# Bishop Ellis Catholic Voluntary Academy

# Mathematics Intent

At Bishop Ellis Catholic Voluntary Academy we aim to provide a high-quality mathematics education so that children have a profound understanding of God's world, the ability to reason mathematically, an appreciation of the magnificence and power of mathematics, and a sense of delight and inquisitiveness about the subject. We want children to develop a love of maths and be confident mathematicians by the end of Y6, beyond Bishop Ellis and up to GCSE and further.

We understand that mathematics is essential to everyday life, critical to science, technology, engineering and necessary for financial literacy and most forms of employment. We aim to ensure that our parents have a clear grasp of this importance as in the past there has been a sense of apathy about the subject from some.

**Our curriculum for mathematics aims to ensure that all pupils:**

- become fluent in the fundamentals of mathematics, through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge quickly and precisely
- reason mathematically by following a line of enquiry, inferring relationships and generalisations, and developing explanation or proof using mathematical language
- can solve problems by applying their mathematics to a variety of problems with increasing complexity, including breaking down problems into a series of simpler steps and being resolute in seeking solutions

We understand that mathematics is an interconnected subject in which pupils need to be able to move fluently between representations of mathematical ideas. Our curriculum is, by necessity, organised into apparently distinct domains, but children make rich connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems.

We expect that pupils should also apply their mathematical knowledge to science and other subjects. The expectation is that the majority of pupils will move through the curriculum at broadly the same pace following the 5 big ideas of the mastery approach (fluency, variation, mathematical thinking, representation and structure and coherence).

Children who grasp concepts quickly are challenged through rich and sophisticated problems before any progression through new content. Those who are not sufficiently fluent with previous material will consolidate their understanding through additional practice, before moving on. We use the White Rose scheme of work supplemented with resources from NCETM and N-rich to deliver our maths curriculum, as well as the Mastering Number programme in Reception and KS1, which supports pupils with their fluency in the fundamentals of mathematics.

**Bishop Ellis Long Term Plan: Maths 2023-24 (Based on White Rose Planning)**

**Children are taught key mathematical knowledge progressively.**

For example:

- **Reception** – Children will be introduced to numbers and counting and will start to use basic mathematical language. An interest in maths and problem solving will be encouraged through maths games and fun activities. Children will be encouraged to talk about maths in the world around them. They will be able to count reliably with numbers from 1 to 20, place them in order and say which number is one more or one less than a given number. Children will use quantities of objects to add and subtract 2 single-digit numbers and be confident with their number bonds to 5.
- **Year 2** – By the end of KS1, children have developed their confidence and mental fluency with whole numbers, counting and place value. They can work with numerals, words and the four operations (addition, subtraction, multiplication and division), including with practical resources (for example, concrete objects and measuring tools). Children should be confident with their number bonds to 20.
- **Year 6** – Children will be able to apply the maths knowledge they already know alongside developing new skills to help solve more complex problems. They work with numbers up to 10 million and begin to learn about algebra and ratio. They will be taught long division for dividing four-digit by two-digit numbers and be able to use brackets in calculations and explain remainders. Children will learn to multiply and divide with fractions and decimals and calculate percentages.

# Bishop Ellis Long Term Plan: Maths 2023-24 (Based on White Rose Planning)

## Advent

| *2 days in school previous week* | Week 1 4.9.23 | Week 2 11.9.23 | Week 3 18.9.23 | Week 4 25.9.23 | Week 5 2.10.23 | Week 6 9.10.23 | Week 7 23.10.23 | Week 8 30.10.23 | Week 9 6.11.23 | Wk 10 13.11.23 | Wk 11 20.11.23 | Wk 12 27.11.23 | Wk 13 4.12.23 | Wk 14 11.12.23 | Wk 15 18.12.23 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Reception** | Baselines week 1-5 | | Baselines week 1-5 Getting to know you | | Match sort and compare | | Talk about measure and patterns | | It's me 1, 2, 3! | | Circles and triangles | 1, 2, 3, 4, 5 | | Shapes with 4 sides | |
| **Year 1** | Number: Place Value (within 10) – 16 lessons | | | | Number: Addition and Subtraction (within 10) – 18 lessons | | | | | Assessment week | Geometry: Shape - 6 lessons | | Number: Place value (within 20) – 13 lessons | | Consolidation |
| **Year 2** | Number: Place Value – 17 lessons | | | | Number: Addition and Subtraction – 22 lessons | | | | | | Geometry: Shape – 13 lessons | | | Measurement: Money – 11 lessons | Consolidation |
| **Year 3** | Number: Place Value – 15 lessons | | | Number: Addition and Subtraction – 23 lessons | | | | | Number: Multiplication and Division A – 16 lessons | | | Number: Multiplication and division B – 12 lessons | Assessment Week | Number: Multiplication and Division - cont | Consolidation |
| **Year 4** | Number: Place Value – 18 lessons | | | | Number: Addition and Subtraction – 11 lessons | | Measurement: Area – 5 lessons | | Number: Multiplication and Division A – 14 lessons | | Number: Multiplication and Division B – 16 lessons | | Assessment Week | Number: Multiplication and Division cont. | Consolidation |
| **Year 5** | Number: Place Value – 15 lessons | | | Number: Addition and Subtraction – 9 lessons | | Number: Multiplication and Division A – 11 lessons | | Assessment Week | Number: Fractions A - 18 lessons | | | | Number: Multiplication and Division – 12 lessons | | Consolidation |
| **Year 6** | Number: Place Value – 9 lessons | | Number: Addition, Subtraction, Multiplication & Division – 18 lessons | | | | Assessment Week | Number: Fraction A – 10 lessons | | Number: Fraction B – 8 lessons | | Measurement: Converting Units - 6 lessons | Assessment Week | Ratio (and proportion) – 11 lessons | |

## Lent

| | Week 1 8.1.24 | Week 2 15.1.24 | Week 3 22.1.24 | Week 4 29.1.24 | Week 5 5.2.24 | Week 6 12.2.24 | Week 7 26.2.24 | Week 8 4.3.24 | Week 9 11.3.24 | Wk 10 18.3.24 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Reception** | Alive in 5 | | Mass and capacity | Growing 6, 7, 8 | | Length, height and time | | Building 9 and 10 | | | | | | | |
| **Year 1** | Number: Place value (within 20) – 13 lessons (continued) | | Number: Addition and Subtraction (within 20) – 11 lessons | | | Number: Place Value (within 50) – 9 lessons | | Assessment week | Measurement: Length and Height – 4 lessons | Measurement: mass and volume – 8 lessons | | | | | |
| **Year 2** | Measurement: Money – 11 lessons (cont.) | Number: Multiplication and Division – 18 lessons | | | | Measurement: Length and Height – 6 lessons | | Assessment week | Measurement: mass, capacity & temp – 10 lessons | | | | | | |
| **Year 3** | Number: Multiplication and Division cont, | Measurement: Length and Perimeter – 13 lessons | | | Number: Fractions A – 13 lessons | | | Assessment Week | Measurement: Mass, Capacity and temperature – 12 lessons | | | | | | |
| **Year 4** | Measurement: Length and Perimeter – 10 lessons | | Number: Fractions – 16 lessons | | | | Number: Decimals A – 11 lessons | Assessment Week | Number: Decimals A – 11 lessons cont. | | | | | | |
| **Year 5** | Number: Multiplication and Division cont | Number: Fractions B – 8 lessons | | Number: Decimals and Percentages – 16 lessons | | | Statistics – 6 lessons | Assessment Week | Measurement: Perimeter and area – 7 lessons | | | | | | |

**Bishop Ellis Long Term Plan: Maths 2023-24 (Based on White Rose Planning)**

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| **Year 6** | Algebra – 11 lessons | Number: Decimals – 10 lessons | Assessment Week | Number: Fractions, Decimals & Percentages – 10 lessons | Measurement: Area, perimeter and volume – 9 lessons | Statistics – 7 lessons | | | | |

## Pentecost

| | **Week 1 8.4.24** | **Week 2 15.4.24** | **Week 3 22.4.24** | **Week 4 29.4.24** | **Week 5 6.5.24** *4 day week* | **Week 6 13.5.24** | **Week 7 20.5.24** | **Week 8 3.6.24** | **Week 9 10.6.24** | **Wk 10 17.6.24** | **Wk 11 24.6.24** | **Wk 12 1.7.24** | **Wk 13 8.7.24** | **Wk 14** | **Wk 15** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Reception** | Explore 3D shapes (cont) | | To 20 and beyond | | How many now? | Manipulate, compose and decompose | | Sharing and grouping | | Visualise, build and map | | Make connections | | | |
| **Year 1** | Measurement: mass and volume – 8 lessons (continued) | Number: Multiplication and Division – 10 lessons | | Number: Fractions – 9 lessons | | Geometry: position and direction – 6 lessons | Assessment week | Number: place value (within 100) – 8 lessons | | Measurement: Money – 5 lessons | Measurement: Time – 7 lessons | | | | |
| **Year 2** | Number: Fractions – 16 lessons | | | Measurement: Time – 8 lessons | | SATs week | Statistics – 8 lessons | | Geometry: Position and direction – 6 lessons | | Consolidation | | | | |
| **Year 3** | Measurement: Mass, Capacity and temperature cont (12 lessons( | Fractions B – 7 lessons | Measurement: Money – 6 lessons | Measurement: Time – 13 lessons | | | Geometry: Shape – 11 lessons | Assessment week | Geometry continued. | | Statistics – 7 lessons | Consolidation | | | |
| **Year 4** | Number: Decimals B – 9 lessons | | Measurement: Money – 7 lessons | | Measurement: Time – 6 lessons | Geometry: Shape – 9 lessons | | Assessment Week | Statistics – 5 lessons | Geometry: Position and Direction – 6 lessons | | Consolidation | | | |
| **Year 5** | Geometry: Shape – 11 lessons | | | Geometry: Position and direction – 7 lessons | Number: Decimals – 13 lessons | | | Number: Negative numbers – 6 lessons | Assessment Week | Measurement: Converting Units – 7 lessons | | Measurement: Volume – 5 lessons | | | |
| **Year 6** | Geometry: Shape – 12 lessons | | | Geometry: Position and direction – 6 lessons | **Revision of core knowledge** | KS2 SATS week | Themed projects/problem solving | | | KS3 Transition work | | | | | |