



St James' Lanehead Church of England Primary School

Mathematics Policy

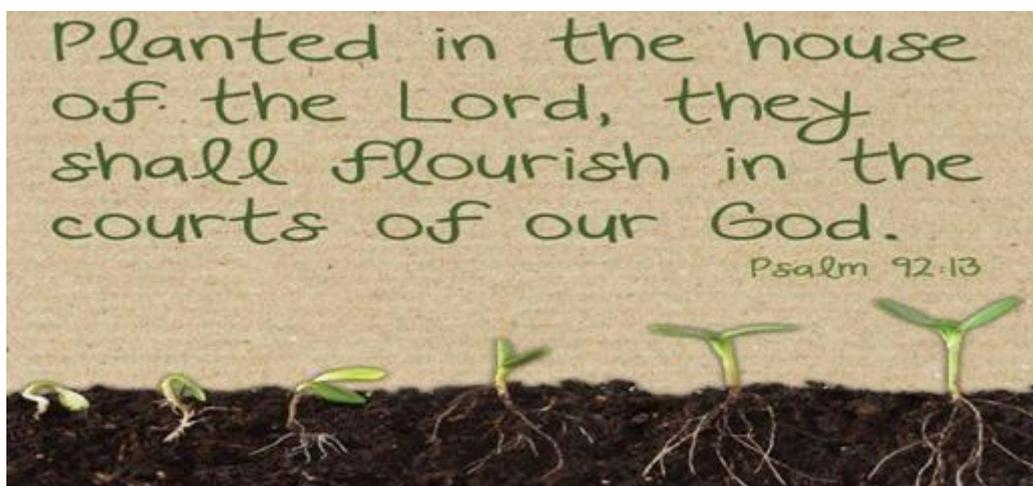
Date of Policy:	January 2019
Person Responsible:	A Moses
To be reviewed:	Annually
Review Date:	January 2020



St James` Lanehead C of E (VA) Primary School

Mission Statement

Our church school seeks to inspire each individual to flourish, grow and learn with Jesus at the heart of all we do.



Code of Conduct

RATIONALE

Mathematics is a key life skill, providing children with a means of making sense of the world in which they live. It is a proficiency, which involves confidence and competence with numbers, shapes, measures and data. It requires an understanding of the numbers system and an ability to solve problems in a variety of contexts.

Mathematics demands practical understanding of the ways in which information is gathered, presented and sorted.

PURPOSE

Mathematics offers opportunities for children to:

- Develop confidence and competence with numbers, shapes, measures and data.
- Develop their mental agility in numeracy and the ability to have instant recall of basic facts.
- Explain their strategies and talk about their mathematics, sharing ideas with others.
- Develop skills in handling data and interpreting information gathering by counting and measuring and presenting in graphs, diagrams, charts and tables.
- Learn to enjoy mathematics and have a positive attitude, approaching all problems with confidence and enthusiasm.
- Reach their full potential and achieve their highest possible personal standards.
- Develop their child's ability to apply mathematics to the solution of real life problems, so that they can see the relevance of what is being taught.

GUIDELINES

All children will be given equal opportunity to follow the National Curriculum Programme of Study for Mathematics through following the Maths-No Problem! Scheme of Work. In Years 1 to 6, children will be taught in whole cohorts by teams of 3 or 4 teachers and teaching assistants. In EYFS, mathematics will be taught explicitly in small groups. School will adopt a 'keep up, not catch up' approach to learning.

Mathematics teaching in school will reflect the philosophy of the National Curriculum and 'Mastery' framework to which children are taught the skills of fluency, reasoning and problem solving.

Mathematics teaching will take place on a daily 60 minutes basis in KS 1 and 80 minutes in KS 2. Interventions will take place during afternoon sessions, if necessary. Further practice of arithmetic strategies and skills take place each afternoon. In KS 2, there is a focus on learning multiplication tables.

Learning and Teaching will be based on the Concrete-Pictorial- Abstract model through Maths-No Problem!

- Concrete is the “doing” stage. During this stage, students use concrete objects to model problems. Unlike traditional maths teaching methods where teachers demonstrate how to solve a problem, the CPA approach brings concepts to life by allowing children to experience and handle physical (concrete) objects. With the CPA framework, every abstract concept is first introduced using physical, interactive concrete materials.
- Pictorial is the “seeing” stage. Here, visual representations of concrete objects are used to model problems. This stage encourages children to make a mental connection between the physical object they just handled and the abstract pictures, diagrams or models that represent the objects from the problem.
- Abstract is the “symbolic” stage, where children use abstract symbols to model problems. Students will not progress to this stage until they have demonstrated that they have a solid understanding of the concrete and pictorial stages of the problem. The abstract stage involves the teacher introducing abstract concepts (for example, mathematical symbols). Children are introduced to the concept at a symbolic level, using only numbers, notation, and mathematical symbols (for example, +, −, ×, ÷) to indicate addition, multiplication or division.

Building or drawing a model makes it easier for children to grasp difficult abstract concepts (for example, fractions). Simply put, it helps students visualise abstract problems and make them more accessible.

Planning will be linked to Mathematics objectives. Each lesson will be planned through Maths- No Problem! and is based on a 3 part lesson:

- Anchor Task: a task which allows children to try out and discuss different methods. This involves a lot of discussion and exploration, usually through Concrete materials (
- Guided Practice: children use the method(s) discussed to complete tasks. They work in small groups and questions become progressively more challenging.
- Independent Practice: children work independently to complete questions. Again, they range from scaffolded questions at first onto more challenging tasks.

When children have completed their workbook, they will then be able to choose a ‘chilli challenge’. This is an extension task which allows them to apply their learning further. The hotter the chilli, the trickier the challenge.

Children will use a variety of methods to record and present their work, including graphs and diagrams.

When completing written methods they will follow the school’s calculation policy.

ICT will be used to support and enhance mathematics teaching where relevant.

MASTERY SKILLS

In addition to a secure understanding of number and calculation, children will be taught essential skills for high quality mathematics learning, Mastery in Mathematics means to

acquire a deep, long-term, secure and adaptable understanding of the subject, which include skills, such as:

- Problem Solving – knowing the strategies and resources, which need to be used to solve a problem.
- Reasoning – being able to explain their results verbally and in written form, using mathematical language and symbols. They will be able think logically and justify their ideas.
- Securing times tables facts and be able to apply them in lessons.

MULTIPLICATION TABLES

Year 1 – Count in multiples of 2, 5 and 10. Recall and use all doubles to 10 and corresponding halves.

Year 2 – Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables.

Year 3 – Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables.

Year 4 – Recall and use multiplication and division facts for multiplication tables up to 12 x 12.

Year 5 – Revision of all times tables and division facts up to 12 x 12.

Year 6 – Revision of all times tables and division facts up to 12 x 12.

PRESENTATION

Children must be set high expectations for the presentation of their work:

- Children will use one symbol per square when writing out calculations.
- Decimal points are used on the line between two numbers (not in its own box).
- Pencil needs to be used for all work in numeracy.
- Rulers must be used for all drawings of lines.
- The writing of explanations should be legible and written in complete sentences, using vocabulary accurately.
- Mistakes are crossed out using a single line or rubbed out.
- All fix-its and responses to feedback must be completed in purple pen.

CONCLUSION

Children are given a sound understanding of numbers and measures will have a solid foundation on which to develop the ability to use mathematics for everyday life and to communicate information and ideas.

Prepared by: Mrs A Moses

Review date: December 2019

Next review date: December 2020