Year 4 Yearly Overview
National Curriculum Links to Ready to Progress Criteria and small steps teaching.

Number – number and place value

Statutory requirements

Pupils should be taught to

- count in multiples of 6, 7, 9, 25 and 1000
- find 1000 more or less than a given number
- count backwards through zero to include negative numbers
- recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones)
- order and compare numbers beyond 1000
- identify, represent and estimate numbers using different representations
- round any number to the nearest 10, 100 or 1000
- solve number and practical problems that involve all of the above and with increasingly large positive numbers
- read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value.

- **4NPV–1** Know that 10 hundreds are equivalent to 1 thousand, and that 1,000 is 10 times the size of 100; apply this to identify and work out how many 100s there are in other four-digit multiples of 100.
- **4NPV–2** Recognise the place value of each digit in four-digit numbers, and compose and decompose four-digit numbers using standard and nonstandard partitioning..
- **4NPV–3** Reason about the location of any four digit number in the linear number system, including identifying the previous and next multiple of 1,000 and 100, and rounding to the nearest of each.

Small Steps: Place Value

- Roman numerals to 100.
- Round to the nearest 10.
- Round to the nearest 100.
- Count in 1,000s.
- 1,000s, 100s, 10s and 1s.
- Partitioning.
- Number line to 10,000.
- 1,000 more or less.
- Compare numbers.
- Order numbers.
- Round to the nearest 1,000.
- Count in 25s.
- Negative numbers.

Number – addition and subtraction

Statutory requirements

Pupils should be taught to:

- add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate
- estimate and use inverse operations to check answers to a calculation
- solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.

- **4NF–3** Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 100)

Small Steps
Addition and subtraction

- Add and subtract 1s, 10s, 100s and 1000s.
- Add two 4-digit numbers – no exchange.
- Add two 4-digit numbers – one exchange.
- Add two 4-digit numbers – more than one exchange.
- Subtract two 4-digit numbers – no exchange.
- Subtract two 4-digit numbers – one exchange.
- Subtract two 4-digit numbers – more than one exchange.
- Efficient subtraction.
- Estimate answers.
- Checking strategies.

Number – multiplication and division

Statutory requirements

Pupils should be taught to:

- recall multiplication and division facts for multiplication tables up to 12 × 12
- use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers
- recognise and use factor pairs and commutativity in mental calculations
- multiply two-digit and three-digit numbers by a one-digit number using formal written layout
- solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects.

Small Steps: Multiplication and division (1)

- Multiply by 10.
- Multiply by 100.
- Divide by 10.
- Divide by 100.
- Multiply by 1 and 0.
- Divide by 1.
- Multiply and divide by 6.
- 6 times-table and division facts.
- Multiply and divide by 9.
- 9 times-table and division facts.
- Multiply and divide by 7.
- 7 times-table and division facts.

- **4NF–1** Recall multiplication and division facts up to 12 x 12, and recognise products in multiplication tables as multiples of the corresponding number
- **4MD–1** Multiply and divide whole numbers by 10 and 100 (keeping to whole number quotients); understand this as equivalent to making a number 10 or 100 times the size.

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Small Steps: Multiplication and division (2)

- 11 and 12 times-table.
- Multiply 3 numbers.
- Factor pairs.
- Efficient multiplication.
- Written methods.
- Multiply 2-digits by 1 –digit.
- Multiply 3-digits by 1-digit.
- Divide 2-digits by 1-digit (1).
- Divide 2-digits by 1-digit (2).
- Correspondence problems.

- **4NF–2** Solve division problems, with two-digit dividends and one-digit divisors, that involve remainders, and interpret remainders appropriately according to the context.
- **4NF–3** Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 100)
- **4MD–2** Manipulate multiplication and division equations, and understand and apply the commutative property of multiplication.
- **4MD–3** Understand and apply the distributive property of multiplication.

Number – fractions (including decimals)

Statutory requirements

Pupils should be taught to:

- recognise and show, using diagrams, families of common equivalent fractions
- count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten.
- solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number
- add and subtract fractions with the same denominator
- recognise and write decimal equivalents of any number of tenths or hundredths
- recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$
- find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths
- round decimals with one decimal place to the nearest whole number
- compare numbers with the same number of decimal places up to two decimal places
- solve simple measure and money problems involving fractions and decimals to two decimal places.

4F-1: Reason about the location of mixed numbers in the linear system.
4F-2: Convert mixed numbers to improper fractions and vice versa.
4F-3: Add and subtract improper and mixed fractions with the same denominator, including bridging whole numbers.

Small Steps:

- What is a fraction?
- Equivalent fractions (1)
- Equivalent fractions (2).
- Fractions greater than 1.
- Count in fractions.
- Add 2 or more fractions.
- Subtract 2 fractions.
- Subtract from whole amounts.
- Calculate fractions of a quantity.
- Problem solving – calculate quantities.

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- round decimals with one decimal place to the nearest whole number
- compare numbers with the same number of decimal places up to two decimal places
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Small Steps: Decimals

- Recognise tenths and hundredths.
- Tenths as decimals.
- Tenths on a place value grid.
- Tenths on a number line.
- Divide 1 digit by 10.
- Divide 2 digits by 10.
- Hundredths.
- Hundredths as decimals.
- Hundredths on a place value grid.
- Divide 1 or 2 digits by 100.

Measurement

Statutory requirements

Pupils should be taught to:

- convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre)
- understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints
- measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres
- calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres (cm^2) and square metres (m^2) and estimate the area of irregular shapes
- estimate volume [for example, using 1 cm^3 blocks to build cuboids (including cubes)] and capacity [for example, using water]
- solve problems involving converting between units of time
- use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling.

5NVP-5:Convert between units of measure, including using common decimals and fractions.

Small Steps: Converting units

- Kilograms and kilometres.
- Milligrams and millilitres.
- Metric units.
- Imperial units.
- Converting units of time.
- Timetables.

- What is volume?
- Compare volume.
- Estimate volume.
- Estimate capacity.

Geometry – properties of shapes

Statutory requirements

Pupils should be taught to:

- identify 3-D shapes, including cubes and other cuboids, from 2-D representations
- know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles
- draw given angles, and measure them in degrees (°)
- identify:
  - angles at a point and one whole turn (total 360°)
  - angles at a point on a straight line and $\frac{1}{2}$ a turn (total 180°)
  - other multiples of 90°
- use the properties of rectangles to deduce related facts and find missing lengths and angles
- distinguish between regular and irregular polygons based on reasoning about equal sides and angles.

Small Steps: Shapes

- Measuring angles in degrees.
- Measuring with a protractor (1).
- Measuring with a protractor (2).
- Drawing lines and angles accurately.
- Calculating angles on a straight line.
- Calculating angles around a point.
- Calculating lengths and angles in shapes.
- Regular and irregular polygons.
- Reasoning about 3D shapes.

- **5G–1** Compare angles, estimate and measure angles in degrees (°) and draw angles of a given size.

Geometry – position and direction

Statutory requirements

Pupils should be taught to:

- identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed.

Small Steps Position and direction

- Position in the first quadrant.
- Reflection.
- Reflection with coordinates.
- Translation.
- Translation with coordinates.

- **5G–2** Compare areas and calculate the area of rectangles (including squares) using standard units.

Statistics

Statutory requirements
Pupils should be taught to: ▪ solve comparison, sum and difference problems using information presented in a line graph ▪ complete, read and interpret information in tables, including timetables.

5NVP-4: Divide 1 into 2,4,5 and 10 equal parts and read scales marked in units of 1 with 2,4,5 and 10 equal parts.

Small Steps: Statistics
• Read and interpret line graphs. • Draw line graphs. • Use line graphs to solve problems. • Read and interpret tables. • Two way tables. • Timetables.