# MATHEMATICS

1+1:

BISHOP ROAD PRIMARY SCHOOL



Here at Bishop Road we promote confident, imaginative attitudes. We believe that all children can achieve and progress in mathematics. We teach for secure and deep understanding of mathematical concepts. Making mistakes is an essential part of learning and we strive to provide challenges through rich and refined problems before progressing onto new content.

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### **CURRICULUM STATEMENT**

To engage, inspire and challenge pupils mathematically to calculate and solve problems across a variety of contexts whilst becoming fluent and accurate with efficient strategies. Children can use the relevant vocabulary when discussing problems and discuss the process.



#### WHAT DOES MATHEMATICS LOOK LIKE AT BISHOP ROAD?

- Over their time at Bishop Road, children will study a broad and balanced mathematics curriculum. They will cover areas including number, addition and subtraction and division, multiplication and division, fractions, decimals and percentages, shape and space, statistics and algebra appropriate to their age.
- Mathematical areas are regularly revisited throughout the year to encourage children to recall their prior learning and commit it to long term memory.
- Children will have numerous hands-on learning opportunities and will approach a concept first with concrete resources, followed by pictorial guides before finally moving to the purely abstract concept. This allows them to develop a deep and lasting conceptual understanding of the maths curriculum.

#### ENRICHMENT OPPORTUNITIES

At Bishop Road all of the children benefit from an exciting range of trips and visits. Carefully chosen visitors come to lead exciting enrichment activities which encourage the children to use and apply their mathematical thinking, including in the contexts of coding and problem solving.

#### CONTRIBUTING THROUGH MATHS

We believe that everybody plays an essential role in their community and it is important that we teach children how to contribute. In maths, children learn to show initiative in solving problems, including the new and unusual, and to think independently and show perseverance.



### ESSENTIAL CHARACTERISTICS OF MATHEMATICS

• 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.

### SUBJECT SPECIFIC TEACHING AND LEARNING APPROACHES

#### In mathematics lessons at Bishop Road you will see:

Focussed teacher input and purposeful conversation. Development of arithmetical fluency through target mental, oral starters and procedural tasks.

Mathematical knowledge is consolidated through problem solving exercises across an array of contexts.

Clear focus on precise mathematical vocabulary.

Concrete, pictorial and abstract representations.

Class wide reasoning opportunities stemming from prior learning.

Challenge and progress for all.





# **PRIMARY RESOURCES**

NRICH is an interactive forum from Cambridge university with tasks designed to stretch and challenge pupils through activities which encourage mathematical thinking and mathematical skills.

TIMES TABLE ROCKSTARS is an online times table game where children can create an avatar and earn game coins by correctly answering times table questions. They can use these coins to obtain new costumes and accessories for their avatar and teachers can set which times tables they would specifically like their classes to be practising.

TARGET YOUR MATHS is a text book which provides graduated levels of challenge for year group objectives.

NFER create the formative assessment papers which are used throughout KS2 to track progress and attainment.

MATHSNAV is an online curriculum tool which provides guidance on key learning points throughout the primary maths curriculum.

#### OUTCOMES

Teaching children to record workings and answers clearly and logically is vital for their mathematical development. Children need to grow confident to set work out themselves and take pride in the presentation of their books.



Children's books will follow these principles:

- Pages should be set out with a two-square margin drawn neatly with a ruler.
- The short date and learning objective should be written at the top of the page and underlined with a ruler.
- One digit should be written in each box when recording numbers. This does not apply to letters when writing words or sentences.
- Workings should be laid out neatly and positioned directly above, below, or next to the sum or problem. Errors in working should be erased.
- Feedback and marking will be provided by teachers in line with our school policy.

## ASSESSMENT, MONITORING AND EVALUATION



- Teachers monitor children's progress and adapt planning and teaching accordingly to ensure progression for all and an increasing level of challenge.
- Assessment of the children's work is on-going to ensure that understanding is being achieved and that progress is being made, through marking of work in books and through a variety of AFL strategies in lessons, including verbal discussion, questioning and answers on whiteboards.
- In addition, formal assessment takes place three times per year in the form of written assessment papers (KS2) or a mixture of dictated and written questions (KS1). These results are complemented by the on-going teacher assessment to track each child's progress and the data is analysed by class teachers, phase leaders and the mathematics co-ordinators to decide on next steps in learning.
- Effort and attainment is reported to parents at the end of each academic year for effort, under the descriptors: I - Excellent, 2- Good or 3- Requires Improvement, and for attainment in relation to national curriculum expectations, either:Working towards expectations, Working at the expected level or Working at greater depth within the expected standard.

### **ENGAGING WITH PARENTS**

We encourage parents to take an active interest in their children's mathematical education by supporting them in the following ways:

Supporting children with any homework they receive.

Having positive conversation about maths with your child and its importance in everyday life.

Helping children to learn number

bonds and key number facts

according to age range.

Help to teach your child mathematical 'life skills', such as learning to tell the time and read timetables, recognising coins and notes and calculating change. Helping children to learn and retain times tables and related facts.

