

Condover Church of England Primary School <i>Love Each Other and Know We Are Loved</i> Love Forgiveness Trust 	St Edward's Church of England Primary School <i>Love Each Other and Know We Are Loved</i> Love Forgiveness Trust 	BITTERLEY C OF E PRIMARY SCHOOL <i>"Be courageous; be strong. Do everything in love" (1 Corinthians 16:13-14)</i> 
Maths Endpoints 2023 - 24		
End of EYFS ELG: • Number • 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. • Numerical Patterns • 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; 27 • Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.		
End of Year 1 • Number and Place Value • Count within 100, forwards and backwards, starting with any number. • Reason about the location of numbers to 20 within the linear number system, including comparing using $<$ $>$ and $=$. • Number facts • Develop fluency in addition and subtraction facts within 10. • Count forwards and backwards in multiples of 2, 5 and 10, up to 10 multiples. • Addition and Subtraction • Compose numbers to 10 from 2 parts, and partition numbers to 10 into parts, including recognising odd and even numbers. • Read, write and interpret equations containing addition (+), subtraction (−) and equals (=) symbols, and relate additive expressions and equations to real-life contexts. • Geometry • Recognise common 2D and 3D shapes presented in different orientations, and know that rectangles, triangles, cuboids and pyramids are not always similar to one another. • Compose 2D and 3D shapes from smaller shapes to match an example, including manipulating shapes to place them in particular orientations.		

End of Year 2

- **Number and Place Value**

- Recognise the place value of each digit in two-digit numbers, and compose and decompose two-digit numbers using standard and non-standard partitioning.
- Reason about the location of any two-digit number in the linear number system, including identifying the previous and next multiple of 10.

- **Number facts**

- Secure fluency in addition and subtraction facts within 10, through continued practice.

- **Addition and Subtraction**

- Add and subtract across 10.
- Recognise the subtraction structure of 'difference' and answer questions of the form, "How many more...?".
- Add and subtract within 100 by applying related one-digit addition and subtraction facts: add and subtract only ones or only tens to/from a two-digit number.
- Add and subtract within 100 by applying related one-digit addition and subtraction facts: add and subtract any 2 two-digit numbers.

- **Multiplication and Division**

- Recognise repeated addition contexts, representing them with multiplication equations and calculating the product, within the 2, 5 and 10 multiplication tables.
- Relate grouping problems where the number of groups is unknown to multiplication or division equations with a missing factor.

- **Geometry**

- Use precise language to describe the properties of 2D and 3D shapes, and compare shapes by reasoning about similarities and differences in properties.

End of Year 3

- **Number and Place Value**

- Know that 10 tens are equivalent to 1 hundred, and that 100 is 10 times the size of 10; apply this to identify and work out how many 10s there are in other three-digit multiples of 10.
- Recognise the place value of each digit in three-digit numbers, and compose and decompose three-digit numbers using standard and non-standard partitioning.
- Reason about the location of any three-digit number in the linear number system, including identifying the previous and next multiple of 100 and 10.
- Divide 100 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 100 with 2, 4, 5 and 10 equal parts.

- **Number facts**

- Secure fluency in addition and subtraction facts that bridge 10, through continued practice.
- Recall multiplication facts, and corresponding division facts, in the 10, 5, 2, 4 and 8 multiplication tables, and recognise products in these multiplication tables as multiples of the corresponding number.
- Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 10).

- **Addition and Subtraction**

- Calculate complements to 100.
- Add and subtract up to three-digit numbers using columnar methods.
- Manipulate the additive relationship: Understand the inverse relationship between addition and subtraction, and how both relate to the part-part-whole structure. Understand and use the commutative property of addition, and understand the related property for subtraction.

- **Multiplication and Division**

- Apply known multiplication and division facts to solve contextual problems with different structures.

- **Fractions**

- Interpret and write proper fractions to represent 1 or several parts of a whole that is divided into equal parts.
- Find unit fractions of quantities using known division facts (multiplication tables fluency).
- Reason about the location of any fraction within 1 in the linear number system.
- Add and subtract fractions with the same denominator, within 1.

- **Geometry**

- Recognise right angles as a property of shape or a description of a turn, and identify right angles in 2D shapes presented in different orientations.
- Draw polygons by joining marked points, and identify parallel and perpendicular sides.

End of Year 4

- **Number and Place Value**

- Know that 10 hundreds are equivalent to 1 thousand, and that 1,000 is 10 times the size of 100; apply this to identify and work out how many 100s there are in other four-digit multiples of 100.
- Recognise the place value of each digit in four-digit numbers, and compose and decompose four-digit numbers using standard and non-standard partitioning.
- Reason about the location of any four-digit number in the linear number system, including identifying the previous and next multiple of 1,000 and 100, and rounding to the nearest of each.
- Divide 1,000 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 1,000 with 2, 4, 5 and 10 equal parts.

- **Number facts**

- Recall multiplication and division facts up to 12×12 , and recognise products in multiplication tables as multiples of the corresponding number.
- Solve division problems, with two-digit dividends and one-digit divisors, that involve remainders, and interpret remainders appropriately according to the context.
- Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 100).

- **Multiplication and Division**

- Multiply and divide whole numbers by 10 and 100 (keeping to whole number quotients); understand this as equivalent to making a number 10 or 100 times the size.
- Manipulate multiplication and division equations, understand and apply the commutative property of multiplication.
- Understand and apply the distributive property of multiplication.

- **Fractions**

- Reason about the location of mixed numbers in the linear number system.
- Convert mixed numbers to improper fractions and vice versa.
- Add and subtract improper and mixed fractions with the same denominator, including bridging whole numbers.

- **Geometry**

- Draw polygons, specified by coordinates in the first quadrant, and translate within the first quadrant.
- Identify regular polygons, including equilateral triangles and squares, as those in which the side-lengths are equal and the angles are equal. Find the perimeter of regular and irregular polygons.
- Identify line symmetry in 2D shapes presented in different orientations. Reflect shapes in a line of symmetry and complete a symmetric figure or pattern with respect to a specified line of symmetry.

End of Year 5

• **Number and Place Value**

- Know that 10 tenths are equivalent to 1 one, and that 1 is 10 times the size of 0.1. Know that 100 hundredths are equivalent to 1 one, and that 1 is 100 times the size of 0.01. Know that 10 hundredths are equivalent to 1 tenth, and that 0.1 is 10 times the size of 0.01.
- Recognise the place value of each digit in numbers with up to 2 decimal places, and compose and decompose numbers with up to 2 decimal places using standard and non-standard partitioning.
- Reason about the location of any number with up to 2 decimals places in the linear number system, including identifying the previous and next multiple of 1 and 0.1 and rounding to the nearest of each.
- Divide 1 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in units of 1 with 2, 4, 5 and 10 equal parts.
- Convert between units of measure, including using common decimals and fractions.

• **Number facts**

- Secure fluency in multiplication table facts, and corresponding division facts, through continued practice.
- Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 1 tenth or 1 hundredth).

• **Multiplication and Division**

- Multiply and divide numbers by 10 and 100; understand this as equivalent to making a number 10 or 100 times the size, or 1 tenth or 1 hundredth times the size.
- Find factors and multiples of positive whole numbers, including common factors and common multiples, and express a given number as a product of 2 or 3 factors.
- Multiply any whole number with up to 4 digits by any one-digit number using a formal written method.
- Divide a number with up to 4 digits by a one-digit number using a formal written method, and interpret remainders appropriately for the context.

• **Fractions, Decimals and Percentages**

- Find non-unit fractions of quantities.
- Find equivalent fractions and understand that they have the same value and the same position in the linear number system.
- Recall decimal equivalents for $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$ and $\frac{1}{10}$, and for multiples of these proper fractions.

• **Geometry**

- Compare angles, estimate and measure angles in degrees ($^{\circ}$) and draw angles of a given size.
- Compare areas and calculate the area of rectangles (including squares) using standard units.

End of Year 6

- **Number and Place Value**

- Understand the relationship between powers of 10 from 1 hundredth to 10 million, and use this to make a given number 10, 100, 1,000, 1 tenth, 1 hundredth or 1 thousandth times the size (multiply and divide by 10, 100 and 1,000).
- Recognise the place value of each digit in numbers up to 10 million, including decimal fractions, and compose and decompose numbers up to 10 million using standard and non-standard partitioning.
- Reason about the location of any number up to 10 million, including decimal fractions, in the linear number system, and round numbers, as appropriate, including in contexts.
- Divide powers of 10, from 1 hundredth to 10 million, into 2, 4, 5 and 10 equal parts, and read scales/number lines with labelled intervals divided into 2, 4, 5 and 10 equal parts.

- **Addition, Subtraction, Multiplication and Division**

- Understand that 2 numbers can be related additively or multiplicatively, and quantify additive and multiplicative relationships (multiplicative relationships restricted to multiplication by a whole number).
- Use a given additive or multiplicative calculation to derive or complete a related calculation, using arithmetic properties, inverse relationships, and place-value understanding.
- Solve problems involving ratio relationships.
- Solve problems with 2 unknowns.

- **Fractions, Decimals and Percentages**

- Recognise when fractions can be simplified, and use common factors to simplify fractions.
- Express fractions in a common denomination and use this to compare fractions that are similar in value.
- Compare fractions with different denominators, including fractions greater than 1, using reasoning, and choose between reasoning and common denomination as a comparison strategy.

- **Geometry**

- Draw, compose, and decompose shapes according to given properties, including dimensions, angles and area, and solve related problems.

Children will leave St Edward's as mathematicians who:

- Can talk about, question and discuss their learning in maths.
- Enjoy and value maths.
- Can effectively and confidently use maths.
- Use and apply skills and knowledge of maths across all areas of learning.