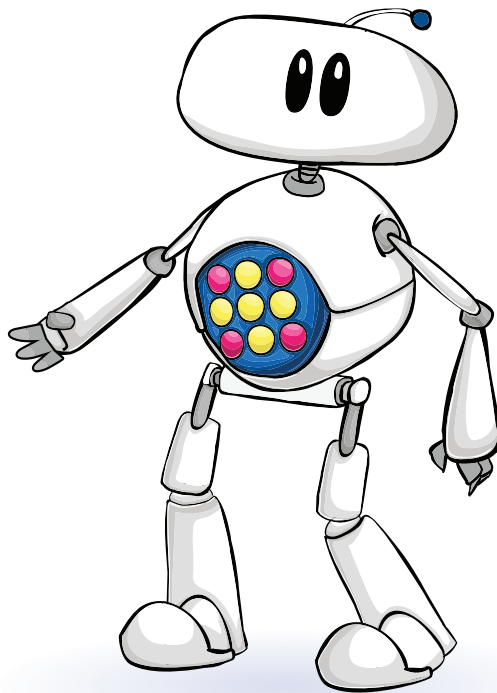


MyMaths

Supporting the National Curriculum in England (2014) for mathematics



Upper Key Stage 2



MyMaths.co.uk

OXFORD



How MyMaths can help you deliver the curriculum at Upper Key Stage 2.

MyMaths is a fully interactive online teaching resource that engages pupils with maths. It can be used for whole class teaching, teaching in small groups, independent work or as a tool for setting homework. The breadth of content available means that MyMaths can be used to help boost those who are struggling and to stretch high achievers.

MyMaths homework activities give pupils the chance to develop their fluency and become confident solving problems across all areas of the maths curriculum. The random number generation in the homework tasks offers almost limitless practice opportunities and the corresponding lessons offer an invaluable resource for revision. The MyMaths website also offers a wide variety of games, investigations and tools to allow children to improve their skills in a fun way.

This guide offers a clear overview of how the primary MyMaths content addresses the Programme of Study for the National Curriculum in England 2014. The objectives are laid out, as in the curriculum, by topic within each year and then matched with the lessons which best cover that objective. The table gives the title of the relevant MyMaths content, which you should then be able to locate easily using the topic headings on the site. MyMaths also offers a simple search function.

For unlimited access to all these resources, visit www.mymaths.co.uk. A year's primary subscription includes challenges for pupils of all abilities. Join the millions already using MyMaths around the world and bring maths alive in your school!



Year 5

Programme of Study

Children should be taught to:		MyMaths Lesson
NUMBER – number and place value	read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit	NEW: Very big numbers
	count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000	<i>Not yet available</i>
	interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers through zero	Negative numbers 1
	round any number up to 1,000,000 to the nearest 10, 100, 1,000, 10,000 and 100,000	NEW: Rounding and accuracy
	solve number problems and practical problems that involve all of the above	Negative numbers 1 NEW: Very big numbers; Rounding and accuracy
	read Roman numerals to 1,000 (M) and recognise years written in Roman numerals	NEW: Very big numbers
NUMBER – addition and subtraction	add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)	<i>Not yet available</i>
	add and subtract numbers mentally with increasingly large numbers	Mixed sums all numbers
	use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy	NEW: Rounding and accuracy
	solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why	Word problems
NUMBER – multiplication and division	identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers	Multiples; Factors and primes
	solve problems involving multiplication and division where larger numbers are used by decomposing them into their factors	NEW: Mental multiplication; Mental division
	know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers	Factors and primes

Children should be taught to:	MyMaths Lesson	
<p>NUMBER – multiplication and division <i>Continued</i></p>	establish whether a number up to 100 is prime and recall prime numbers up to 19	Factors and primes
	multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers	NEW: Short and long multiplication
	multiply and divide numbers mentally drawing upon known facts	NEW: Mental multiplication; Mental division
	divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context	NEW: Short division
		NEW: Interpreting remainders
	multiply and divide whole numbers and those involving decimals by 10, 100 and 1,000	NEW: Short and long multiplication
	recognise and use square numbers and cube numbers, and the notation for squared (²) and cubed (³)	Square and cubes
	solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign	Word problems
solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates	<i>Not yet available</i>	
<p>NUMBER – fractions</p>	compare and order fractions whose denominators are all multiples of the same number	NEW: Comparing scalable fractions
	identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths	NEW: Comparing scalable fractions
	recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number (e.g. $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$)	Mixed numbers
	add and subtract fractions with the same denominator and multiples of the same number	NEW: Fraction calculations 2
	multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams	NEW: Starting to multiply fractions
	read and write decimal numbers as fractions (e.g. $0.71 = \frac{71}{100}$)	Fractions to decimals
	recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents	Decimal place value

Children should be taught to:	MyMaths Lesson	
NUMBER – fractions <i>Continued</i>	round decimals with two decimal places to the nearest whole number and to one decimal place	Rounding decimals
	read, write, order and compare numbers with up to three decimal places	Ordering decimal numbers
	solve problems involving number up to three decimal places	Add and subtract decimals
	recognise the per cent symbol (%) and understand that per cent relates to “number of parts per hundred”, and write percentages as a fraction with denominator hundred, and as a decimal fraction	Percentages of amounts 1
	solve problems which require knowing percentage and decimal equivalents of $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{2}{5}$, $\frac{4}{5}$ and those with a denominator of a multiple of 10 or 25	Frac Dec Perc 1
MEASUREMENT	convert between different units of metric measure (e.g. kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre)	Units of length; Units of mass; Units of capacity
	understand and use equivalences between metric units and common imperial units such as inches, pounds and pints	Units of length; Units of mass; Units of capacity
	measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres	Perimeter
	calculate and compare the area of squares and rectangles including using standard units, square centimetres (cm ²) and square metres (m ²) and estimate the area of irregular shapes	Areas of rectangles
	estimate volume (e.g. using 1 cm ³ blocks to build cubes and cuboids) and capacity (e.g. using water)	NEW: Volume and capacity
	solve problems involving converting between units of time	NEW: Time conversions 1; Time conversions 2
	use all four operations to solve problems involving measure (e.g. length, mass, volume, money) using decimal notation including scaling	Money calculations
GEOMETRY – properties of shapes	identify 3-D shapes, including cubes and other cuboids, from 2-D representations	3D shapes
	know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles	<i>Not yet available</i>
	draw given angles, and measure them in degrees (°)	Measuring angles
	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°), and other multiples of 90°	<i>Not yet available</i>
	use the properties of rectangles to deduce related facts and find missing lengths and angles	NEW: Rectangles and irregular polygons

Children should be taught to:		MyMaths Lesson
GEOMETRY – properties of shapes <i>Continued</i>	distinguish between regular and irregular polygons based on reasoning about equal sides and angles	NEW: Rectangles and irregular polygons
GEOMETRY – position and direction	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	NEW: Translating and reflecting
STATISTICS	solve comparison, sum and difference problems using information presented in a line graph	Line graphs and 2-way tables
	complete, read and interpret information in tables, including timetables	Two way tables



Year 6

Programme of Study

Children should be taught to:		MyMaths Lesson
NUMBER – number and place value	read, write, order and compare numbers up to 10,000,000 and determine the value of each digit	NEW: Place value beyond 10 000
	round any whole number to a required degree of accuracy	Significant figures
	use negative numbers in context, and calculate intervals across zero	NEW: Negative numbers in context
	solve number and practical problems that involve all of the above	<i>Not yet available</i>
NUMBER – addition, subtraction, multiplication and division	multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication	NEW: Long multiplication
	divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context	NEW: More long division
	perform mental calculations, including with mixed operations and large numbers.	NEW: Addition and subtraction problems
	identify common factors, common multiples and prime numbers	Highest common factors; Lowest common multiples; Factors and primes
	use their knowledge of the order of operations to carry out calculations involving the four operations	Order of operations
	solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why	NEW: Addition and subtraction problems
	solve problems involving addition, subtraction, multiplication and division	NEW: Addition and subtraction problems
	use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy	Estimating calculations

Children should be taught to:		MyMaths Lesson
NUMBER – fractions	use common factors to simplify fractions; use common multiples to express fractions in the same denomination	Comparing fractions NEW: Ordering and simplifying fractions
	compare and order fractions, including fractions >1	Improper and mixed fractions NEW: Comparing scalable fractions
	add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions	Adding subtracting fractions NEW: Equivalent fractions 3
	multiply simple pairs of proper fractions, writing the answer in its simplest form (e.g. $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$)	NEW: Multiplying fractions by fractions
	divide proper fractions by whole numbers (e.g. $\frac{1}{3} \div 2 = \frac{1}{6}$)	Dividing fractions
	associate a fraction with division and calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. $\frac{3}{8}$)	Recurring decimals 1
	identify the value of each digit to three decimal places and multiply and divide numbers by 10, 100 and 1000 where the answers are up to three decimal places	Multiply decimals by 10 and 100
	multiply one-digit numbers with up to two decimal places by whole numbers	Multiply decimals by whole numbers
	use written division methods in cases where the answer has up to two decimal places	NEW: Introducing long division
	solve problems which require answers to be rounded to specified degrees of accuracy	Decimal places
	recall and use equivalences between simple fractions, decimals and percentages, including in different contexts	Simple equivalent fractions
	RATIO AND PROPORTION	solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts
solve problems involving the calculation of percentages (e.g. of measures) such as 15% of 360 and the use of percentages for comparison		Percentages of amounts 2
solve problems involving similar shapes where the scale factor is known or can be found		Scale drawing
solve problems involving unequal sharing and grouping using knowledge of fractions and multiples		Ratio introduction

Children should be taught to:		MyMaths Lesson
ALGEBRA	express missing number problems algebraically	Simple equations
	use simple formulae expressed in words	Rules and formulae
	generate and describe linear number sequences	Sequences
	find pairs of numbers that satisfy number sentences involving two unknowns	Simultaneous equations 1
	enumerate all possibilities of combinations of two variables	NEW: Algebraic thinking
MEASUREMENT	solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate	Square and cubic units
	use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places	Converting measures
	convert between miles and kilometres	Imperial measures
	recognise that shapes with the same areas can have different perimeters and vice versa	NEW: Algebraic thinking
	recognise when it is possible to use formulae for area and volume of shapes	Volume of prisms; Volume of cylinders
	calculate the area of parallelograms and triangles	Area of a parallelogram; Area of a triangle
	calculate, estimate and compare volume of cubes and cuboids using standard units, including centimetre cubed (cm^3) and cubic metres (m^3), and extending to other units such as mm^3 and km^3	Volume of cuboids
GEOMETRY – properties of shapes	draw 2-D shapes using given dimensions and angles	Constructing triangles; Constructing shapes
	recognise, describe and build simple 3-D shapes, including making nets	Nets of 3-D shapes
	compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons	Angle reasoning
	illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius	Circumference of a circle
	recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles	Sums of angles

Children should be taught to:		MyMaths Lesson
GEOMETRY – position and direction	describe positions on the full coordinate grid (all four quadrants)	Coordinates 2 – negative
	draw and translate simple shapes on the coordinate plane, and reflect them in the axes	Reflecting shapes; Translating shapes
STATISTICS	interpret and construct pie charts and line graphs and use these to solve problems	Reading pie charts; Drawing pie charts
	calculate and interpret the mean as an average	Mean and mode