Overview of Progression in Year 2

Number and place value

In Year 2, children develop their understanding of place value from Year 1, learning the place value of each digit in a two-digit number; for example, 23 means two tens and three ones. They begin to understand the use of 0 as a place holder. They will build on this when they consider place value in three-digit numbers in Year 3. Children learn to count in 3s, which will help develop the concept of a third. They order numbers from 0 to 100 and use the <, > and = signs. They become more independent in partitioning numbers in different ways, and this helps to support their work in addition and subtraction.

Addition and subtraction

Children use mental methods to solve problems using addition and subtraction, as well as using objects and pictorial representations. They begin to record addition and subtraction in columns, reinforcing their knowledge of place value. They independently use addition and subtraction facts to 20, and this helps them derive number facts up to 100, such as seeing the parallels between 2 + 6 = 8 and 20 + 60 = 80. They add and subtract different combinations of numbers, including two two-digit numbers. They understand the inverse relationship between addition and subtraction (that one operation undoes the other), and use this to check their calculations.

Multiplication and division

In Year 2, children learn the 2, 5 and 10 multiplication tables, and use these facts in calculations. They recognise that multiplication and division have an inverse relationship, and begin to use the × and ÷ symbols. They learn that multiplication is commutative (2 × 10 is the same as 10 × 2) whereas division is not (10 ÷ 2 is not the same as 2 ÷ 10).

Fractions

Children extend their understanding of fractions to 1/3 and 3/4 and learn that 1/2 is equivalent to 2/4. They read and write the symbols 1/2, 1/4 for example. As well as experimenting practically with fractions and connecting unit fractions to the concepts of sharing and grouping, they begin to write simple fractions, such as 1/4 of 8 = 2. They will develop this in Year 3 when they learn about tenths and begin to find out more about non-unit fractions.

Geometry: properties of shapes

By handling common 2D and 3D shapes (including quadrilaterals and cuboids, prisms, cones and polygons) children identify their properties, using the terms sides, edges, vertices and faces. They compare and sort shapes using their properties.

Geometry: position and direction

Children experiment with making patterns using shapes and begin to use the concept of right angles to describe quarter, half and three-quarter turns. They will develop this concept further in Year 3.

Statistics

Children are introduced to pictograms, tally charts, block diagrams and tables, using these to collate and compare information, and to ask and answer simple questions (for example, finding the number of items in a category, perhaps using one-to-many correspondence, or comparing different categories by quantity).

Year 2 Long Term Planning

Number and place value

- Using materials and a range of representations, children should practise counting, reading, writing and comparing numbers to at least 100 and solving a variety of related problems to develop fluency. They should count in multiples of three to support their later understanding of a third.
- As they become more confident with numbers up to 100, children should be introduced to larger numbers to develop further their recognition of patterns within the number system and represent them in different ways, including spatial representations.
- Children should partition numbers in different ways to support subtraction. They become fluent and apply their knowledge of numbers to reason with, discuss and solve problems that emphasise the value of each digit in two-digit numbers. They begin to understand zero as a place holder.

Multiplication and division

- Children should use a variety of language to describe multiplication and division.
- Children should be introduced to the multiplication tables. They practise to become fluent in the 2, 5 and 10 multiplication tables and connect them to each other. They connect the 10 multiplication table to place value, and the 5 multiplication table to the divisions on the clock face. They begin to use other multiplication tables and recall multiplication facts, including using related division facts to perform written and mental calculations.
- Children should work with a range of materials and contexts in which multiplication and division relate to grouping and sharing discrete and continuous quantities, relating these to fractions and measures (e.g. $40 \div 2 = 20$, 20 is a half of 40). They use commutativity and inverse relations to develop multiplicative reasoning (e.g. $4 \times 5 = 20$ and $20 \div 5 = 4$).

Measurement

- Children should use standard units of measurement with increasing accuracy, using their knowledge of the number system. They should use the appropriate language and record using standard abbreviations.
- They should become fluent in telling the time on analogue clocks and recording it.
- Children should also become fluent in counting and recognising coins. They should read and say amounts of money confidently and use the symbols £ and p accurately, recording pounds

Fractions

- Children should use additional fractions as 'fractions of' discrete and continuous quantities by solving problems using shapes, objects and quantities. They connect unit fractions to equal sharing and grouping, to numbers when they can be calculated, and to measures, finding fractions of lengths, quantity, a set of objects or shapes. They meet 3/4 as the first example of a non-unit fraction.
- Children should count in fractions up to 10, starting from any number and using the 1/2 and 2/4 equivalence on the number line (11/4, 12/4 , (or 11/2), 13/4, 2). This reinforces the concept of fractions as numbers and that they can add up to more than one.

Addition and subtraction

- Children should extend their understanding of the language of addition and subtraction to include sum and difference.
- Children should practise addition and subtraction to 20 to become increasingly fluent in deriving facts such as using $3 + 7 = 10$, $10 - 7 = 3$ and $7 = 10 - 3$ to calculate $30 + 70 = 100$, $100 - 70 = 30$ and $70 = 100 - 30$. They should check their calculations, including by adding to check subtraction and adding numbers in a different order to check addition ($5 + 2 + 1 = 1 + 5 + 2 = 1 + 2 + 5$). This establishes commutativity and associativity of addition.
- Recording addition and subtraction in columns supports place value and prepares for formal written methods with larger numbers.

Geometry: properties of shapes

- Children should handle and name a wider variety of common 2D and 3D shapes and identify the properties of each shape. Children identify, compare and sort shapes on the basis of their properties and use vocabulary precisely, such as sides, edges, vertices and faces.
- Children should read and write names for shapes that are appropriate for their word reading and spelling.
- Children should draw lines and shapes using a straight edge.

Statistics

- Children should record, interpret, collate, organise and compare information (e.g. using many-to-one correspondence with simple ratios 2, 5, 10).