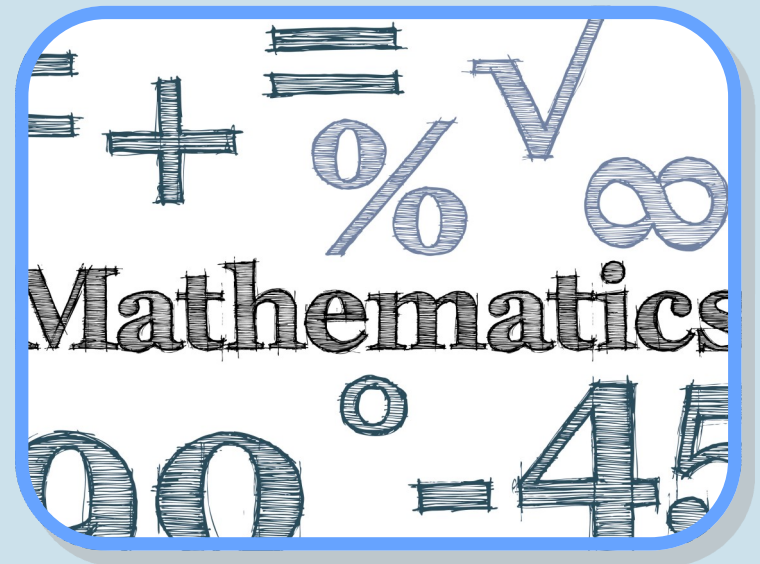


# Maths progression of skills





# Early year—Number

## Key knowledge

- Know that the amount of objects stays the same when moved
- The language of more and less
- Vocabulary involved in adding and subtracting

## Key skills

ELG: Number Children at the expected level of development will: -

- Have a deep understanding of number to 10, including the composition of each number;
- Subitise (recognise quantities without counting) up to 5; -
- Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts.

## Key vocabulary

Number names

Before , after, next

More, less

Double, half, share

Order

Count

Add/plus/Subtract/take away

Number bonds

<p><b>Geometry</b> (Shape and space)</p>	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>• Recognise and name common 2-D and 3-D shapes, including:</li> <li>• 2-D shapes (e.g. rectangle(including squares), circles and triangles)</li> <li>• 3-D shapes (e.g. cuboids (including cubes), pyramids and spheres).</li> </ul>	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>• Identify and describe the properties of 2-D shapes, including the number of sides and symmetry in a vertical line</li> <li>• Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces</li> <li>• Identify 2-D shapes on the surface of 3-D shapes, for example a circle on a cylinder and a triangle on a pyramid</li> <li>• Compare and sort common 2-D and 3-D shapes and everyday objects.</li> </ul>
<p><b>Geometry</b> (Direction and position)</p>	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>• Order and arrange combinations of objects and shapes in patterns</li> <li>• Describe position, directions and movements, including half, quarter and three-quarter turns.</li> </ul>	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>• Order and arrange combinations of mathematical objects in patterns</li> <li>• Use mathematical vocabulary to describe position, direction and movement, including distinguishing between rotation as a turn and in terms of right angles for quarter, half and three quarter turns (clockwise and anti-clockwise), and movement</li> </ul>
<p><b>Data</b></p>		<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>• Interpret and construct simple pictograms, tally charts, block diagrams and simple tables</li> <li>• Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity</li> <li>• Ask and answer questions about totaling and compare categorical data.</li> </ul>



### CHIS Skills Progression

Subject area: Number and place value, multiplication and division, addition and subtraction, fractions

Curriculum leader: Michelle Pepper

	Year 1	Year 2
<b>Measures</b>	<p>Pupils should be taught to: Compare, describe and solve practical problems for: lengths and heights (e.g. long/short, longer/shorter, tall/short, double/half) mass or weight (e.g. heavy/light, heavier than, lighter than) capacity/volume (full/empty, more than, less than, quarter) time (quicker, slower, earlier, later)</p> <ul style="list-style-type: none"> <li>o measure and begin to record the following:               <ul style="list-style-type: none"> <li>o lengths and heights</li> <li>o mass/weight</li> <li>o capacity and volume</li> <li>o time (hours, minutes, seconds)</li> </ul> </li> <li>• Recognise and know the value of different denominations of coins and notes</li> <li>• Sequence events in chronological order using language such as: before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening</li> <li>• Recognise and use language relating to dates, including days of the week, weeks, months and years</li> <li>• Tell the time to the hour and half past the hour and draw the hands on a clock face</li> </ul>	<p>Pupils should be taught to: Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (<math>^{\circ}C</math>); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels</p> <p>Compare and order lengths, mass, volume/capacity and record the results using <math>&gt;</math>, <math>&lt;</math> and <math>=</math></p> <p>Read relevant scales to the nearest numbered unit</p> <p>Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value and match different combinations of coins to equal the same amounts of money; add and subtract money of the same unit, including giving change</p> <p>Solve simple problems in a practical context involving addition and subtraction of money</p> <p>Compare and sequence intervals of time</p> <p>Tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times.</p>

### CHIS Skills Progression

## Early year—Patterns

### Key knowledge

Number system

Recognising pattern in number

### Key skills

ELG: Numerical Patterns Children at the expected level of development will:

- Verbally count beyond 20, recognising the pattern of the counting system; -
- Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity; -
- Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.

### Key vocabulary

Pattern, repeated, repeat

Number names

More, less

Greater

Same

Odd/even

Doubles



**CHIS Skills Progression**  
**Subject area: Number and place value, multiplication and division, addition and subtraction, fractions**  
**Curriculum leader: Michelle Pepper**

	Year 1	Year 2
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<b>Number and place value</b>	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number</li> <li>Count, read and write numbers to 100 in numerals, count in different multiples including ones, twos, fives and tens</li> <li>Given a number, identify one more and one less</li> <li>Identify and represent numbers using concrete objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least</li> <li>read and write numbers from 1 to 20 in digits and words.</li> </ul>	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>Count in steps of 2, 3, and 5 from 0, and count in tens from any number, forward or backward</li> <li>Recognise the place value of each digit in a two-digit number (tens, ones)</li> <li>Identify, represent and estimate numbers using different representations, including the number line</li> <li>Compare and order numbers from 0 up to 100; use &lt;, &gt; and = signs</li> <li>Read and write numbers to at least 100 in numerals and in words</li> <li>use place value and number facts to solve problems.</li> </ul>
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<b>Multiplication and division</b>	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>Solve simple one-step problems involving multiplication and division, calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher.</li> </ul>	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers</li> <li>Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs</li> <li>Recognise and use the inverse relationship between multiplication and division in calculations</li> <li>Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot</li> <li>Solve one-step problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.</li> </ul>
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<b>Addition and subtraction</b>	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs</li> <li>Represent and use number bonds and related subtraction facts within 20</li> <li>Add and subtract one-digit and two-digit numbers to 20 (9 + 9, 18 - 9), including zero</li> <li>Solve simple one-step problems that involve addition and subtraction, using concrete objects and pictorial representations,</li> </ul>	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>Solve simple one-step problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures applying their increasing knowledge of mental and written methods</li> <li>Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100</li> <li>Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: a two-digit number and ones a two-digit number and tens two two-digit numbers adding three one-digit numbers</li> <li>Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot</li> <li>Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems.</li> </ul>
<b>Fractions</b>	<p>Pupils should be taught to:</p> <p>Recognise, find and name a half as one of two equal parts of an object, shape or quantity</p> <p>Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity.</p>	<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> <li>Recognise, find, name and write fractions <math>\frac{1}{3}</math>, <math>\frac{1}{4}</math>, <math>\frac{2}{4}</math> and <math>\frac{3}{4}</math> of a length, shape, set of objects or quantity</li> <li>Write simple fractions e.g. <math>\frac{1}{2}</math> of 6 = 3 and recognise the equivalence of two quarters and</li> </ul>