

## Problem Solving \& Reasoning

## KEY LEARNING IN MATHEMATICS - YEAR 1

## Number - number and place value

- Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number
- Count in multiples of twos, fives and tens
- Read and write numbers to 100 in numerals
- Read and write numbers from 1 to 20 in numerals and words
- Begin to recognise the place value of numbers beyond 20 (tens and ones)
- Identify and represent numbers using objects and pictorial representations including the number line
- Use the language of: equal to, more than, less than (fewer), most, least
- Given a number, identify one more and one less
- Recognise and create repeating patterns with numbers, objects and shapes
- Identify odd and even numbers linked to counting in twos from 0 and 1
- Solve problems and practical problems involving all of the above


## Number - fractions

- Understand that a fraction can describe part of a whole
- Understand that a unit fraction represents one equal part of a whole
- Recognise, find and name a half as one of two equal parts of an object shape or quantity (including measure)
- Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity (including measure)


## Number - addition and subtraction

- Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs
- Represent and use number bonds and related subtraction facts within 20
- Add and subtract one-digit and two-digit numbers to 20, including zero (using concrete objects and pictorial representations)
- Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7=\square-9$


## Geometry - properties of shapes

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


## Geometry - position and direction

- Describe movement, including whole, half, quarter and threequarter turns
- Recognise and create repeating patterns with objects and shapes
- Describe position and direction


## Statistics

- Sort objects, numbers and shapes to a given criterion and their own
- Present and interpret data in block diagrams using practical equipment
- Ask and answer simple questions by counting the number of objects in each category
- Ask and answer questions by comparing categorical data


## Number - multiplication and division

- Recall and use doubles of all numbers to 10 and corresponding halves
- Solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher


## Measurement

- Measure and begin to record:
- lengths and heights, using non-standard and then manageable standard units ( $\mathrm{m} / \mathrm{cm}$ )
- mass/weight, using non-standard and then manageable standard
units ( $\mathrm{kg} / \mathrm{g}$ )
- capacity and volume using non-standard and then manageable standard units (litres/ml)
- time (hours/minutes/seconds)
within children's range of counting competence
- Compare, describe and solve practical problems for:
- lengths and heights (for example, long/short, longer/shorter, tall/short, double/half)
- mass/weight (for example, heavy/light, heavier than, lighter than)
- capacity and volume (for example, full/empty, more than, less than,
half, half full, quarter)
- time (for example, quicker, slower, earlier, later)
- Recognise and use language relating to dates, including days of the week, weeks, months and years
- Sequence events in chronological order using language (for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening
- Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times
- Recognise and know the value of different denominations of coins and notes

