

The vision for Mathematics at Brixworth Primary School

We, at Brixworth Primary School, envisage that every learner who leaves our school will have the three Maths concepts embedded in them as a learner:

Number Facts and knowledge

This concept involves having a clear understanding of a range of number facts including counting, number bonds, place value, times table and division facts and understanding shape and position.

Working with Number

This concept involves being able to manipulate numbers, comparing, measuring, using data and being able to carry out calculations.

Problem solving and Reasoning

This concept involves children understanding how to use their mathematical knowledge to solve problems and to be able to justify their answer.

Year 5

YEAR 5	Autumn Term 1	Autumn Term 2	Spring Term 3	Spring Term 4	Summer Term 5	Summer Term 6
Number and Place Value	<p>I understand the place value of each digit in numbers up to 1 000 000</p> <p>I can round any number up to 1 000 000 by 10, 100, 1000, 10 000 & 100 000</p>	<p>I can count on and back, from any given point, in powers of 10 up to 1 000 000</p> <p>I can identify and read Roman Numerals up to 1000 and recognise years written in Roman Numerals</p>	<p>I can interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers including through zero</p> <p>I can solve problems involving negative numbers</p>	<p>I can complete whole and decimal number sequences describing the term-to-term rule</p>	<p>I can identify and read Roman Numerals up to 1000 and recognise years written in Roman Numerals</p>	<p>Solve number problems and practical problems that involve all of the year's place value learning.</p>
Addition and Subtraction	<p>I can use multiple methods, including formal written methods, to add whole and decimal numbers with more than 4 digits</p> <p>I can use rounding and the inverse operation to</p>	<p>I can solve addition and subtraction multistep problems in contexts deciding which operations and methods to use and why.</p>	<p>Add and subtract numbers mentally with increasingly large numbers</p>	<p>I can solve problems involving a combination of operations</p>	<p>I can use bar models and diagrams to solve multi-step addition and subtraction problems on time, money and measures</p>	<p>I can use bar models and diagrams to solve multi-step addition and subtraction problems on time, money and measures</p>

Year 5

	check the accuracy of answers					
Multiplication and Division	<p>I can identify prime numbers up to 100 and recall prime numbers to 19</p> <p>I can multiply numbers up to 4 digits by a 1 or 2-digit number</p> <p>I can divide numbers up to 4 digits by 1 digit number</p> <p>I can solve problems involving \times and \div</p>	<p>I can multiply and divide whole and decimal numbers by 10, 100 and 1000</p> <p>I know and can quickly recall the 6 & 8 times tables facts</p> <p>I can solve problems involving \times and \div</p>	<p>I can identify multiples and factors, including all factor pairs of a number</p> <p>I can identify common factors of two numbers</p> <p>I know and can quickly recall the 7 & 9 times tables facts</p> <p>I can solve problems involving \times and \div</p>	<p>I can divide numbers up to 4 digits by a 1 or 2-digit number using formal written method of short division</p> <p>I can recognise and use square and cubed numbers, and use the notations 2 and 3</p> <p>I can solve problems involving \times and \div</p>	<p>I can solve 1 and 2 step problems on time, money and measures choosing which operation and methods to use and those including scaling.</p> <p>I have a secure knowledge of all of the times tables and division facts</p>	<p>I can solve multi-step problems choosing the appropriate method and operations to use in order to solve each problem and check the calculations</p>
Fractions	I can read, write, order and compare numbers with up to 3 decimal places.	I can compare and order fractions whose denominators are	I can read and write decimal numbers as fractions.	I can solve problems involving number up to 3 decimal places.	I can solve problems which require knowing percentages and decimal	I can multiply proper fractions and mixed numbers by a whole number

Year 5

	<p>I can round decimals with 2 decimal places to the nearest whole number and to one decimal place</p> <p>I can add and subtract fractions with the same denominator and denominators that are multiples of the same number.</p>	<p>multiples of the same number</p> <p>Identify, name and write equivalent fractions of a given fraction, represented visually including tenths and hundredths.</p>	<p>I can express a percentage as a fraction and a decimal</p>		<p>equivalents of $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{2}{5}$, $\frac{4}{5}$</p> <p>I can recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements >1 as a mixed number</p>	<p>I can solve problems with fractions and percentages</p>
Measurement	<p>I can read time to the nearest minute</p> <p>I can convert between units of time</p> <p>I can convert between km to m, cm to m, cm to mm, g to kg, ml to l</p>	<p>I can measure and calculate the perimeter of composite and rectilinear shapes in cm and m</p> <p>I can calculate and compare the area of rectangles (including</p>	<p>I can solve 1 and 2 step problems with perimeter and shape</p> <p>I can estimate volume and capacity</p>	<p>I can solve time duration problems</p>	<p>I can solve 1 and 2 step problems converting between units of measurement (time, length, capacity & currency)</p>	<p>I can solve multi-step problems converting between units of measure including converting between metric and imperial units (time, money and measures)</p>

Year 5

		squares) including using standard units, square cm and square m and estimate the area of irregular shapes.				
Geometry	<p>I can identify and describe the properties of 2d and 3d shapes</p> <p>I can distinguish between regular and irregular polygons based on reasoning about equal sides and angles.</p>	<p>I can identify angles at a point at one whole turn (total 360degrees)</p> <p>I know angles at a point on a straight line and half turn (180degrees) and other multiples of 90degrees.</p> <p>I can identify, compare and measure acute, obtuse and reflex angles</p>	I can translate and reflect shapes in lines that are parallel to the shape and know the shape has not changed	<p>I can identify, compare and measure acute, obtuse and reflex angles</p> <p>I can draw given angles, and measure them in degrees</p>	I can use the properties of rectangles to deduce related facts and find missing lengths and angles	I can identify, describe and represent the position of a shape following a reflection or translation using the appropriate language and know the shape has not changed

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Statistics	I can solve comparison, sum and difference problems using information presented in a line graph.	I can complete, read and interpret information in tables including time tables	I can draw tables and graphs to represent and compare data		I can interpret information in tables and charts to find the sum of a set of data	I can solve problems interpreting information in graphs based on money, measures and time
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