## Maths progression

### Counting
- Year 1: Count to and across 100, forward and backward, beginning with any digit and 1 or from any given number. Count, read and write numbers to 100 in numerals; count in multiples of tens, forwards and backwards.
- Year 2: Count in steps of 2, 3, and 5 from 0, and in tens from any number forward and backward.
- Year 3: Recognise the place value of each digit in a two-digit number (hundreds, tens and units) and compare and order numbers from 0 up to 100; use <, > and = signs.
- Year 4: Recognise the place value of each digit in a two-digit number and compare and order numbers up to 1000.
- Year 5: Recognise the place value of each digit in a three-digit number (hundreds, tens and units) and compare and order numbers beyond 1000.
- Year 6: Read, write, order and compare numbers up to 10 000 000 and determine the value of each digit around any number up to 10 000 000 to the nearest 1 000, 10 000, 100 000 and 100 000 000.

### Place Value
- Year 1: Identify, represent and estimate numbers using objects, pictorial representations, including the number line, and use language of: more than, less than (fewer), equal to, using the equals (=) sign, between.
- Year 2: Identify, represent and estimate numbers using different representations, including the number line and read and write numbers to at least 100 in numerals and in words.
- Year 3: Identify, represent and estimate numbers using different representations, including the number line, read and write numbers to at least 1000 in numerals and in words.
- Year 4: Identify, represent and estimate numbers using different representations, including the number line.
- Year 5: Identify 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.
- Year 6: Read Roman numerals to 1000 (M) and recognise years written in Roman numerals.

### Representing number
- Year 1: Recognise and use the inverse relationship between addition and subtraction of one number from another.
- Year 2: Add and subtract one-digit numbers to 20, including zero.
- Year 3: Add and subtract one-digit and two-digit numbers to 20, including zero.
- Year 4: Add and subtract numbers mentally, including: $10+1$, $10+10$ and $10+100$.
- Year 5: Add and subtract numbers mentally with increasingly large numbers.
- Year 6: Subtract numbers mentally, including with mixed operations and large numbers.

### Number facts (+/-)
- Year 1: Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: $10+1$, $10+10$, $10+100$, and zero.
- Year 2: Add and subtract numbers with up to three digits using formal written methods of columnar addition and subtraction.
- Year 3: Add and subtract numbers mentally, including: $10+1$, $10+10$, and $10+100$.
- Year 4: Add and subtract numbers with up to four digits using formal written methods of columnar addition and subtraction where appropriate.
- Year 5: Add and subtract whole numbers with up to more than 5 digits, using formal written methods.
- Year 6: Add and subtract whole numbers with up to more than 5 digits, using formal written methods.

### Mental +/-
- Year 1: Identify and represent numbers using objects and pictorial representations and related subtraction facts, up to 20.
- Year 2: Identify and represent numbers using different representations, including the number line and read and write numbers to at least 100 in numerals and in words.
- Year 3: Identify and represent numbers using different representations, including the number line.
- Year 4: Identify and represent numbers using different representations, including the number line.
- Year 5: Identify and represent numbers using different representations, including the number line and read and write numbers to at least 1000 in numerals and in words.
- Year 6: Identify and represent numbers using different representations, including the number line and read Roman numerals to 1000 (M) and recognise years written in Roman numerals.

### Written +/-
- Year 1: Use their knowledge of the order of operations to carry out calculations involving all four operations on whole numbers with up to three digits, using formal written methods of columnar addition and subtraction where appropriate.
- Year 2: Use their knowledge of the order of operations to carry out calculations involving all four operations on whole numbers with up to three digits, using formal written methods of columnar addition and subtraction where appropriate.
- Year 3: Use their knowledge of the order of operations to carry out calculations involving all four operations on whole numbers with up to more than 5 digits, using formal written methods.
- Year 4: Use their knowledge of the order of operations to carry out calculations involving all four operations on whole numbers with up to more than 5 digits, using formal written methods.
- Year 5: Use their knowledge of the order of operations to carry out calculations involving all four operations on whole numbers with up to more than 5 digits, using formal written methods.
- Year 6: Use their knowledge of the order of operations to carry out calculations involving all four operations on whole numbers with up to more than 5 digits, using formal written methods.

### Problems +/-
- Year 1: Represent and use number bonds and related subtraction facts, including for two-digit numbers times one-digit numbers, using multiplication tables that they know, and simple integer scaling problems and correspondence problems such as n objects are connected to m objects.
- Year 2: Solve problems, including missing number problems, involving addition and subtraction two-step problems in contexts, decoding which operations and methods to use and why.
- Year 3: Represent and use number bonds and related subtraction facts, including for two-digit numbers times one-digit numbers, using multiplication tables that they know, and simple integer scaling problems and correspondence problems such as n objects are connected to m objects.
- Year 4: Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.
- Year 5: Solve problems involving multiplication and division, including understanding the meaning of the equals sign and large numbers.
- Year 6: Solve problems involving multiplication and division, interpreting the meaning of the equals sign and large numbers.

### Number facts (x/÷)
- Year 1: Read and write numbers from 1 to 20 in numerals and words.
- Year 2: Read and write numbers to at least 100 in numerals and in words.
- Year 3: Read and write numbers to at least 100 in numerals and in words.
- Year 4: Read and write numbers to at least 1000 in numerals and in words.
- Year 5: Read and write numbers to at least 10 000 in numerals and in words.
- Year 6: Read and write numbers to at least 10 000 000 in numerals and in words.

### Mental (x/÷)
- Year 1: Recognise, find, name and write fractions 1/3, 1/4, 2/4 and 3/4 of an object, shape or quantity.
- Year 2: Recognise, find, name and write fractions 1/3, 1/4, 2/4 and 3/4 of an object, shape or quantity.
- Year 3: Recognise, find, name and write fractions 1/3, 1/4, 2/4 and 3/4 of an object, shape or quantity.
- Year 4: Recognise, find, name and write fractions 1/3, 1/4, 2/4 and 3/4 of an object, shape or quantity.
- Year 5: Recognise, find, name and write fractions 1/3, 1/4, 2/4 and 3/4 of an object, shape or quantity.
- Year 6: Recognise, find, name and write fractions 1/3, 1/4, 2/4 and 3/4 of an object, shape or quantity.

### Written (x/÷)
- Year 1: Recognise and use the inverse relationship between multiplication and division of one number by another.
- Year 2: Recognise and use the inverse relationship between multiplication and division of one number by another.
- Year 3: Recognise and use the inverse relationship between multiplication and division of one number by another.
- Year 4: Recognise and use the inverse relationship between multiplication and division of one number by another.
- Year 5: Recognise and use the inverse relationship between multiplication and division of one number by another.
- Year 6: Recognise and use the inverse relationship between multiplication and division of one number by another.

### Problems (x/÷)
- Year 1: Solve problems involving addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $x + 5 = 12$.
- Year 2: Solve problems involving addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $x + 5 = 12$.
- Year 3: Solve problems involving addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $x + 5 = 12$.
- Year 4: Solve problems involving addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $x + 5 = 12$.
- Year 5: Solve problems involving addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $x + 5 = 12$.
- Year 6: Solve problems involving addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $x + 5 = 12$.

### Recognising fractions
- Year 1: Recognise, name and write halves, quarters, three-quarters and whole.
- Year 2: Recognise, name and write fractions 1/2, 1/4, 3/4, 2/3, and whole.
- Year 3: Recognise, name and write fractions 1/2, 1/4, 3/4, 2/3, and whole.
- Year 4: Recognise, name and write fractions 1/2, 1/4, 3/4, 2/3, and whole.
- Year 5: Recognise, name and write fractions 1/2, 1/4, 3/4, 2/3, and whole.
- Year 6: Recognise, name and write fractions 1/2, 1/4, 3/4, 2/3, and whole.
<table>
<thead>
<tr>
<th>Menu</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
<th>Year 6</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Comparing fractions</strong></td>
<td>Recognise and show, using diagrams, equivalent fractions with small denominators</td>
<td>Recognise and show, using diagrams, equivalent fractions with small denominators</td>
<td>Recognise and show, using diagrams, equivalent fractions with small denominators</td>
<td>Recognise and show, equivalent denominators are all multiples of the same number. Identify, name and write equivalent fractions of a given fraction represented visually, including tenths and hundredths</td>
<td>Use common factors to simplify fractions. Use common multiples to express fractions in the same denomination. Compare and order fractions, including fractions &gt;1.</td>
<td></td>
</tr>
<tr>
<td><strong>Finding fractions of quantities</strong></td>
<td>Recognise, read and write fractions of a discrete set of objects, fractions and non-unit fractions with small denominators. Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators.</td>
<td>Recognise, read and write fractions of a discrete set of objects, fractions and non-unit fractions with small denominators. Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators.</td>
<td>Recognise, read and write fractions of a discrete set of objects, fractions and non-unit fractions with small denominators. Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators.</td>
<td>Recognise, read and write fractions of a discrete set of objects, fractions and non-unit fractions with small denominators. Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators.</td>
<td>Recognise, read and write fractions of a discrete set of objects, fractions and non-unit fractions with small denominators. Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators.</td>
<td></td>
</tr>
<tr>
<td><strong>Fraction calculations</strong></td>
<td>Add and subtract fractions with the same denominator and fractions where the answer is a whole number.</td>
<td>Add and subtract fractions with the same denominator and fractions where the answer is a whole number.</td>
<td>Add and subtract fractions with the same denominator and fractions where the answer is a whole number.</td>
<td>Add and subtract fractions with the same denominator and fractions where the answer is a whole number.</td>
<td>Add and subtract fractions with the same denominator and fractions where the answer is a whole number.</td>
<td></td>
</tr>
<tr>
<td><strong>Decimals as fractional amounts</strong></td>
<td>Recognise and write decimal equivalents of any number of tenths or hundredths. Recognise and write decimal equivalents to 3, 5, and 10.</td>
<td>Recognise and write decimal equivalents to 3, 5, and 10.</td>
<td>Recognise and write decimal equivalents to 3, 5, and 10.</td>
<td>Recognise and write decimal equivalents to 3, 5, and 10.</td>
<td>Recognise and write decimal equivalents to 3, 5, and 10.</td>
<td></td>
</tr>
<tr>
<td><strong>Ordering decimals</strong></td>
<td>Compare numbers with the same number of decimal places up to two decimal places.</td>
<td>Compare numbers with the same number of decimal places up to two decimal places.</td>
<td>Compare numbers with the same number of decimal places up to two decimal places.</td>
<td>Compare numbers with the same number of decimal places up to two decimal places.</td>
<td>Compare numbers with the same number of decimal places up to two decimal places.</td>
<td></td>
</tr>
<tr>
<td><strong>Calculating with decimals</strong></td>
<td>Recognise and use thousandths and relate them to tenths, hundredths and thousandths.</td>
<td>Recognise and use thousandths and relate them to tenths, hundredths and thousandths.</td>
<td>Recognise and use thousandths and relate them to tenths, hundredths and thousandths.</td>
<td>Recognise and use thousandths and relate them to tenths, hundredths and thousandths.</td>
<td>Recognise and use thousandths and relate them to tenths, hundredths and thousandths.</td>
<td></td>
</tr>
<tr>
<td><strong>Percentages</strong></td>
<td>Solve problems using all fraction knowledge.</td>
<td>Solve problems using all fraction knowledge.</td>
<td>Solve problems using all fraction knowledge.</td>
<td>Solve problems using all fraction knowledge.</td>
<td>Solve problems using all fraction knowledge.</td>
<td></td>
</tr>
<tr>
<td><strong>Fraction problems</strong></td>
<td>Solve simple measures and money problems involving fractions.</td>
<td>Solve simple measures and money problems involving fractions.</td>
<td>Solve simple measures and money problems involving fractions.</td>
<td>Solve simple measures and money problems involving fractions.</td>
<td>Solve simple measures and money problems involving fractions.</td>
<td></td>
</tr>
<tr>
<td><strong>Ratio &amp; Proportion</strong></td>
<td>Solve problems involving similar shapes where the scale factor is known or can be found.</td>
<td>Solve problems involving similar shapes where the scale factor is known or can be found.</td>
<td>Solve problems involving similar shapes where the scale factor is known or can be found.</td>
<td>Solve problems involving similar shapes where the scale factor is known or can be found.</td>
<td>Solve problems involving similar shapes where the scale factor is known or can be found.</td>
<td></td>
</tr>
<tr>
<td><strong>Measures</strong></td>
<td>Compare and order unit fractions, and fractions with the same denominators.</td>
<td>Compare and order unit fractions, and fractions with the same denominators.</td>
<td>Compare and order unit fractions, and fractions with the same denominators.</td>
<td>Compare and order unit fractions, and fractions with the same denominators.</td>
<td>Compare and order unit fractions, and fractions with the same denominators.</td>
<td></td>
</tr>
<tr>
<td><strong>Mensuration</strong></td>
<td>Recognise shapes that have the same area can have different perimeters and vice versa. Recognise when it is possible to use formulae for area and volume.</td>
<td>Recognise shapes that have the same area can have different perimeters and vice versa. Recognise when it is possible to use formulae for area and volume.</td>
<td>Recognise shapes that have the same area can have different perimeters and vice versa. Recognise when it is possible to use formulae for area and volume.</td>
<td>Recognise shapes that have the same area can have different perimeters and vice versa. Recognise when it is possible to use formulae for area and volume.</td>
<td>Recognise shapes that have the same area can have different perimeters and vice versa. Recognise when it is possible to use formulae for area and volume.</td>
<td></td>
</tr>
<tr>
<td>Menu</td>
<td>Year 1</td>
<td>Year 2</td>
<td>Year 3</td>
<td>Year 4</td>
<td>Year 5</td>
<td>Year 6</td>
</tr>
<tr>
<td>--------------</td>
<td>------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Money</td>
<td>Recognise and know the value of different denominations of coins and notes</td>
<td>Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value</td>
<td>Odd and subtract amounts of money for change, using both £ and p in practical contexts</td>
<td>Year 4: Four operations to solve problems involving money (for example, length, mass, volume, money) using decimal notation, including scaling</td>
<td>Year 5: Four operations to solve problems involving money (for example, length, mass, volume, money) using decimal notation, including scaling</td>
<td>Year 6: Four operations to solve problems involving money (for example, length, mass, volume, money) using decimal notation, including scaling</td>
</tr>
<tr>
<td>Time</td>
<td>Sequence events in chronological order using language recognising and sun language relating to dates, including days of the week, weeks, months and years</td>
<td>Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times</td>
<td>Compare and sequence intervals of time and write the time to five minutes, including quarter past and to half past. Draw and draw the hands on a clock face to show these times. Know the number of minutes in an hour and the number of hours in a day</td>
<td>Count between different units of measure (e.g. hours to minutes), read and interpret time from analogue and digital 12- and 24-hour clocks</td>
<td>Solve problems involving converting between units of time</td>
<td>Solve problems involving converting between units of time</td>
</tr>
<tr>
<td>Shape vocabulary</td>
<td>Recognise and name common 3-D shapes (e.g. cubes, cuboids, pyramids &amp; spheres)</td>
<td>Recognise and use vocabulary to describe position, direction and movement, including whole, half, quarter, three quarter and full turns. Know that a half turn, three make three quarters of a turn and four a complete turn. Identify whether angles are greater or less than right angle.</td>
<td>Identify and describe the properties of 2-D shapes, including the number of edges and vertices, and of 3-D shapes and everyday objects.</td>
<td>Identify and describe the properties of 2-D shapes, including the number of edges, vertices and faces. Identify and describe the properties of 3-D shapes in different orientations and describe them as a combination of cubes, cuboids and triangles.</td>
<td>Identify 2-D shapes, including triangles and other curvilinear, from 2-D representations</td>
<td>Identify 2-D shapes, including triangles and other curvilinear, from 2-D representations</td>
</tr>
<tr>
<td>Properties of 2-D shape</td>
<td>Identify and describe the properties of 2-D shapes, including the number of edges, vertices and faces. Identify 2-D shapes on the surface of 3-D shapes. Compare and sort common 2-D and 3-D shapes and everyday objects.</td>
<td>Use basic geometric vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and full turns.</td>
<td>Use basic geometric vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and full turns.</td>
<td>Recognise angles as a property of shapes or as a description of a turn. Identify right angles; recognise that two right angles make a half turn; three make four quarters (a complete turn). Identify angles that are greater or less than a right angle.</td>
<td>Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.</td>
<td>Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.</td>
</tr>
<tr>
<td>Properties of 3-D shape</td>
<td>Recognise 2-D shapes on the surface of 3-D shapes. Compare and sort common 2-D and 3-D shapes and everyday objects.</td>
<td>Describe position, direction and movement, including whole, half, quarter and three-quarter turns.</td>
<td>Describe position, direction and movement, including whole, half, quarter and three-quarter turns.</td>
<td>Identify lines of symmetry in 2-D shapes presented in different orientations. Recognise a simple symmetric figure with respect to a specific line of symmetry.</td>
<td>Reflect shapes in the axes.</td>
<td>Reflect shapes in the axes.</td>
</tr>
<tr>
<td>Angles</td>
<td>Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces. Identify 2-D shapes on the surface of 3-D shapes. Compare and sort common 2-D and 3-D shapes and everyday objects.</td>
<td>Order and arrange combinations of mathematical objects in patterns and sequences. Over-numeracy to add, subtract, divide and multiply using a range of apparatus.</td>
<td>Order and arrange combinations of mathematical objects in patterns and sequences. Over-numeracy to add, subtract, divide and multiply using a range of apparatus.</td>
<td>Identify acute and obtuse angles and compare and order angles up to two right angles by size.</td>
<td>Identify angles at a point and one whole turn (total 360°).</td>
<td>Identify angles at a point and one whole turn (total 360°).</td>
</tr>
<tr>
<td>Position &amp; Direction</td>
<td>Describe position, direction and movement, including whole, half, quarter and three-quarter turns.</td>
<td>Use basic geometric vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and full turns.</td>
<td>Use basic geometric vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and full turns.</td>
<td>Describe movements between positions as translations of a given point on a straight line and ½ a turn (total 180°) at a point on a straight line and ½ a turn (total 180°)</td>
<td>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.</td>
<td>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.</td>
</tr>
<tr>
<td>Interpreting data</td>
<td>Interpret and construct simple pictograms, tally charts, block diagrams and simple tables.</td>
<td>Interpret and present data using bar charts, pie charts, line graphs, tables and graphs.</td>
<td>Interpret and present data using bar charts, pie charts, line graphs, tables and graphs.</td>
<td>Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and line graphs.</td>
<td>Compare and contrast discrete and continuous data using appropriate graphical methods, including bar charts and line graphs.</td>
<td>Compare and contrast discrete and continuous data using appropriate graphical methods, including bar charts and line graphs.</td>
</tr>
<tr>
<td>Extract info from data</td>
<td>Solve one-step and two-step questions [for example, ‘How many more? ’ and ‘How many fewer?’] using information presented in scaled bar charts and pictograms and tables.</td>
<td>Solve one-step and two-step questions [for example, ‘How many more? ’ and ‘How many fewer?’] using information presented in scaled bar charts and pictograms and tables.</td>
<td>Solve one-step and two-step questions [for example, ‘How many more? ’ and ‘How many fewer?’] using information presented in scaled bar charts and pictograms and tables.</td>
<td>Solve comparison, sum and difference problems using information presented in bar charts, pie charts, tables and other graphs.</td>
<td>Solve comparison, sum and difference problems using information presented in bar charts, pie charts, tables and other graphs.</td>
<td>Solve comparison, sum and difference problems using information presented in bar charts, pie charts, tables and other graphs.</td>
</tr>
</tbody>
</table>

www.primarycurriculum.me.uk

Objectives reprinted under Open Government Licence