and which:

- *promotes the spiritual, moral, cultural, mental and physical development of pupils at the school and of society, and*
- *prepares pupils at the school for the opportunities, responsibilities and experiences of later life.*

Introduction:

This policy has been developed in order to ensure that the teaching of mathematics contributes to the school fulfilling its mission statement.

The policy is intrinsically linked with and is informed by other school policies, including:

- Calculation Policy
- Teaching and Learning Policy
- Marking and Feedback Policy
- Early Years Policy
- Special Educational Needs Policy
- Single Equalities Policy

General approach:

As part of our strategy to raise pupil attainment, this school uses 'The National Curriculum in England: mathematics programmes of study: key stages 1 and 2' (2013) as a basis for planning teaching and to fulfil the government's statutory requirements. This ensures continuity and progression throughout the school. Our school embraces the statement: "The school curriculum comprises all learning and other experiences that each school plans for its pupils. The National Curriculum forms one part of the school curriculum." (2.2, National Curriculum 2013, Key Stages 1-4)



At St John Fisher, we also believe that the key to success for all our pupils is to provide **quality first teaching**, which means that we have; high expectation of pupil involvement and engagement with their learning; high levels of interaction for all pupils as well as the appropriate use of teacher questioning, modelling and explaining.

Assessment for Learning, a focus on investigative and problem solving approaches, plus the development of mathematical thinking are at the heart of our school's approach. A rigorous and planned commitment to the development of teacher and teaching assistants' subject knowledge complements and strengthens this.

Aims:

Our school believes that every child is entitled to a high quality mathematics education, which will provide a foundation for them understanding the world. As a result, they will have an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject. It is our belief that our pupils should:

- **become fluent in the fundamentals of mathematics**, so that they:
 - have a well-developed sense of number values
 - know by heart key number facts, e.g. times-tables and related division facts, number bonds - in line with the latest programmes of study
 - apply knowledge of the above to work out connected facts
- **reason mathematically**, so that they:
 - are able to follow a line of enquiry
 - provide generalisations and proof of findings around their investigations
 - are able to justify their thinking, e.g. as to why a particularly calculation strategy is the most efficient
- **solve problems by applying their understanding of mathematics**, so that they:
 - encounter a variety of both routine and non-routine problems
 - are able to select specific maths skills and/or operations
 - persevere with a line of enquiry, breaking down increasingly complex problems into a series of smaller steps

Approach:

Our school believes that all pupils can achieve in Mathematics. We have high expectations and emphasise the value of mathematics education. We encourage our pupils to build confidence and resilience.

At St John Fisher, in January 2019, we introduced a CPA approach to teaching mathematics based around the principles of mastery. We are trialling the 'Teaching for mastery approach' supported by the use of materials from White Rose, Classroom Secrets and Third Space Learning.

The aim is for all pupils to fully understand key number concepts. This approach enables our pupils to deepen their understanding, with challenges being provided through investigating in new, alternative and complex ways (Fluency, Reasoning and Problem Solving). We also use Nrich and NCETM as sources of reasoning and problem solving activities. All pupils have the opportunity to build competency by taking this approach.

- **Concrete** - Our pupils have the opportunity to use concrete objects and manipulatives to help them understand and explain what they are doing.
- **Pictorial** - Our pupils can then build on this concrete approach by using pictorial representations. These representations can then be used to reason and solve problems.
- **Abstract** - With the foundations firmly laid, our pupils are able to move to an abstract approach using numbers and key concepts with confidence.

Coverage:

In order that our children get a broad and balanced mathematical curriculum, we will ensure that the following domains are covered each year:

- Number:
 - number and place value
 - addition and subtraction
 - multiplication and division
 - fractions, including decimals and percentages
- Measurement:
- Geometry
 - properties of shape
 - position and direction
- Statistics
- Ration and proportion (Year 6)
- Algebra (Year 6, although the foundations will be taught from Key Stage 1)

Our school is committed to fostering positive attitudes towards the subject, whilst ensuring that all pupils develop deep conceptual understanding (in part, through exposure to a range of models and images) and mastery across the domains listed above, and in line with their age group. Teachers will actively diagnose and address perceived 'gaps' in conceptual understanding. How pupil learning is then developed as a result will be monitored. In line with the curriculum's focus on children making connections, our school will provide regular

and stimulating cross curricular enrichment opportunities. At St John Fisher, this will also include the delivery of outdoor learning through our provision of Forest School.

Learning Environment:

At St John Fisher, we strive to ensure that the learning environment is one that will promote our children's learning in Mathematics and their curiosity and enjoyment of the subject. Therefore, we will ensure that our classrooms will reflect this through the use of Maths Working Walls. We will use them to provide interactive mathematics displays to aid our teaching and to record our progression in learning. We will ensure that they provide examples of mathematical language and show mathematical calculations.

Homework:

At St John Fisher, we believe that homework encourages our pupils to practise and consolidate basic skills and knowledge in mathematics. It improves the quality of the learning experience offered to pupils and extends it beyond the classroom environment. We believe that homework provides opportunities for our pupils and their parents or other adults who support them to develop a shared love of learning.

Our school also provides children with access to Purple Mash and Classroom Secrets Kids (2021), which are fully interactive online mathematics learning tools for children to support mathematics learning both in class and at home. Our pupils are encouraged to access them regularly at home to support their mathematical learning.

Special educational needs & disabilities (SEND)

Daily mathematics lessons are inclusive to pupils with special educational needs and disabilities. Where required, children's IEP's incorporate suitable objectives from the National Curriculum for Mathematics, Development Matters and P-Scales. Teachers keep these in mind when planning work. These targets may be worked upon within the lesson, as well as in a small group or 1:1 basis outside the mathematics lesson, as and when needed. Maths focused intervention in school helps children with gaps in their learning and mathematical understanding. When provided outside of the Maths lesson, these are delivered by trained support staff and overseen by the SENCO and/or the class teacher. Within the daily mathematics lesson teachers have a responsibility to not only provide differentiated activities to support children with SEND but also activities that provide sufficient challenge for children who are high achievers. It is the teachers' responsibility to ensure that all children are challenged at a level appropriate to their ability, within each step of their learning.

Equal Opportunities:

At St John Fisher, positive attitudes towards mathematics are encouraged, so that all children, regardless of race, gender, ability or special needs, including those for whom English is a second language, develop an enjoyment and confidence with mathematics. This is building upon the fact that children enter our school with different levels of baseline skills and abilities.

The aim is to ensure that everyone makes progress and gains positively from lessons and to plan inclusive lessons. Lessons involving a CPA approach will benefit all children including those for whom English is an additional language (EAL).

Organisation:

In order to respond to latest changes in the mathematical landscape, including the latest inspection framework, we will ensure that:

- Maths provision and impact on learners is evaluated and reviewed regularly via the School Improvement Plan and aligned maths action plan. As part of this process, the maths subject-leader (alongside other senior leaders) will triangulate evidence from a range of monitoring activities (e.g. planning/book scrutinies, learning walks/observations and pupil voice) to determine next stages of development.
- CPD needs of our staff, including the maths subject-leader and teaching assistants, are regularly reviewed and planned as appropriate. The expectation is that staff attending CPD will be given planned opportunities to cascade key messages, or share through lesson study.

Agreed by:

Date Agreed: January 2022

Date of next review: January 2024