Maths

Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6
NUMBER					
Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number	Count in tens from any number, forward and backward	Count from 0 in multiples of 100 (^)	Count in multiples of 1000; count backwards through zero to include negative numbers	Count forwards and backwards with positive and negative whole numbers, including through zero	Calculate intervals across zero
Given a number, identify one more and one less	Identify ten more or ten less than any given number	Find 10 or 100 more or less than a given number	Find 1000 more or less than a given number	Count forwards or backwards in steps of powers of 10 for any given number to 1 000 000	Consolidate counting forwards or backwards in steps of powers of 10 for any given number to 1 000 000
Count in multiples of twos, fives and tens	Count in steps of 2, 3, and 5 from 0, forward and backward	Count from 0 in multiples of 4, 8 and 50	Count in multiples of 6, 7, 9 and 25	Count in any multiples of 2 to 10, 25 and 50	Consolidate counting in multiples of 2, through to 10, 25, 50
Read and write numbers to 100 in numerals	Recognise the place value of each digit in a two-digit number (tens, ones)	Recognise the place value of each digit in a three-digit number (hundreds, tens, ones)	dentify, read and write numbers to 10 000 and recognise the place value of each digit	Read and write numbers to at least 1 000 000 and determine the value of each digit	Read and write numbers to 10 000 000 and determine the value of digits
Identify and represent numbers using objects and pictorial representations including the number line	Identify, read and write numbers to at least 100	Identify , read and write numbers up to 1000	Order, compare and round numbers beyond 1000 to the nearest 10, 100 or 1000	Order, compare and round numbers to at least 1 000 000	Order, compare and round numbers up to 10 000 000
Use the language of: equal to, more than, less than (fewer), most, least	Compare and order numbers from 0 up to 100; use <, > and = signs	Compare, order and round numbers up to 1000 to the nearest 10	Read 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	Read Roman numerals to 1000 (M)	Read Roman numerals to 1000 (M) and recognising years written in Roman numerals
	Partition any two-digit number into different combinations of tens and ones, explaining their thinking verbally, in pictures or using apparatus **(MTAF 1)**				
CALCULATION					
Represent and use number bonds and related subtraction facts within 20 **(MTAF 4)**	Add and subtract numbers using concrete objects, pictorial representations, and mentally, including**: two two-digit numbers** and adding three one-digit numbers **(MTAF3)**	Mentally add and subtract numbers including a three-digit number with ones, tens or hundreds	Use addition and subtraction facts to 100 and derive related facts up to 1000	Multiply and divide numbers mentally drawing upon known facts	Use knowledge of the order of operations
Mentally add and subtract one- and two-digit numbers to 20, including zero	Use addition and subtraction facts to 20 (including number bonds within 10) and derive related facts up to 100 **(MTAF 4)**	Continue to use addition and subtraction facts to 20 and derive related facts up to 100	Recognise factor pairs	Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000	Use simple formulae: e.g 3n+9=30
Mentally double numbers up to 10	Use the inverse relationship between addition and subtraction to solve missing number problems	Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables	Recall multiplication and division facts for multiplication tables up to 12 × 12	Identify multiples and factors, including all factor pairs of a number, and common factors of 2 numbers	Identify common factors, common multiples and prime numbers greater than 100
Use arrays to represent multiplication and record grouping when doing division	Recall multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers and write them using the multiplication (×), division (÷) and equals (=) signs. Use these to solve simple problems. **(MTAF5)**	Add and subtract numbers with up to three digits, using formal columnar methods of addition and subtraction	Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate	Recall square numbers and cube numbers and the notation for them. Recall prime numbers up to 19	Consolidate knowledge of multiples and factors, including all factor pairs of a number, and common factors of two numbers
	Record addition and subtraction in columns	Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods	Multiply two-digit and three-digit numbers by a one-digit number using formal written layout	Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)	Use square numbers and cube numbers and the notation for them. Identify prime numbers below 50.
			4.2.e.3 Divide two-digit and three-digit numbers by a one-digit number using formal written layout	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	Consolidate adding and subtracting whole numbers with more than 4 digits, including using formal written columnar addition and subtraction
				Divide numbers up to 4 digits by a one-digit number using formal written method of short division and interpret remainders appropriately for the context	Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication
					Divide numbers up to 4 digits by a two-digit whole number using the formal methods of short or long division, and interpret remainders as appropriate for the context as whole numbers, fractions or by rounding
FDP					

Recognise, find and name a half as one of two equal parts of an object, shape or quantity	Recognise, find, name and write fractions 1/2, 1/3 and 1/4 of a length, shape, set of objects or quantity **(MTAF 6)**	Recognise, find and write fractions of a discrete set of objects, unit fractions with small denominators	Make connections between fractions of a length, of a shape and as a representation of one whole or a set of quantities	Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths	Associate a fraction with division
Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity	Recognise, find, name and write fractions 2/4 and 3/4 of a length, shape, set of objects or quantity **(MTAF 6)**	Recognise, find and write fractions of a discrete set of objects, non-unit fractions with small denominators	Use factors and multiples to recognise equivalent fractions and simplify where appropriate	Recognise mixed numbers and improper fractions and convert from one form to the other	Consolidate understanding of equivalent fractions by extending to improper fractions
	Recognise the equivalence of 2/4 and 1/2	Count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10	Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten	Know percentage and decimal equivalents of 1/2, 1/4, 1/5, 2/5, 4/5 and those with a denominator of a multiple of 10 or 25	Identify the value of each digit in numbers given to three decimal places
		Recognise and show, using diagrams, equivalent fractions with small denominators	Divide a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths	Compare and order fractions whose denominators are all multiples of the same number	Use common factors to simplify fractions
		Connect tenths to decimal measures and place value	Recognise and write decimal equivalents of any number of tenths or hundredths and 1/4; 1/2; 3/4	Add and subtract fractions with the same denominator and denominators that are multiples of the same number, including calculations > 1	Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts
		Compare and order unit fractions, and fractions with the same denominators	Add and subtract fractions with the same denominator	Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams	Compare and order fractions, including fractions greater than 1
		Add and subtract fractions with the same denominator within one whole [for example 5/7 + 1/7 = 6/7]	Round decimals with one decimal place to the nearest whole number	Round decimals with two decimal places to the nearest whole number and to one decimal place	Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions
		Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators	Compares numbers with the same number of decimal places up to two decimal places	Read, write, order and compare numbers with up to three decimal places	Multiply simple pairs of proper fractions
				Add and subtract decimals including those with a different number of decimal places	Divide proper fractions by whole numbers
					Multiply one-digit numbers with up to two decimal places by whole numbers
MEASURE					
Tell the time to the hour and half past the hour 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	Convert between analogue and 12-hour digital clocks	Read, write and convert time between analogue and digital 12- and 24-hour clocks	Develop fluency in using money expressed in £, converting to p when necessary	Convert between units of time
Measure and begin to record lengths and heights, mass/weight, capacity and volume	Recognise and use symbols for pounds (£) and pence (p)	Know the number of seconds in a minute and the number of days in each month, year and leap year	Convert from larger to smaller units of time	Convert between different units of metric measure	Use, read and write standard units with up to three decimal places, including converting from smaller to larger units and vice versa
Begin to handle coins and become familiar with coins up to 20 pence	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 **(MTAF 8)**	Become confident in exchanging between £ and p when handling money	Record money using decimal notation	Understand and use approximate equivalences between metric units and common imperial units	Identify, measure and calculate perimeter
	Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels	Record measurements using mixed units, e.g.1 kg 200 g	Convert from larger to smaller units of metric measure	Calculate and compare the area of rectangles	Solve measurement problems with decimal notation up to three decimal places and approximate equivalences between metric and imperial measurements
	Combine amounts of money to make a particular value including different combinations of coins that equal the same amount of money **(MTAF 7)**	Measure the perimeter of simple 2-D shapes	Measure and calculate the perimeter of rectilinear shapes	Measure and calculate the perimeter of composite rectilinear shapes	Calculate the area of parallelograms and triangles
	Read scales in divisions of ones, twos, fives and tens **(MTAF1)**	Add and subtract amounts of money to give change, recording £ and p separately	Find the area of rectilinear shapes by counting squares and relate it to multiplication arrays	Estimate the area of irregular shapes, and volume and capacity of objects and containers.	Estimate and calculate and compare volume of cubes and cuboids using standard units
		Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)	Continue to solve problems involving mixed units of length, mass and capacity/volume, time and money	Become familiar with temperature measure using degrees Celsius, realising that the scale becomes negative below the freezing point of water	Add and subtract positive and negative measurements such as temperature
SHAPE					

Name common 2-D shapes in different orientations and sizes i.e. including rectangles (including squares), circles and triangles	Draw lines and shapes using a straight edge	Describe 2-D shapes using accurate language, including lengths of lines and angles greater or less than a right angle	Identify lines of symmetry in 2-D shapes presented in different orientations.	Draw given angles, and measure them in degrees and draw shapes with sides measured to the nearest millimetre. Use conventional markings for parallel lines and right angles.	Draw 2-D shapes accurately using given dimensions and angles. Use conventional markings and labels for lines and angle
Recognise and name common 3-D shapes in different orientations and sizes i.e. including cuboids (including cubes), pyramids and spheres	Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line **(MTAF 9)**	Draw 2-D shapes with straight sides measured in cm	Compare and classify geometric shapes, including different types of quadrilaterals and triangles, based on their properties and sizes and use the vocabulary of the different types of triangle and quadrilaterals.	Continue to make and classify 3-D shapes, including identifying all of the 2-D shapes that form their surface	Recognise 3-D shapes from their nets and build simple 3-D shapes, including making nets
	Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces **(MTAF 9)**	Identify horizontal and vertical lines and pairs of perpendicular and parallel lines	Continue to make and classify 3-D shapes, including by the 2-D shapes that form their surface	Distinguish between regular and irregular polygons based on reasoning about equal sides and angles	Compare and classify geometric shapes based on geometric properties and sizes
		Recognise 3-D shapes in different orientations and describe them	Identify acute and obtuse angles and compare and order angles by size.	Identify angles at a point and one whole turn, angles at a point on a straight line and ½ a turn and other multiples of 90º	Illustrate and names parts of circles, including radius, diameter and circumference and know that the diameter of a circle is twice the radius
		Recognise angles as a property of shape or a description of a turn		Estimate and compare acute, obtuse and reflex angles	Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles
		Identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn		Use the properties of rectangles and triangles to deduce related facts and find missing lengths and angles	Find unknown angles and lengths in triangles, quadrilaterals, and regular polygons
POSITION					
Recognise and create simple repeating patterns with objects and shapes	Order and arrange combinations of mathematical objects in patterns and sequences	Mark a given square on a grid, e.g. A3	Describe and plot positions on a 2-D grid as coordinates in the first quadrant	Continue to use coordinates in the first quadrant to become fluent in their use and identify the points required to complete a polygon	Use positions on the full coordinate grid (all four quadrants)
		Recognise and devise patterns and sequences in shapes	Describe movement between positions as translations of a given unit to the left/right and up/down	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.	Draw and label rectangles (including squares), parallelograms and rhombuses specified by coordinates in the four quadrants, predicting missing coordinates using the properties of shapes
					Draw and translate simple shapes on the coordinate plane, and reflect them in the axes
STATISTICS					
	Interpret data from simple pictograms, tally charts, block diagrams and simple tables	Interpret bar charts, pictograms and tables	Interpret discrete and continuous data using appropriate graphical methods, including time graphs	Interpret data using line graphs	Interpret data in pie charts
	Present data in simple tables, simple pictograms, tally charts and block diagrams	Present data in bar charts, pictograms and tables	Present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs	Present data using line graphs	Present data in pie charts