

## National Centre for Excellence in the Teaching of Mathematics

### National Curriculum: Year Overview - Year 3

#### Number and Place Value

- ▶ count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number
- ▶ recognise the place value of each digit in a three-digit number (hundreds, tens, ones)
- ▶ compare and order numbers up to 1000
- ▶ identify, represent and estimate numbers using different representations
- ▶ read and write numbers up to 1000 in numerals and in words
- ▶ solve number problems and practical problems involving these ideas.

#### Addition and Subtraction

- ▶ add and subtract numbers mentally, including:
  - ▶ a three-digit number and ones
  - ▶ a three-digit number and tens
  - ▶ a three-digit number and hundreds
- ▶ add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction
- ▶ estimate the answer to a calculation and use inverse operations to check answers
- ▶ solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction.

#### Multiplication and Division

- ▶ recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables
- ▶ write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods

- ▶ solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which  $n$  objects are connected to  $m$  objects.

## Fractions (including decimals and percentages)

- ▶ count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10
- ▶ recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators
- ▶ recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators
- ▶ recognise and show, using diagrams, equivalent fractions with small denominators
- ▶ add and subtract fractions with the same denominator within one whole [for example,  $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$ ]
- ▶ compare and order unit fractions with the same denominator
- ▶ solve problems that involve all of the above.

## Measurement

- ▶ measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)
- ▶ measure the perimeter of simple 2-D shapes
- ▶ add and subtract amounts of money to give change, using both £ and p in practical contexts
- ▶ tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks
- ▶ estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight
- ▶ know the number of seconds in a minute and the number of days in each month, year and leap year
- ▶ compare durations of events [for example to calculate the time taken by particular events or tasks].

## Geometry - properties of space

- ▶ draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them

- ▶ recognise angles as a property of shape or a description of a turn
- ▶ identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle
- ▶ identify horizontal and vertical lines and pairs of perpendicular and parallel lines.

## Statistics

- ▶ interpret and present data using bar charts, pictograms and tables
- ▶ solve one-step and two-step questions [for example, 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables.

A Department for Education initiative to enhance professional development across mathematics teaching

