



## Year 5 Maths Curriculum Map

### Autumn 1

#### Week 1-3: Numbers to 1,000,000

- Can read and write numbers to at least 1 000 000 and determine the value of each digit.
- Can order and compare numbers to at least 1 000 000.
- Can count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000.
- Can interpret negative numbers in context, and count forwards and backwards with positive and negative whole numbers through zero.
- Can round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000.
- Can solve number problems and practical problems that involve all of the above.
- Can read Roman numerals to 1000 (M) and recognise years written in Roman numerals.

#### Week 4-6: Addition and Subtraction Mental Calculation Strategies

- Can add and subtract numbers mentally with increasingly large numbers (see the Mental Calculation Policy).

### Autumn 2

#### Week 1-2: Addition and Subtraction Mental Calculation Strategies

- Can add and subtract numbers mentally with increasingly large numbers (see the Mental Calculation Policy).

#### Week 3-4: Addition and Subtraction Written Methods

- Can add and subtract whole numbers with more than 4-digits, including using formal written methods (columnar addition and subtraction).
- Can use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy.
- Can solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.

#### Week 5-6: Time

- Can solve problems involving converting between units of time.



## Spring 1

### Week 1-3: Multiplication and Division Mental Calculation Strategies

- Can identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers.
- Knows and uses the vocabulary of prime numbers, prime factors and composite (non-prime) numbers.
- Can establish whether a number up to 100 is prime and recall prime numbers up to 19.
- Can multiply and divide numbers mentally drawing upon known facts.
- Can multiply and divide whole numbers and those involving decimals by 10, 100 and 1000.
- Can recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3).

### Week 4-5: Multiplication and Division Written Methods

- Can multiply numbers up to 4-digits by a 1-digit number using a formal written method.
- Can multiply numbers up to 4-digits by a 2-digit number using a formal written method, including long multiplication for 2-digit numbers.
- Can divide numbers up to 4-digits by a 1-digit number using the formal written method of short division.
- Can interpret remainders appropriately for the context when using short division.
- Can solve problems involving multiplication and division, including using their knowledge of factors and multiples, squares and cubes.
- Can solve problems involving addition, subtraction, multiplication and division, and a combination of these, including understanding the meaning of the equals sign.
- Can solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.

## Spring 2

### Week 1-6: Fractions and Decimal Numbers

- Can compare and order fractions whose denominators are all multiples of the same number.
- Can identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths.
- Can recognise mixed numbers and improper fractions, and convert from one form to the other and write mathematical statements  $> 1$  as a mixed number (e.g.  $2/5 + 4/5 = 6/5 = 1$  and  $1/5$ ).



- Can add and subtract fractions with the same denominator and multiples of the same number.
- Can multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams.
- Can read and write decimal numbers as fractions (e.g.  $0.71 = 71/100$ )
- Can recognise and use thousandths, and relate them to tenths, hundredths and decimal equivalents.
- Can round decimals with two decimal places to the nearest whole number, and to one decimal place.
- Can read, write, order and compare numbers with up to three decimal places.
- Can solve problems involving numbers with up to three decimal places.
- Can recognise the per cent symbol (%) and understand that per cent relates to “number of parts per hundred”, and write percentages as a fraction with denominator hundred, and as a decimal.
- Can solve problems which require knowing percentage and decimal equivalents of  $1/2$ ,  $1/4$ ,  $1/5$ ,  $2/5$ ,  $4/5$  and those with a denominator of a multiple of 10 or 25.

### Summer 1

#### Week 1-4: Geometry

- Can identify 3-D shapes, including cubes and other cuboids, from 2-D representations.
- Knows angles are measured in degrees and can estimate and compare acute, obtuse and reflex angles.
- Can draw given angles, and measure them in degrees ( $^{\circ}$ )
- Can identify angles at a point and one whole turn (total  $360^{\circ}$ ); angles at a point on a straight line and  $\frac{1}{2}$  a turn (total  $180^{\circ}$ ); other multiples of 90 degrees.
- Can use the properties of rectangles to deduce related facts and find missing lengths and angles.
- Can distinguish between regular and irregular polygons based on reasoning about equal sides and angles.
- Can identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed.

#### Week 5-6: Money

- Can use all four operations to solve problems involving measure (e.g. length, mass, volume, money) using decimal notation, including scaling.
- Can read, write, order and compare numbers with up to three decimal places.



**Summer 2**

**Week 1-4: Measures**

- Can convert between different units of metric measure (e.g. kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre).
- Can understand and use equivalences between metric units and common imperial units, such as inches, pounds and pints.
- Can measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres.
- Can calculate and compare the area of squares and rectangles, including using standard units, square centimetres (cm<sup>2</sup>) and square metres (m<sup>2</sup>).
- Can estimate the area of irregular shapes.
- Can estimate volume (e.g. using 1 cm<sup>3</sup> blocks to build cubes and cuboids) and capacity (e.g. using water).
- Can use all four operations to solve problems involving measure (e.g. length, mass, volume, money) using decimal notation, including scaling.

**Week 5-6: Statistics**

- Can solve comparison, sum and difference problems, using information presented in a line graph.
- Can complete, read and interpret information in tables, including timetables.