

Year 6 Statutory Requirements

Number and Place Value

Pupils should be taught to:

- ♣ read, write, order and compare numbers up to 10 000 000 and determine the value of each digit
- ♣ round any whole number to a required degree of accuracy
- ♣ use negative numbers in context, and calculate intervals across zero
- ♣ solve number and practical problems that involve all of the above.

Number – Addition, Subtraction, multiplication and division

Pupils should be taught to:

- ♣ 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, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context
- ♣ divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context
- ♣ perform mental calculations, including with mixed operations and large numbers
- ♣ identify common factors, common multiples and prime numbers
- ♣ use their knowledge of the order of operations to carry out calculations involving the four operations
- ♣ solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why

Number – Fractions (including decimals and percentages)

Pupils should be taught to:

- ♣ use common factors to simplify fractions; use common multiples to express fractions in the same denomination
- ♣ compare and order fractions, including fractions > 1
- ♣ add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions
- ♣ multiply simple pairs of proper fractions, writing the answer in its simplest form [for example, $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$]
- ♣ divide proper fractions by whole numbers [for example, $\frac{1}{3} \div 2 = \frac{1}{6}$]
- ♣ associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, $\frac{3}{8}$]
- ♣ identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places
- ♣ multiply one-digit numbers with up to two decimal places by whole numbers
- ♣ 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

Pupils should be taught to:

- ♣ solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts
- ♣ solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison
- ♣ solve problems involving similar shapes where the scale factor is known or can be found
- ♣ solve problems involving unequal sharing and grouping using knowledge of fractions and multiples.

Algebra

Pupils should be taught to:

- ♣ use simple formulae
- ♣ generate and describe linear number sequences
- ♣ express missing number problems algebraically
- ♣ find pairs of numbers that satisfy an equation with two unknowns
- ♣ enumerate possibilities of combinations of two variables.

Measurement

Pupils should be taught to:

- ♣ solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate
- ♣ use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places
- ♣ convert between miles and kilometres
- ♣ recognise that shapes with the same areas can have different perimeters and vice versa
- ♣ recognise when it is possible to use formulae for area and volume of shapes
- ♣ calculate the area of parallelograms and triangles
- ♣ calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm³) and cubic metres (m³), and extending to other units [for example, mm³ and km³].

Geometry - Properties of shapes

Pupils should be taught to:

- ♣ draw 2-D shapes using given dimensions and angles
- ♣ recognise, describe and build simple 3-D shapes, including making nets
- ♣ compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons
- ♣ illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius
- ♣ recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.

Geometry – position and direction

Pupils should be taught to:

- ♣ describe positions on the full coordinate grid (all four quadrants)
- ♣ draw and translate simple shapes on the coordinate plane, and reflect them in the axes.

Statistics

Pupils should be taught to:

- ♣ interpret and construct pie charts and line graphs and use these to solve problems
- ♣ calculate and interpret the mean as an average.

Overview of Year 6

| | Week 1 | Week 2 | Week 3 | Week 4 | Week 5 | Week 6 | Week 7 | Week 8 | Week 9 | Week 10 | Week 11 | Week 12 |
|--------|--------------------------------|--------|--|--------|-----------------|------------|------------------------------|--|--------|---------------|----------------------------------|---------------|
| Autumn | Number- Place Value | | Number- Addition, Subtraction, Multiplication and Division | | | | Fractions | | | | Geometry- Position and Direction | Consolidation |
| Spring | Number- Decimals | | Number- Percentages | | Number- Algebra | | Measurement Converting units | Measurement Perimeter, Area and Volume | | Number- Ratio | | Consolidation |
| Summer | Geometry- Properties of Shapes | | Problem solving | | | Statistics | | Investigations | | | | Consolidation |

