Primary Stage 2 Mathematics for Year 2

Number

Numbers and the number system

- Count, read and write numbers to at least 100 and back again.
- Count up to 100 objects, e.g. beads on a bead bar.
- Count on in ones and tens from single- and two-digit numbers and back again.
- Count in twos, fives and tens, and use grouping in twos, fives or tens to count larger groups of objects.
- Begin to count on in small constant steps such as threes and fours.
- Know what each digit represents in two-digit numbers; partition into tens and ones.
- Find 1 or 10 more/less than any two-digit number.
- Round two-digit numbers to the nearest multiple of 10.
- Say a number between any given neighbouring pairs of multiples of 10, e.g. 40 and 50.
- Place a two-digit number on a number line marked off in multiples of ten.
- Recognise and use ordinal numbers up to at least the 10th number and beyond.
- Order numbers to 100; compare two numbers using the > and <signs.
- Give a sensible estimate of up to 100 objects, e.g. choosing from 10, 20, 50 or 100.
- Understand even and odd numbers and recognise these up to at least 20.
- Sort numbers, e.g. odd/even, multiples of 2, 5 and 10.
    - Recognise that we write one half ½, one quarter ¼ and three quarters ¾.
    - Recognise that 2/2 or 4/4 make a whole and 1/2 and 2/4 are equivalent.
    - Recognise which shapes are divided in halves or quarters and which are not.
    - Find halves and quarters of shapes and small numbers of objects.

Calculation

Mental strategies
- Find and learn by heart all numbers pairs to 10 and pairs with a total of 20.
- Partition all numbers to 20 into pairs and record the related addition and subtraction facts.
- Find all pairs of multiples of 10 with a total of 100 and record the related addition and subtraction facts.
- Learn and recognise multiples of 2, 5 and 10 and derive the related division facts.
- Find and learn doubles for all numbers up to 10 and also 15, 20, 25 and 50.

Addition and subtraction
- Relate counting on/back in tens to finding 10 more/less than any two-digit number and then to adding and subtracting other multiples of 10, e.g. 75 – 30.
- Use the = sign to represent equality, e.g. 16 + 4 = 17 + 3.
- Add four or five small numbers together.
- Recognise the use of a symbol such as ⬜ or Δ to represent an unknown, e.g. Δ + ⬜ = 10.
- Solve number sentences such as 27 + ⬜ = 30.
- Add and subtract a single digit to and from a two-digit number.
- Add pairs of two-digit numbers.
- Find a small difference between pairs of two-digit numbers.
- Understand that addition can be done in any order, but subtraction cannot.
- Understand subtraction as both difference and take away.

Multiplication and division
- Understand multiplication as repeated addition and use the x sign.
- Understand multiplication as describing an array.
- Understand division as grouping and use the ÷ sign.

- Use counting in twos, fives or tens to solve practical problems involving repeated addition.
- Find doubles of multiples of 5 up to double 50 and corresponding halves.
- Double two-digit numbers.
- Work out multiplication and division facts for the 3x and 4x tables.
- Understand that division can leave some left over.

Geometry

Shapes and geometric reasoning
- Sort, name, describe, visualise and draw 2D shapes (e.g. squares, rectangles, circles, regular and irregular pentagons and hexagons) referring to their properties; recognise common 2D shapes indifferent positions and orientations.
- Sort, name, describe and make 3D shapes (e.g. cubes, cuboids, cones, cylinders, spheres and pyramids) referring to their properties; recognise 2D drawings of 3D shapes.
- Identify reflective symmetry in patterns and 2D shapes; draw lines of symmetry.
- Find examples of 2D and 3D shape and symmetry in the environment.

Position and movement
- Follow and give instructions involving position, direction and movement.
- Recognise whole, half and quarter turns, both clockwise and anti-clockwise.
- Recognise that a right angle is a quarter turn.

Measure

Money
- Recognise all coins and notes.
- Use money notation.
- Find totals and the coins and notes required to pay a given amount; work out change.

Length, mass and capacity
- Estimate, measure and compare lengths, weights and capacities, choosing and using suitable uniform non-standard and standard units and appropriate measuring instruments.
- Compare lengths, weights and capacities using the standard units: centimetre, metre, 100g, kilogram, and litre.

Time
- Know the units of time (seconds, minutes, hours, days, weeks, months and years).
- Know the relationships between consecutive units of time.
- Read the time to the half hour on digital and analogue clocks.
- Measure activities using seconds and minutes.
- Know and order the days of the week and the months of the year.

Handling data

Organising, categorising and representing data
- Answer a question by collecting and recording data in lists and tables, and representing it as block graphs and pictograms to show results.
- Use Carroll and Venn diagrams to sort numbers or objects using one criterion; begin to sort numbers and objects using two criteria; explain choices using appropriate language, including 'not'.

Problem solving

Using techniques and skills in solving mathematical problems

➢ Choose appropriate mental strategies to carry out calculations and explain how they worked out the answer.
➢ Explain methods and reasoning orally.
➢ Explore number problems and puzzles.
➢ Make sense of simple word problems (single and easy two-step), decide what operations (addition or subtraction, simple multiplication or division) are needed to solve them and, with help, represent them, with objects or drawings or on a number line.
➢ Make up a number story to go with a calculation, including in the context of money.
➢ Check the answer to an addition by adding the numbers in a different order or by using a different strategy, e.g. 35 + 19 by adding 20 to 35 and subtracting 1, and by adding 30 + 10 and 5 + 9.
➢ Check a subtraction by adding the answer to the smaller number in the original subtraction.
➢ Describe and continue patterns which count on in twos, threes, fours or fives to 30 or more.
➢ Identify simple relationships between numbers and shapes, e.g. this number is double ...; these shapes all have ... sides.
➢ Make a sensible estimate for the answer to a calculation.
➢ Consider whether an answer is reasonable.