



Samuel Barlow
Primary Academy

Maths Curriculum

Overview



For detailed progression
click each title

[Mapping and Assessing Progress](#)

[Pre-Key Stage Standards](#)

[Number and Place Value](#)

[Cognition: Using number](#)

[Addition and Subtraction](#)

B Squared

[Multiplication and Division](#)

[Fractions, Decimals and Percentages](#)

[Measurement](#)

[Cognition: Problem solving Representing Ideas](#)

[Geometry—properties of shapes
Geometry—position and direction](#)

[Cognition: Problem solving Representing Ideas](#)

[Statistics](#)

[Communication: Handling Information](#)

[Algebra Ratio and Proportion](#)

Maths Curriculum Map

Mathematics Curriculum Summary Map

Nursery

Reception

Year 1

Year 2

Cardinality and counting

Composition

Comparison

Count, read and compare to 100, write to 20
Count in multiples of 2s 5s 10s
One more or one less

Count in steps of 2, 3, 5, 10
Compare and order up to 100
Read, write to 100 in numerals and words
Place Value in 2 digit numbers

Represent and use facts to 20
+ & - 1 digit and 2 digit nos. to 20, reading, writing mathematical statements using + -

Recall facts to 20 fluently → & - using concrete, pictorial and mental with two-digit nos. and 3 single digit nos.
Rec. Inverse and commutativity

Count in steps as above; recall x & / facts for 2, 5, 10
Show that x is commutative but / is not, use symbols to record

Count in fractions up to 10 and using equivalence. Reciprocal, name, find and write fractions as equal parts of an object, shape or quantity using halves and quarters, recognise equivalence.

Recognise, find and draw each half as one of two equal parts, and a quarter as one of four equal parts of an object, shape or quantity

Count in fractions up to 10 and using equivalence. Recognise, name, find and write fractions as equal parts of an object, shape or quantity using halves and quarters, recognise equivalence.

Measures

Pattern

Shape

Compare, describe and solve practical problems using length, mass, volume/capacity and time. Sequence events in chronological order and know the value of coins and notes. Tell the time to the hour, half past and draw hands on a clock, and use a.m./p.m. and o'clock notation.

Compare and order lengths, mass, volume/capacity and second the results using <, = and >. Compare & measure intervals of time. Choose & use appropriate standard units to estimate and measure the & use t p. combine amounts to make a value and equal amounts, solving simple problems, giving change, tell and solve the time to hours and draw hands on a clock, telling the no. of minutes in an hour and hours for a day.

Rec. & name 2D and 3D shapes, comparing and sorting

Identify and describe properties of 2D and 3D shapes, comparing and sorting thousand everyday objects

Describe position, direction and movement including half, quarter and three-quarter turns

Use mathematical vocabulary to describe position, direction, & movement inc. rotation. Order & arrange patterns and sequences

Interpret and construct simple pictograms, tally charts, block diagrams and simple tables. Ask and answer questions about totals, finding and comparing categorical data.

Interpret and use the inverse relationship between & - use this to check calculations and missing number problems. Recall & use + & - facts fluently to 20. Compare & sequence intervals of time. Create repeating and comparing patterns.

Solve one-step problems using + & - and missing number problems using concrete objects and pictorial representations. Recall & use + & - facts fluently within 20. Sequence events in chronological order.

Interpret and use the inverse relationship between & - use this to check calculations and missing number problems. Recall & use + & - facts fluently to 20. Compare & sequence intervals of time. Create repeating and comparing patterns.



For detailed progression click each title

Coherent small steps **Representation and structure** **Mathematical thinking** **Variation** **Fluency**

Number and Place Value

Count from 0 in multiples of 4, 8, 50 and 100
Find 10 or 100 more or less than a given number
Compare and order numbers up to 1000
Read and write numbers up to 1000
Recognise the place value of 3 digit numbers

Year 3

Addition and Subtraction

Mentally and using formal written methods up to 3 digits
Estimate and use inverse to check

Multiplication and Division

Count in multiples of 4, 8, 50, 100 from 0
Recall multiplication and division facts for 3, 4, 8
Write and calculate inc. 2digit x 1 digit using mental and formal written layout

Fractions, Decimals and Percentages

Count up and down in 10ths. Recognise that 10ths arise from dividing an object into 10 equal parts. Recognise Find and write unit fractions and non-unit fractions with small denominators. Compare and order unit fractions and fractions with the same denominator. Recognise and show diagrams, equivalent fractions with small denominators. Add and subtract fractions with the same denominator.

Measurement

Estimate, compare, calculate and record different measures, including money in pounds and pence as well as time to the nearest minutes. Find the perimeter of simple 2D shapes. Calculate money giving change. Tell and write analogue time to Roman numerals. Estimate & read time with increasing accuracy. Know seconds in a minute, days in each month, year & leap year.

Geometry—properties of shapes Geometry—position and direction

Draw and make 2D and 3D shapes. Recognise 3D shapes in different orientations. Recognise angles as a property of shape including right angles. Identify horizontal, vertical, perpendicular and parallel lines.

Statistics

Interpret and present data using bar charts, pictograms and tables. Solve one-step and two-step questions using information in bar charts, pictograms and tables.

Algebra Ratio and Proportion

Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction. Solve problems, inc. missing number problems involving x & / including integer scaling

Mathematics Curriculum Summary Map

Year 5

Counting forwards and backwards including negative numbers and in steps of powers of 10 to 1,000,000—reading, writing, comparing, rounding and ordering numbers knowing their place value. Read Roman numerals to M and recognise years.

Year 6

Counting forwards and backwards including negative numbers and in steps of powers of 10 to 10,000,000—reading, writing, ordering and comparing numerals knowing their place value, rounding to any degree.

Mental calculations including with mixed operations and large numbers.

Use the knowledge of the order of operations using all four operations.
Use estimation to check accuracy.

Mental calculations including with mixed operations and large numbers.

Multiply & divide up to 4 digit numbers mentally by up to 2 digit numbers using formal written methods.
Identify common factors, multiples and prime numbers.
Use knowledge to carry out order of operations using all four operations. Use estimation to check answers.

Mental calculations including with mixed operations and large numbers.

Multiply & divide up to 4 digit numbers by up to 2 digit numbers using formal written methods.
Identify common factors, multiples and prime numbers.
Use knowledge to carry out order of operations using all four operations. Use estimation to check answers.

Calculate and compare the area of squares and rectangles. Estimate volume. Use all 4 operations to solve measure problems.

Measure and calculate perimeter of composite rectilinear shapes. Calculate & compare the area of squares & rectangles using standard units & notation. Convert between different units of metric measure inc. time. Understand & use equivalence.

Identify 3D shapes from 2D representations. Draw given angles and measure angles. Use properties of angles to deduce facts and find lengths & angles. Distinguish between regular and irregular polygons. Find angles as measured in degrees, compare acute, obtuse & reflex angles. Identify angles at a point and one whole turn, as a straight line (1/2 a turn) and other multiples of right angles.

Describe positions on a 2D grid as coordinates. Describe movements as translations of a given unit. Plot specified points and draw sides to complete a given polygon.

Identify describe & represent the position of a shape following a reflection or translation

Describe positions on the full coordinate grid. Draw and translate simple shapes on the coordinate plane, and reflect them in lines.

Complete, read and interpret information in tables, including timetables. Solve comparison, sum and difference problems using information presented in a line graph.

Interpret and construct pie charts and line graphs and use these to solve problems. Calculate and interpret the mean as average.

Express missing number problems algebraically. Find pairs of numbers that satisfy number sentence involving two unknowns.

Enumerate all possibilities of combinations of two variables. Use simple formulae. Rec. when it is possible to use formulae for area and volume of shapes. Generate and describe linear number sequences.