



DIOCESE OF ARUNDEL AND BRIGHTON

St Pancras Catholic Primary School

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Overview of progression in Year 6

Number and place value

Children work with numbers up to 10,000,000, using knowledge of place value to work out the value of digits. They continue working with negative numbers in different contexts, and work out intervals across zero.

Addition, subtraction, multiplication and division Children continue to practise using efficient written and mental methods for all four operations, working with larger numbers and increasingly complex calculations, and confidently using number facts from the multiplication and division tables. They learn about the correct order of operations, understanding that (for example) to work out $(7 + 8) \div 3$ they need to tackle the operation in brackets first.

Fractions (including decimals and percentages)

Children begin to add and subtract fractions with different denominators. They multiply pairs of simple proper fractions together, and divide proper fractions by whole numbers.

Children begin to multiply and divide numbers with two decimal places by one-digit and two-digit whole numbers. They are introduced to this in practical contexts such as measures and money (for example, multiplying 1.80 metres by 2, or dividing £1.80 by 3).

Children extend their work on percentage and decimal equivalents of fractions, begun in Year 5. They work out simple percentages of whole numbers, and encounter equivalences between fractions, decimals and percentages in different contexts.

Ratio and proportion

In Year 6, children are introduced to the concepts of ratio and proportion and use these to compare quantities and sizes; for example, understanding that mixing sugar and flour in a ratio of 1:2 means using 1 part of sugar for every 2 parts of flour, and that the proportion of sugar in the mixture is 1 out of 3 parts, which is $\frac{1}{3}$.

Algebra

Children begin to form an understanding of algebra by encountering the use of symbols and letters to represent unknown elements, for example using letters to represent missing numbers



in missing number problems. They also describe and generate number sequences and patterns. They begin to use simple formulae expressed in words, such as 'the perimeter of a rectangle is two times the length plus two times the width.

Measurement

Children extend their Year 5 work on calculating area and estimating volume and capacity to calculate the area of parallelograms and triangles, and work out the volume of cubes and cuboids using standard units. They convert measurements from miles to kilometres.

Geometry: properties of shapes

This year, children make nets to build simple 3D shapes, and work out unknown angles in triangles, quadrilaterals and regular polygons. They draw and name the different parts of a circle (radius, diameter and circumference).

Geometry: position and direction

Extending their work with coordinate grids, children learn to describe positions on all four quadrants of the grid, including using negative numbers. They translate simple shapes on the coordinate plan, reflecting them in the axes.

Statistics

Children continue working with line graphs and also learn how to use pie charts, linking this with their work on angles, percentages and fractions. Children learn how to work out the mean of a set of data and understand when it might be appropriate to calculate the mean, and why.