St John's CE VA Primary School

Mathematics Calculation Policy

At St John's we are Loved by God - Learning with Jesus - Living by the Spirit.

1. Introduction

Mathematics is a creative and highly inter-connected discipline that has been developed over centuries, providing the solution to some of history's most intriguing problems. It is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment. A high-quality mathematics education therefore provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject. (National Curriculum 2014)

This calculation policy has been written in line with the programmes of study taken from the revised National Curriculum for Mathematics (2014). It provides guidance on how appropriate calculation methods are represented to the children and how these representations are developed to ensure continuity and progression across the Milestones. Although, the skills are recommended to specific year groups, it is important to note that this is not fixed – this is to encourage a flexible approach to teaching and learning that meets the needs of the children.

2. EYFS & Milestones

The EYFS Statutory Framework 2025 sets standards for the learning, development and care of children from birth to five years old and supports an integrated approach to early learning. This is supported by the 'Development matters' non-statutory guidance. The EYFS Framework in relation to mathematics aims for our pupils to:

- Have a deep understanding of number to 10, including the composition of each number.
- Subitise (recognise quantities without counting) up to 5
- Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts
- Verbally count beyond 20, recognising the pattern of the counting system
- Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity
- Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.

The National Curriculum sets out year-by-year programmes of study for Key Stages 1 and 2, which underpins St Johns' Milestones:

Milestone 1: Y1 – Y2
Milestone 2: Y3 – Y4
Milestone 3: Y5 – Y6

St John's has the holistic aim to develop the key skills and characteristics of a mathematician:

- An understanding of the important concepts and an ability to make connections within mathematics.
- A broad range of skills in using and applying mathematics.
- Fluent knowledge and recall of number facts and the number system.
- The ability to show initiative in solving problems in a wide range of contexts, including the new or unusual.
- The ability to think independently and to persevere when faced with challenges, showing a confidence of success.
- The ability to embrace the value of learning from mistakes and false starts.
- The ability to reason, generalise and make sense of solutions.
- Fluency in performing written and mental calculations and mathematical techniques.
- A wide range of mathematical vocabulary.
- A commitment to, and passion for, the subject.

3. Teaching & Learning

At St John's, the teaching of mathematics is underpinned by the White Rose Maths schemes of learning. This ensures that there is a clear progression of skills across the school and that teaching is built in appropriate steps.

It is expected that teachers will use their professional judgement as to when consolidation of existing skills is required or if to move onto the next concept. However, it is our belief that the focus must always remain on breadth and depth rather than accelerating through concepts. Children will not be extended using curriculum materials from the year above. Instead, they should deepen their conceptual understanding by tackling challenging and varied problems that sure up their foundations and increase flexibility.

Teachers can use any teaching resources that they wish to use and the policy does not recommend one set of resources over another, rather that, a variety of resources are used. These mainly include Target Your Maths, Primary Stars, Maths Shed, Maths Ninja and Twinkl.

4. Concrete, Pictorial and Abstract

For each of the four rules of number, different strategies are laid out, together with examples of what concrete materials can be used and how, along with suggested pictorial representations and abstract methods. The principle of the concrete-pictorial abstract (CPA) approach [Make it, Draw it, Write it] is for children to have a true understanding of a mathematical concept and develop themselves as mathematicians. Reinforcement is achieved by going back and forth between these representations.

4a Concrete Representation

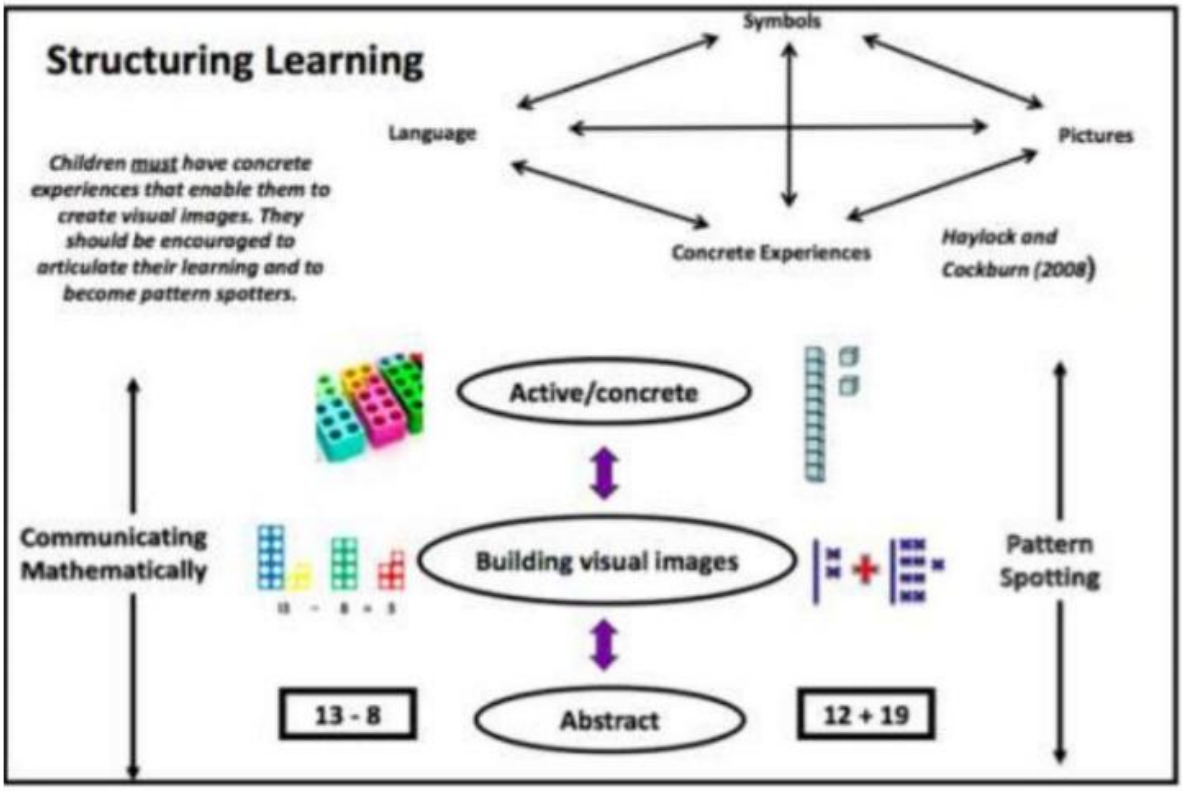
The enactive stage - a pupil is first introduced to an idea or a skill by acting it out with real objects. This is a 'hands on' component using real objects and it is the foundation for conceptual understanding.

4b Pictorial Representation

The iconic stage - a pupil has sufficiently understood the hands-on experiences performed and can now relate them to representations, such as a diagram or picture of the problem.

4c Abstract Representation

The symbolic stage - a pupil is now capable of representing problems by using mathematical notation, for example: 12 ÷ 2 = 6.



5. Responsibilities of the Governing Body

As well as fulfilling their legal obligations, the governing body should also make sure that:

- all pupils make progress in achieving the expected educational outcomes;
- the subjects are well led, effectively managed and well planned;
- the quality of provision is subject to regular and effective self-evaluation;
- teaching is delivered in ways that are accessible to all pupils with SEND;
- clear information is provided for parents on the subject content and the right to request that their child is withdrawn;
- the subjects are resourced, staffed and timetabled in a way that ensures that the school can fulfil its legal obligations.
- the religious ethos of the school is maintained and developed.

6. Linked Policies

Due to the focus and purpose of this policy, there are also direct and intrinsic links to the following:

- Curriculum Policy
- SMSC Policy
- Equalities Policy
- SEN Policy

Please also refer to those named policies for more comprehensive information.

Appendices

Addition/Subtraction

See Appendix 1.

Multiplication/Division

See Appendix 2.

		Date
Version	V1.4	26.9.2025
Reviewed by	All Staff	Sept 2025
Approved by	Curriculum Committee	
Ratified by	Governing Body	5.11.2025
Review period	2 years	
Date of Review	September 2027	Sept 2027