



Bishop John Robinson
Church of England Primary School

Mathematics Policy

Be the best we can;

Join in Learning, Play and Prayer;

Remember God's Word

"Jesus is the Anchor of my Soul." Hebrews 9:16



The Diocese of
Southwark



Mission Statement

We want all adults and children to: **Be the best they can** in order to have best possible start in life and to make the most of the gifts God has given. To achieve this, we teach everyone *"Whatever you do, work at it with all your heart"* (Colossians 3:23) by;

- Set ambitious targets for all pupils and staff
- Continually look for ways to improve
- Have high expectations of behaviour for all

We encourage children to: **Join in Learning**, to promote academic excellence and to inspire everyone to value the importance of education in wider society. The bible teaches us God will *"Instruct us in the way of knowledge and wisdom and lead us along straight paths"* (Proverbs 4:11). To achieve this we;

- Provide an engaging curriculum with opportunities for learning in a variety of contexts
- Strive for all lessons to be focussed and engaging to allow all children to achieve
- Support deeper levels of understanding so that children can apply learning to different settings

For children to: **Join in Play** is important at BJR because Play is essential for everyone's social and emotional development. It is a vital life skill which helps children to form the adult they will become building trust, forgiveness and resilience. Play is the foundation for learning compassion and the Golden Rule *"Do to others as you would have them do to you"* (Luke 6:31). To promote positive play we;

- Have dedicated staff who promote play EVERY PLAYTIME
- Promote the importance of play through PLAY DAYS
- Invest in the playground as a learning resource

We want the school community to: **Join in Prayer** as Christians believe that this is fundamental to developing a relationship with God as well as giving thanks and praise. We should *"Always be joyful. Never stop praying. Whatever happens, give thanks, because it is God's will."* (Thessalonians 5:16-18). We encourage this though;

- High quality collective worship for all children
- Daily acts of prayer
- Valuing the essential role of our School Chaplain

We believe that we should: **Remember God's Word**, as this is at the very Foundation of being a Christian school. In promoting a practical understanding and application of Christian Values we strive to; *"Train up a child in the way they should go, And when they are old they will not depart from it"* (Proverbs 22:6) through;

- Providing High quality RE teaching and daily collective worship for all children
- Regular visits to church and other places of worship

In all aspects of school life, our school vision is key to ensuring that Bishop John Robinson CofE Primary School offers the best education money can't buy. Our history and naval links, our entire spiritual and ethical ethos, and our approach to the school's curriculum is rooted in our individual and corporate identity: *"Jesus is the anchor of my soul."* (Hebrews 9:16).

Introduction

At Bishop John Robinson we have adopted a 'Mastery' approach to teaching and learning in Mathematics.

Aims

- to ensure quality first teaching of mathematics across the curriculum in Early Years Foundation Stage, Key Stages 1 and 2, so that children achieve end of year expectations.
- pupils become fluent in the fundamentals of mathematics so that they develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
- pupils can solve problems by applying their mathematics to a variety of problems, including in unfamiliar contexts and modelling real-life scenarios.
- pupils can reason mathematically by following a line of enquiry and develop and present a justification, argument or proof using mathematical language.

Beliefs

We believe that ability within Mathematics is not fixed. We are developing the mindsets of children and adults alike to develop a growth mindset and a 'We Can' attitude to Mathematics. We believe that through quality first teaching and intelligent practice, children learning together and immediate intervention that all children have the potential to 'go deeper' and broaden their understanding of mathematical concepts.

Long Term Planning

Using the National Curriculum, long term plans outline the content and progression of key skills and understanding that will be taught over the academic year. These focus skills are used as 'drivers' which are used as vehicles to explore the broader areas of Mathematics.

Medium Term Planning

In Mathematics, medium term plans outline the areas of Mathematics to be taught and provides supplementary skills from other areas to ensure that the Mathematics curriculum remains broad and relevant. Clear and appropriate links are made between different areas of Mathematics in order to contextualise learning and enable deepening and understanding.

Short Term Planning

Lesson plans must have:

- 5 minutes of counting every day.
- Do Now's that are used to recap and review previous learning.
- Star words and skill (which must appear on every page of the slides used within the lesson).
- New learning.
- Developing learning.
- Independent learning.
- Review.

Mathematics is taught through end of year expectations for each year group which are set out in the National Curriculum.

Children are taught sequences based upon the Teaching for Mastery Approach using concrete resources, then by drawing pictures to support their understanding and moving to the abstract once they are able.

Teachers ensure that knowledge, reasoning and problem solving are incorporated in all short-term planning, ensuring that reasoning is at the core of every lesson. The children explain their answers and how they worked them out.

Number, Place Value and Algebra

Children need to develop their number facts and understanding of how different numbers relate to each other. They should be able to access numbers in words as well as numerals and recognise that the position of a digit gives its value and know what each digit represents, including zero as a place holder. In Key Stage Two, children must have an understanding of algebra.

Calculation

Children should be shown different ways to complete calculations. Written calculations should adhere to the 'Calculations Policy'.

Fractions, Decimals and Percentages

Children should be given the opportunity to explore the relationship between fractions, percentages, ratios, decimals and integers.

Measures

Children should be given the opportunity estimate and measure, using standard and non-standard measurements and understand the relationships between one metric unit to another.

Geometry

Children need to develop their knowledge and understanding of 2D and 3D shapes, including their names and properties. Children should develop their positional and directional understanding and use these in practical activities and other areas of the curriculum.

Statistics

Children should become familiar with drawing inferences from data in practical activities. They should have access to different data sources used in everyday life. They should be taught to construct and interpret data, both discrete and continuous, and to be able to draw conclusions and explore doubt and certainty, developing an understanding of probability.

Problem Solving / Reasoning

Additionally, lessons should incorporate opportunities for children to develop a range of approaches to both solving mathematical problems, making connections between different areas of Mathematics and looking for ways to overcome difficulties they encounter and reasoning with numbers. Children need to use correct language, symbols and vocabulary and have opportunities to explain their methods and reasoning, which needs to be planned for, modelled and developed. We will also promote children's courage to question the accuracy of their answers. Children are

encouraged to persevere in challenging activities and respect contributions and suggestions from others.

Assessment

Target Tracker is used to assess and track the progress of children in maths from EYFS through to Year 6.

In EYFS, children are assessed against Early Learning Goals. In statutory year groups, Years 2 and 6, children are assessed against statutory frameworks.

Formal teacher assessment will be conducted each term as part of the school's assessment procedures. SATS will be undertaken by pupils in Year 2 and Year 6. Year 4 will undertake the Multiplication Tables Check.

In Years 1-6, teachers will use cold (at the start of a unit) tasks to assess where the children are and hot (at the end of a unit) tasks to assess how much progress the children have made.

Feedback and Marking

Children's books are marked every day using the school's Feedback and Marking Policy.

Early Morning Work

Every morning our children will complete a mathematical task before lessons commence. This should be used to practice and embed skills through over-learning tasks.

Times Tables

Children throughout the school will learn times tables using the progression in tables document (appendix 1). KS2 children will complete half termly multiplication checks. In Year 4, children will complete the Multiplication Tables check.

Inclusion

In line with the school's Inclusion Policy, each child will have equal entitlement to all aspects of the Maths curriculum and to experience the full range of Maths activities. Therefore, in delivering Maths, care will be taken to ensure that a variety of learning styles are accessed and teaching methods are adapted. Intervention groups will take place both within the Maths lesson and outside; being delivered by the teacher or teaching assistant.

Special Educational Needs

Children with SEND are taught within the daily maths lesson. When additional staff are available to support groups or individual children, they may be withdrawn to use intervention materials.

Health and Safety

The general teaching requirement for health and safety applies in mathematics. We encourage the children to consider their own safety and the safety of others at all times.

Resources

There are a wide range of resources available to support the teaching of Mathematics across the school. Most of these resources are kept in the Maths cupboard or on the trolleys outside of Year 4 and 5.

Social, Moral, Spiritual and Cultural Understanding

The teaching of mathematics offers opportunities to support the social development of our children through the way we expect them to work with each other in lessons. Groupings allow children to work together and give them the chance to discuss their ideas and experiences. Their work in general enables them to develop a respect for other children's levels of ability and encourages them to co-operate across a range of activities and experiences. Children learn to respect and work with each other and develop a better understanding of themselves and of each other.

Monitoring and Evaluating

Regular monitoring and evaluating of planning, teaching and children's everyday mathematical learning will be conducted regularly as a part of the school's monitoring and evaluation schedule.

In Service Training

Whole staff training will be identified through the School Improvement Plan and met through INSET provision.

Equal Opportunities

Bishop John Robinson offers equal opportunities to every child in every aspect of the curriculum and school life.

Update and Review

This policy was updated in November 2021

It is due for review in November 2022

Appendix 1: Progression in Times Tables.

Learning multiplication facts is a vital part of any child's mathematical development. Once rapid recall of multiplication facts become possible, a whole host of mathematical activities will seem easier. Children need to be able to recall multiplication facts in any order and also to derive associated division facts. The expectations for each year group are set out below:

Year 1

Count on or back in ones, twos, fives and tens and use this knowledge to derive multiples of 2, 5 and 10 to the twelfth multiple.

Year 2

Derive and recall multiplication facts for the 5, 10 and 2 times tables and the related division facts. 4 times tables in the Summer term.

Year 3

Derive and recall multiplication facts for the 5, 10, 2, 4, 8, 3 and 6 times tables and the related division facts. 9 times tables in the Summer term.

Year 4

Derive and recall multiplication facts for the 5, 10, 2, 4, 8, 3, 6, 9, 7, 11 and 12 times tables and the related division facts.

Year 5

Derive and recall multiplication facts for the 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 and 12 times tables and the related division facts.

Year 6

Derive and recall multiplication facts for the 2, 3, 4, 5, 6, 7, 8, 9, 10, 11 and 12 times tables and the related division facts.