



ST JOHN'S CHURCH OF ENGLAND (VA) FIRST SCHOOL

"LEARNING TOGETHER – AIMING HIGH"

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Mathematics Policy

This policy should be taken as part of St. John's C. of E. First School's overall strategy and is implemented within the context of our vision of Government aims and our values as a Church of England School.

The National Curriculum for Mathematics

Mathematics is an interconnected subject in which children need to be able to move fluently between representations of mathematical ideas. The 2014 National Curriculum programmes of study are, by necessity, organised into apparently distinct domains, but children should make rich connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems. They should also apply their mathematical knowledge to science and other subjects.

The expectation is that the majority of children will move through the programmes of study at broadly the same pace. However, decisions about when to progress should always be based on the security of childrens' understanding and their readiness to progress to the next stage. Children who grasp concepts rapidly should be challenged through being offered rich and sophisticated problems before any acceleration through new content. Those who are not sufficiently fluent with earlier material should consolidate their understanding, including through additional practice, before moving on.

Aims

The 2014 national curriculum for Mathematics aims to ensure that all children:

- become fluent in the fundamentals of Mathematics, including through varied and frequent practice with increasingly complex problems over time, so that children 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

The Focus of Mathematics teaching in Key Stage 1 and 2

Key Stage 1

The principal focus of mathematics teaching in key stage 1 is to ensure that pupils develop confidence and mental fluency with whole numbers, counting and place value. This should involve working with numerals, words and the 4 operations, including with practical resources [for example, concrete objects and measuring tools].

At this stage, pupils should develop their ability to recognise, describe, draw, compare and sort different shapes and use the related vocabulary. Teaching should also involve using a range of measures to describe and compare different quantities such as length, mass, capacity/volume, time and money.

By the end of year 2, pupils should know the number bonds to 20 and be precise in using and understanding place value. An emphasis on practice at this early stage will aid fluency.

Pupils should read and spell mathematical vocabulary, at a level consistent with their increasing word reading and spelling knowledge at key stage 1.

Lower Key Stage 2

The principal focus of mathematics teaching in lower key stage 2 is to ensure that pupils become increasingly fluent with whole numbers and the 4 operations, including number facts and the concept of place value. This should ensure that pupils develop efficient written and mental methods and perform calculations accurately with increasingly large whole numbers.

At this stage, pupils should develop their ability to solve a range of problems, including with simple fractions and decimal place value. Teaching should also ensure that pupils draw with increasing accuracy and develop mathematical reasoning so they can analyse shapes and their properties, and confidently describe the relationships between them. It should ensure that they can use measuring instruments with accuracy and make connections between measure and number.

By the end of year 4, pupils should have memorised their multiplication tables up to and including the 12 multiplication table and show precision and fluency in their work.

Pupils should read and spell mathematical vocabulary correctly and confidently, using their growing word-reading knowledge and their knowledge of spelling.

Spoken Language

The national curriculum for mathematics reflects the importance of spoken language in pupils' development across the whole curriculum – cognitively, socially and linguistically. The quality and variety of language that pupils hear and speak are key factors in developing their mathematical vocabulary and presenting a mathematical justification, argument or proof. They must be assisted in making their thinking clear to themselves as well as others, and teachers should ensure that pupils build secure foundations by using discussion to probe and remedy their misconceptions.

Cross curricular

Mathematics teaches children how to make sense of the world around them through developing their ability to calculate, reason and solve problems. It is a core subject with a range of cross-curricular links but most often, is best taught discretely, using opportunities from other subjects to rehearse skills in a context. Maths involves developing confidence and competence in number work; shape, space and measure; handling data and the using and applying of these skills.

Computing

Computing can enhance the teaching of Mathematics significantly. It has ways of impacting on learning that are not possible with conventional methods. Teachers can use software to present information visually, dynamically and interactively, so that children understand concepts more quickly. A range of software and resources are available to support work with the computers.

Equal Opportunities

All children have an entitlement to participate fully in Maths, regardless of gender, race, age or ability, in accordance with the school's Equal Opportunities Policy.

Children for whom English is an additional language will receive additional support as appropriate.

This Policy will be reviewed every two years by the Maths Subject leader
Nicole Simenton 15/9/16