

## National Centre for Excellence in the Teaching of Mathematics

### National Curriculum: Year Overview - Year 2

#### Number and Place Value

- ▶ count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward
- ▶ recognise the place value of each digit in a two-digit number (tens, ones)
- ▶ identify, represent and estimate numbers using different representations, including the number line
- ▶ compare and order numbers from 0 up to 100; use  $<$ ,  $>$  and  $=$  signs
- ▶ read and write numbers to at least 100 in numerals and in words
- ▶ use place value and number facts to solve problems.

#### Addition and Subtraction

- ▶ solve problems with addition and subtraction:
  - ▶ using concrete objects and pictorial representations, including those involving numbers, quantities and measures
  - ▶ applying their increasing knowledge of mental and written methods
- ▶ recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100
- ▶ add and subtract numbers using concrete objects, pictorial representations, and mentally, including:
  - ▶ a two-digit number and ones
  - ▶ a two-digit number and tens
  - ▶ two two-digit numbers
  - ▶ adding three one-digit numbers
- ▶ show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot
- ▶ recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.

## Multiplication and Division

- ▶ recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers
- ▶ calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication ( $\times$ ), division ( $\div$ ) and equals ( $=$ ) signs
- ▶ show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot
- ▶ solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.

## Fractions (including decimals and percentages)

- ▶ recognise, find, name and write fractions  $\frac{1}{3}$ ,  $\frac{1}{4}$ ,  $\frac{2}{4}$  and  $\frac{3}{4}$  of a length, shape, set of objects or quantity
- ▶ write simple fractions e.g.  $\frac{1}{2}$  of 6 = 3 and recognise the equivalence of two quarters and one half.

## Measurement

- ▶ choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature ( $^{\circ}\text{C}$ ); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels
- ▶ compare and order lengths, mass, volume/capacity and record the results using  $>$ ,  $<$  and  $=$
- ▶ recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value
- ▶ find different combinations of coins that equal the same amounts of money
- ▶ solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change
- ▶ compare and sequence intervals of time
- ▶ tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times
- ▶ know the number of minutes in an hour and the number of hours in a day.

## Geometry - properties of space

- ▶ identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line
- ▶ identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces
- ▶ identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid]
- ▶ compare and sort common 2-D and 3-D shapes and everyday objects.

## Geometry - position and direction

- ▶ order and arrange combinations of mathematical objects in patterns and sequences
- ▶ use mathematical vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise).

## Statistics

- ▶ interpret and construct simple pictograms, tally charts, block diagrams and simple tables
- ▶ ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity
- ▶ ask and answer questions about totalling and comparing categorical data.