

## Year 1

### Number and Place Value

- Count forwards to 100 from 0 or 1
- Count backwards from 100 to 0 or 1
- Count numbers to 100 in numerals
- Read numbers to 100 in numerals
- Write numbers to 100 in numerals
- Count in multiples of two to 20
- Count in multiples of five to 50
- Count in multiples of ten to 100
- Identify one more than any given number up to 100
- Identify one less than any given number between 1 and 100

### Addition, Multiplication, Subtraction, Division

- Represent and use number bonds and related subtraction facts within 20

### FDP

- Recognise, find and name a half as one of two equal parts of an object, shape or quantity

### Measurement

- Compare, describe and solve practical problems for:
  - Lengths and heights (e.g. long/short, longer/shorter, tall/short, double/half)
  - Mass/weight (e.g. heavy/light, heavier than/lighter than)
  - Capacity and volume (e.g. full/empty, more than, less than, half, half full, quarter)
  - Time (e.g. quicker, slower, earlier, later)
- Tell the time:
  - To the hour and draw the hands on a clock face to show these times

- To half past the hour and draw the hands on a clock face to show these times

## Geometry

- Recognise and name common 2D shapes (e.g. rectangles (including squares), circles and triangles)
- Recognise and name common 3D shapes (e.g. cuboids (including cubes), pyramids and spheres)

## Year 2

### Number and Place Value

- Count in steps of 10 from any number, forward and backward.
- Count in steps of 2, 3 and 5 from 0, forward or backward.
- Compare and order numbers from 0 up to 100; use  $<$ ,  $>$  and  $=$  signs.
- Use place value and number facts to solve problems.

### Addition, Multiplication, Subtraction, Division

- Recognise odd and even numbers
- Recall and use addition and subtraction facts to 20 fluently
- Add and subtract numbers using concrete objects and pictorial representations, including:
  - A two-digit number and ones
  - A two-digit number and tens
  - Two, two-digit numbers
  - Adding three one-digit numbers
- Add and subtract numbers mentally, including:
  - A two-digit number and ones
  - A two-digit numbers and tens
  - Two, two-digit numbers
  - Adding three one-digit numbers
- Recall and use multiplication and division facts for the 10 times tables
- Solve one-step 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 multiplication and division facts for the 2 times tables
- Solve problems involving multiplication and division, using a range of strategies, including problems in contexts
- Recall and use multiplication and division facts for the 5 times tables, including recognising odd and even numbers.

## FDP

- Recognise fractions of a shape ( $\frac{1}{3}$ ,  $\frac{1}{4}$ ,  $\frac{2}{4}$  and  $\frac{3}{4}$ )
- Recognise fractions of a length ( $\frac{1}{3}$ ,  $\frac{1}{4}$ ,  $\frac{2}{4}$  and  $\frac{3}{4}$ )
- Recognise, find, name and write fractions  $\frac{1}{3}$ ,  $\frac{1}{4}$ ,  $\frac{2}{4}$  and  $\frac{3}{4}$  of a set of objects or quantity

## Measurement

- Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change

### Measurement: 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

## Geometry

- Compare and sort common 2D shapes and everyday objects
- Compare and sort common 3D shapes and everyday objects
- Use mathematical vocabulary to describe position, direction and movement, including distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise), and movement in a straight line

## Statistics

- Ask and answer questions about totalling and comparing categorical data

## Year 3

### Number and Place Value

- Count from 0 in multiples of 50
- Count from 0 in multiples of 100
- Count from 0 in multiples of 4
- Count from 0 in multiples of 8
- Find 10 or 100 more or less than a given number
- Recognise the place value of each digit in a 3-digit number
- Solve number problems and practical problems involving each of the below:
  - Compare and order numbers up to 1000
  - Identify, represent and estimate numbers using different representations, e.g. using Numicon, counting sticks, cubes, 100 squares etc.

### Addition, Multiplication, Subtraction, Division

- Add and subtract numbers mentally, including:
  - A three-digit number and ones
  - A three-digit number and tens
  - A three-digit number and hundreds
- Recall and use multiplication and division facts for the 3 times tables
- Recall and use multiplication and division facts for the 4 times tables
- Recall and use multiplication and division facts for the 8 times tables
- Write and calculate mathematical statements for multiplication and division using the multiplication tables the children know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods

### FDP

- Count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts
- Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators

- Recognise and show, using diagrams, equivalent fractions with small denominators. (halves, quarters, thirds)

## Measurement

- Compare lengths (m/cm/mm)
- Compare mass (kg/g)
- Compare volume/capacity (l/ml)
- Measure lengths (m/cm/mm)
- Measure mass (kg/g)
- Measure volume/capacity (l/ml)
- Tell and write the time from an analogue clock; 12-hour clocks
- Tell and write the time from an analogue clock; 24-hour clocks
- Add and subtract amounts of money to give change, using both £ and p in practical contexts
- Add and subtract lengths (m/cm/m)
- Add and subtract mass (kg/g)
- Add and subtract volume/capacity (l/ml)

## Geometry

- 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 or less than a right angle

## Statistics

- Interpret and present data using bar charts, pictograms and tables

## Year 4

### Number and Place Value

- Count in multiples of 6
- Count in multiples of 7
- Count in multiples of 9
- Count in multiples of 25 and 1000
- Order and compare numbers beyond 1000
- Round any number to the nearest 10, 100 or 1000
- Count backwards through zero to include negative numbers
- Solve number problems and practical problems involving both of the above

### Addition, Multiplication, Subtraction, Division

- Solve addition and subtraction two-step problems in contexts, deciding which operation and methods to use and why
- Recall multiplication and division facts for 6 times table
- Recall multiplication and division facts for 7 times table
- Recall multiplication and division facts for 9 times table
- Recall multiplication and division facts for 11 times table
- Recall multiplication and division facts for 12 times table

### FDP

- Count up and down in hundredths
- Recognise that hundredths arise when dividing an object by a hundred and dividing tenths by 10
- Recognise and show, using diagrams, families of common equivalent fractions. (halves, thirds, quarters, fifths, eighths, tenths)
- Round decimals with one decimal place to the nearest whole number
- Solve simple measure and money problems involving fractions and decimals to two decimal places (e.g.  $\frac{1}{4}$  of £2.36)

## Measurement

- Convert between different units of measurement (e.g. km to m; hour to minute)

## Geometry

- Compare and classify geometric shapes, including quadrilaterals and triangles based on their properties and sizes
- Identify lines of symmetry in 2D shapes presented in different orientations
- Plot specified points and draw sides to complete a given polygon

## Statistics

- Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs

## Year 5

### Number and Place Value

- Read, write, order and compare numbers to at least 1,000,000
- Determine the value of each digit in numbers up to 1,000,000
- Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers through zero

### Addition, Multiplication, Subtraction, Division

- Add and subtract numbers mentally with increasingly large numbers
- Add and subtract whole numbers with more than 4 digits
- Identify multiples and factors, including finding all factor pairs of a number
- Find common factors of two numbers
- Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes
- Solve problems involving multiplication and division including scaling by simple fractions and problems involving simple rates – (e.g. miles per hour; eggs in a recipe)

### FDP

- Compare and order fractions whose denominators are all multiples of the same number
- Read and write decimal numbers as fractions
- Read, write, order and compare numbers with up to three decimal places
- Solve problems which require knowing percentage and decimal equivalents of  $\frac{1}{2}$ ,  $\frac{1}{4}$ ,  $\frac{1}{5}$ ,  $\frac{2}{5}$ ,  $\frac{4}{5}$  and those fractions with a denominator of a multiple of 10 or 25

## Measurement

- Convert between different units of metric measure
- Measure and calculate the perimeter of composite rectilinear shapes in cm and m
- Calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres and square metres

## Geometry

- Distinguish between regular and irregular polygons based on reasoning about equal sides and angles
- Identify:
  - Angles at a point and one whole turn (total  $360^\circ$ )
  - Angles at a point on a straight line and half a turn (total  $180^\circ$ )
  - Other multiples of  $90^\circ$
  - Draw given angles and measure them in degrees ( $^\circ$ )
- Draw given angles and measure them in degrees ( $^\circ$ )

## Statistics

- Complete comparison, sum and difference problems using information in tables, including timetables

## Year 6

### Number and Place Value

- Use negative numbers in context, and calculate intervals across zero
- Round any whole number to a required degree of accuracy (in context)

### Addition, Multiplication, Subtraction, Division

- Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication
- Divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division
- When dividing, interpret remainders as whole number remainders, fractions, or by rounding, as appropriate to the context
- Solve problems involving addition, subtraction, multiplication and division
- Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy

### FDP

- Use written division methods in cases where the answer has up to two-decimal places
- Solve problems which require answers to be rounded to specified degrees of accuracy
- Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts

### Ratio and Proportion

- Solve problems involving the calculation of percentages
- Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples

## Algebra

- Use simple formulae

## Measurement

- Use, read, write and convert between standard units using up to three decimal places

## Geometry

- Compare and classify geometric shapes based on their properties and sizes
- Find unknown angles in any triangles, quadrilaterals and regular polygons
- Describe positions on the full co-ordinate grid (all four quadrants)

## Statistics

- Interpret pie charts and line graphs and use these to solve problems