

## Stage 3

### Thinking and Working Mathematically

- **TWM.01** Specialising
- **TWM.02** Generalising
- **TWM.03** Conjecturing
- **TWM.04** Convincing
- **TWM.05** Characterising
- **TWM.06** Classifying
- **TWM.07** Critiquing
- **TWM.08** Improving

### Number

#### Counting and sequences

- **3Nc.01** Estimate the number of objects or people (up to 1000).
- **3Nc.02** Count on and count back in steps of constant size: 1-digit numbers, tens or hundreds, starting from any number (from 0 to 1000).
- **3Nc.03** Use knowledge of even and odd numbers up to 10 to recognise and sort numbers.
- **3Nc.04** Recognise the use of an object to represent an unknown quantity in addition and subtraction calculations.
- **3Nc.05** Recognise and extend linear sequences, and describe the term-to-term rule.
- **3Nc.06** Extend spatial patterns formed from adding and subtracting a constant.

**Integers and powers**

- **3Ni.01** Recite, read and write number names and whole numbers (from 0 to 1000).
- **3Ni.02** Understand the commutative and associative properties of addition, and use these to simplify calculations.
- **3Ni.03** Recognise complements of 100 and complements of multiples of 10 or 100 (up to 1000).
- **3Ni.04** Estimate, add and subtract whole numbers with up to three digits (regrouping of ones or tens).
- **3Ni.05** Understand and explain the relationship between multiplication and division.
- **3Ni.06** Understand and explain the commutative and distributive properties of multiplication, and use these to simplify calculations.
- **3Ni.07** Know 1, 2, 3, 4, 5, 6, 8, 9 and 10 times tables.
- **3Ni.08** Estimate and multiply whole numbers up to 100 by 2, 3, 4 and 5.
- **3Ni.09** Estimate and divide whole numbers up to 100 by 2, 3, 4 and 5.
- **3Ni.10** Recognise multiples of 2, 5 and 10 (up to 1000).

**Money**

- **3Nm.01** Interpret money notation for currencies that use a decimal point.
- **3Nm.02** Add and subtract amounts of money to give change.

**Place value, ordering and rounding**

- **3Np.01** Understand and explain that the value of each digit is determined by its position in that number (up to 3-digit numbers).
- **3Np.02** Use knowledge of place value to multiply whole numbers by 10.
- **3Np.03** Compose, decompose and regroup 3-digit numbers, using hundreds, tens and ones.
- **3Np.04** Understand the relative size of quantities to compare and order 3-digit positive numbers, using the symbols =, > and <.
- **3Np.05** Round 3-digit numbers to the nearest 10 or 100.

## Fractions, decimals, percentages, ratio and proportion

- **3Nf.01** Understand and explain that fractions are several equal parts of an object or shape and all the parts, taken together, equal one whole.
- **3Nf.02** Understand that the relationship between the whole and the parts depends on the relative size of each, regardless of their shape or orientation.
- **3Nf.03** Understand and explain that fractions can describe equal parts of a quantity or set of objects.
- **3Nf.04** Understand that a fraction can be represented as a division of the numerator by the denominator (half, quarter and three-quarters).
- **3Nf.05** Understand that fractions (half, quarter, three-quarters, third and tenth) can act as operators.
- **3Nf.06** Recognise that two fractions can have an equivalent value (halves, quarters, fifths and tenths).
- **3Nf.07** Estimate, add and subtract fractions with the same denominator (within one whole).
- **3Nf.08** Use knowledge of equivalence to compare and order unit fractions and fractions with the same denominator, using the symbols  $=$ ,  $>$  and  $<$ .

## Geometry and Measure

### Time

- **3Gt.01** Choose the appropriate unit of time for familiar activities.
- **3Gt.02** Read and record time accurately in digital notation (12-hour) and on analogue clocks.
- **3Gt.03** Interpret and use the information in timetables (12-hour clock).
- **3Gt.04** Understand the difference between a time and a time interval. Find time intervals between the same units in days, weeks, months and years.

**Geometrical reasoning, shapes and measurements**

- **3Gg.01** Identify, describe, classify, name and sketch 2D shapes by their properties. Differentiate between regular and irregular polygons.
- **3Gg.02** Estimate and measure lengths in centimetres (cm), metres (m) and kilometres (km). Understand the relationship between units.
- **3Gg.03** Understand that perimeter is the total distance around a 2D shape and can be calculated by adding lengths, and area is how much space a 2D shape occupies within its boundary.
- **3Gg.04** Draw lines, rectangles and squares. Estimate, measure and calculate the perimeter of a shape, using appropriate metric units, and area on a square grid.
- **3Gg.05** Identify, describe, sort, name and sketch 3D shapes by their properties.
- **3Gg.06** Estimate and measure the mass of objects in grams (g) and kilograms (kg). Understand the relationship between units.
- **3Gg.07** Estimate and measure capacity in millilitres (ml) and litres (l), and understand their relationships.
- **3Gg.08** Recognise pictures, drawings and diagrams of 3D shapes.
- **3Gg.09** Identify both horizontal and vertical lines of symmetry on 2D shapes and patterns.
- **3Gg.10** Compare angles with a right angle. Recognise that a straight line is equivalent to two right angles or a half turn.
- **3Gg.11** Use instruments that measure length, mass, capacity and temperature.

**Position and transformation**

- **3Gp.01** Interpret and create descriptions of position, direction and movement, including reference to cardinal points.
- **3Gp.02** Sketch the reflection of a 2D shape in a horizontal or vertical mirror line, including where the mirror line is the edge of the shape.

## Statistics and Probability

### Statistics

- **3Ss.01** Conduct an investigation to answer non-statistical and statistical questions (categorical and discrete data).
- **3Ss.02** Record, organise and represent categorical and discrete data. Choose and explain which representation to use in a given situation:
  - Venn and Carroll diagrams
  - tally charts and frequency tables
  - pictograms and bar charts.
- **3Ss.03** Interpret data, identifying similarities and variations, within data sets, to answer non-statistical and statistical questions and discuss conclusions.

### Probability

- **3Sp.01** Use familiar language associated with chance to describe events, including 'it will happen', 'it will not happen', 'it might happen'.
- **3Sp.02** Conduct chance experiments, and present and describe the results.