

Foundation Stage – End of Year Expectations

<p style="text-align: center;">Counting</p> <ul style="list-style-type: none"> • Participate in stories, songs and rhymes involving number, repetition and actions • Count forwards starting at any number (0–1000) • Count backwards starting at any number (0–1000) • Count up to 10 objects when asked How many...?, and reply with the correct number • Count objects when asked ‘How much is there here?’ and reply with, for example, [number] cups 	<p style="text-align: center;">Number</p> <ul style="list-style-type: none"> • Read, say and match numbers 0–9 • Read, say and match numbers 10–20 • Sequence numbers in order • Match the number of objects to the numeral • Recognise and say numbers greater than 20 in an everyday context • Play simple games that involve use of number 	<p style="text-align: center;">Writing</p> <ul style="list-style-type: none"> • Recognise and write numbers from 0–9 • Recognise and write numbers from 10 –20 • Recognise and write fractions • Copy and write Maths Stories, e.g. $2 + 3 - 4 = 1$
<p style="text-align: center;">Calculating</p> <ul style="list-style-type: none"> • Read what an addition or subtraction Maths Story with 1-digit whole numbers including. and. (with a whole-number answer) says • Read what an addition or subtraction Maths Story with 1-digit whole numbers including. and. (with a whole-number answer) means • Act the Real Story for an addition or subtraction Maths Story with 1-digit whole numbers including. and. with cups • Act out a Real-Life Story an addition or subtraction Maths Story with 1-digit whole numbers including. and. using, e.g. pennies • Share objects into equal groups and count how many in each group • Participate in role play prompted by a Maths Story 	<p style="text-align: center;">Shape</p> <ul style="list-style-type: none"> • Recognise, name and describe 2D shapes • Play simple games that involve use of number, pattern, shape and language 	<p style="text-align: center;">Position</p> <ul style="list-style-type: none"> • Follow instructions that involve positional language • Give directions that include positional language
<p style="text-align: center;">Sorting and data</p> <ul style="list-style-type: none"> • Sort objects such as playing cards, number cards, coloured objects, 2D and 3D shapes according to criteria • Read information from a simple block graph • Make a simple block graph using blocks or bricks 	<p style="text-align: center;">Measure</p> <ul style="list-style-type: none"> • Use comparative language, such as bigger/smaller, shorter/ longer, heavier/lighter to compare quantities. • Tell the time using o’clock • Use sand timers to measure minutes 	<p style="text-align: center;">Problem Solving</p> <ul style="list-style-type: none"> • Use knowledge and skills of counting to solve simple problems, e.g. counting pairs of socks • Use knowledge and skills of songs and rhymes to join in with a modified song or rhyme, e.g. Three Little Dickie Birds • Use knowledge and skills of number and calculating to solve simple problems, e.g. sharing nine cakes between three friends • Use knowledge and skills of shape, position, sorting and measure to solve simple problems, e.g. building a room with construction bricks

Year 1

Block	Arithmetic 1	Geometry	Data and Measure	Arithmetic 2	Reasoning
1	<ul style="list-style-type: none"> Copy addition and subtraction Maths Stories with 1-digit whole numbers, zero, a half and a quarter, Act the Real Story for addition and subtraction Maths Stories with 1-digit whole numbers, zero, a half and a quarter Look at a Maths Story and read what it says Look at a Maths Story and read what it means, 	<ul style="list-style-type: none"> Draw straight lines by joining named dots using a ruler, e.g. draw line AB Draw open or closed shapes by joining named dots using a ruler 	<ul style="list-style-type: none"> Make shapes with dm sticks from written instructions specifying the number of sides, numbers of sticks and whether the shape should be open or closed Find the length of a shape by counting dm and respond accurately to the questions: <i>What is the length? How long is this shape? How far is it from one end to the other? What is the distance from one end to the other? What is the total length of the sticks? What is the total length of the sides?</i> Find the perimeter of a closed shape made with dm sticks. Recognise that open shapes do not have a perimeter 	<ul style="list-style-type: none"> Look at an addition or subtraction Maths Story with 1-digit whole numbers, zero, a half and a quarter and read what it says Look at an addition or subtraction Maths Story with 1-digit whole numbers, zero, a half and a quarter and read what it means Act the Real Story using addition and subtraction Maths Stories with 1-digit whole numbers, zero, a half and a quarter 	<ul style="list-style-type: none"> Distinguish between how many and how much by responding accurately to the questions <i>How many cups did I count?</i> Distinguish between a half cup and a quarter cup as physical objects and their names, 'a half' and 'a quarter' Identify and use the phrase <i>Same Value: Different Appearance</i> for different arrangements of cups, which have the same value, including half cups and quarter cups For an addition Maths Story with 1-digit whole numbers, a half and a quarter, look at the Maths Story and read what it says; Look at Maths Story and read what it means Write numbers 0–9 accurately.
2	<ul style="list-style-type: none"> Copy a written addition Maths Story with multiples of ten, a hundred or a thousand Look at an addition Maths Story with multiples of ten, a hundred or a thousand and read what it says 	<ul style="list-style-type: none"> Read instructions for making a shape from a grid, e.g. five sticks, five sides, open, and use dm sticks to make the correct open or closed shape Find and record the perimeter of closed shapes made with dm sticks, e.g. 5 dm Measure a named straight lines, e.g. line AB, in centimetres with a ruler. Record the length of a named straight line, e.g. line AB in centimetres, 	<ul style="list-style-type: none"> Use the appropriate action for length to show 1 cm, 1 dm and 1 m Use the appropriate action for mass to show 1 g and 1 kg. 	<ul style="list-style-type: none"> Copy multiplication Maths Stories with 1-digit whole numbers Act the Real Story using multiplication Maths Stories with 1-digit whole numbers Look at the Maths Story and read what it says, Look at the Maths Story and read what it means. 	<ul style="list-style-type: none"> Say and show <i>bigger, smaller</i> and <i>the difference between</i> by encircling cups on the Maths Table Write numbers 0–9, $\frac{1}{2}$ and $\frac{1}{4}$ accurately.
3	<ul style="list-style-type: none"> Copy, on squared paper, vertical additions with 2-digit whole numbers Calculate answers to vertical additions with 2-digit whole numbers (no tricky columns) using number pairs for assistance. 	<ul style="list-style-type: none"> Using a labelled diagram of a 2D shape, select the correct number of dm sticks and make the shape Turn through one full turn, a quarter, a half and three-quarters of one full turn, two full turns and three full turns 	<ul style="list-style-type: none"> Measure and record the length of a line in whole centimetres using a ruler Say and write the mass, indicated by pictures of bags of sugar and baked beans, in kilograms and grams Draw pictures of bags of sugar and baked beans to represent the mass of items, in kilograms and grams 	<ul style="list-style-type: none"> Copy division Maths Stories with 1-digit whole numbers Act the Real Story for division Maths Stories with 1-digit whole numbers For division Maths Stories with 1-digit whole numbers, look at the Maths Story and read what it says and look at the Maths Story and read what it means 	<ul style="list-style-type: none"> Use an addition or subtraction Maths Story with 1-digit whole numbers to make up a Real-Life Story about everyday objects or measures, and state what the Real-Life Story is about Draw a picture to act a Real-Life Story.
4	<ul style="list-style-type: none"> Copy vertical additions and subtractions with 2-digit and 3-digit whole numbers Use the correct operation and calculate answers to vertical additions and subtractions with 2-digit and 3-digit whole numbers (no tricky columns) 	<ul style="list-style-type: none"> Name 2D shapes (triangle, quadrilateral, pentagon, hexagon, circle, ellipse) and for each polygon identify the number of sides Use a dm stick to represent a <i>turn through</i> a half, a quarter or three-quarters of a full turn, from one direction to another 	<ul style="list-style-type: none"> Associate particular volumes with different objects Select correct combinations of 1p, 2p and 5p coins to buy and sell objects and show <i>Same Value: Different Appearance</i> for coins and objects. 	<ul style="list-style-type: none"> Copy addition and subtraction Maths Stories with 1-digit whole numbers, zero, a half and a quarter Copy multiplication and division Maths Stories with 1-digit whole numbers Act the Real Story using addition and subtraction Maths Stories with 1-digit whole numbers, zero, a half and a quarter. Act the Real Story using multiplication and division Maths Stories with 1-digit whole numbers 	<ul style="list-style-type: none"> Use an addition or subtraction Maths Story with 1-digit whole numbers to make up a basic Real-Life Story and an embellished Real-Life Say what a basic Real-Life Story is about, give the context of the embellished Real-Life Story Use everyday vocabulary related to addition and subtraction <i>away</i> in embellished Real-Life Stories involving addition and subtraction Draw a picture of a basic Real-Life Story.
5	<ul style="list-style-type: none"> Copy vertical additions and subtractions with any pair of 2-digit, 3-digit or 4-digit whole numbers, Use the correct operation and calculate additions and subtractions with any pair of 2-digit, 3-digit or 4-digit whole numbers (no tricky columns) 	<ul style="list-style-type: none"> Recognise the difference between, and use actions for 1D, 2D and 3D shapes Identify 2D faces on 3D shapes, and name them as triangles, quadrilaterals, pentagons or hexagons. 	<ul style="list-style-type: none"> Give change from ten pence in a shopping context. 	<ul style="list-style-type: none"> Use an embellished Real-life Story to say what a basic Real-Life Story, involving addition or subtraction with 1-digit whole numbers, is about Use an embellished Real-life Story to draw a basic Real-Life Story involving addition or subtraction with 1-digit whole numbers Use an embellished Real-life Story to say a basic Real-Life Story From an embellished Real-life Story, find and write an addition or subtraction Maths Story with 1-digit whole numbers 	<ul style="list-style-type: none"> Cut shapes into halves and quarters by drawing lines accurately Shade a half, a quarter and three quarters of a shape.
6	<ul style="list-style-type: none"> Copy vertical additions and subtractions with 2-digit, 3-digit or 4-digit whole numbers (no tricky columns) Use the correct operation and calculate vertical additions and subtractions with 2-digit, 3-digit or 4-digit whole numbers (no tricky columns), 	<ul style="list-style-type: none"> Identify the 2D shapes that make up the faces of 3D shapes (no curved faces). 	<ul style="list-style-type: none"> Draw the short hand and long hand on a clock face to show duration 	<ul style="list-style-type: none"> Say what a simple word problem, involving addition or subtraction with 1-digit whole numbers, is about Draw a basic Real-Life Story involving addition or subtraction with 1-digit whole numbers, Say a basic Real-Life Story, From a simple word problem, find and write an addition or subtraction Maths Story with 1-digit whole numbers Answer a simple word problem involving addition or subtraction with 1-digit whole numbers, 	<ul style="list-style-type: none"> Identify which months (January to December) come before or after a particular month Identify which day numbers (first to thirty-first), come before or after a particular day number With assistance, and as a group, collect, order and record information to create a bar chart.

Year 2

Block	Arithmetic 1	Geometry	Data and Measure	Arithmetic 2	Reasoning
1	<ul style="list-style-type: none"> Copy and calculate vertical additions and subtractions with up to 4-digit whole numbers (no 'tricky' columns) Copy and calculate addition, subtraction, multiplication and division Maths Stories with 1-digit whole numbers, including zero, $\frac{1}{2}$ and $\frac{1}{4}$ 	<ul style="list-style-type: none"> Read information from grids to find the number of and the length of sides of shapes, the number of sticks needed to make them and the perimeter of closed shapes Identify a line of symmetry in 2D shapes Use the vocabulary 'line of symmetry' and 'not a line of symmetry'. 	<ul style="list-style-type: none"> Draw hands on a clock face to show the time to the quarter hour, e.g. quarter to six, five forty-five Read the time from an analogue clock to the quarter hour, saying it as o'clock or past/to the hour. Write the 12-hour time in figures, to the quarter hour, . 	<ul style="list-style-type: none"> Look at an embellished Real-Life Story involving addition, subtraction or multiplication and identify what the basic Real-Life Story is' Look at an embellished Real-Life Story involving addition, subtraction or multiplication and write the implied Maths Story. 	<ul style="list-style-type: none"> Know that the inverse of add is take away, and, for an addition Maths Story, write two related subtraction Maths Stories, e.g. for $3 + 2 = 5$, write $5 - 2 = 3$ and $5 - 3 = 2$ For an addition Maths Story, use the commutative law to write the related addition Maths Story, e.g. for $3 + 2 = 5$, write $2 + 3 = 5$ For a multiplication Maths Story, use the commutative law to write the related multiplication Maths Story, e.g. for $2 \times 3 = 6$, write $3 \times 2 = 6$.
2	<ul style="list-style-type: none"> Copy and calculate vertical additions, with up to 4-digit whole numbers and a 'tricky' units column using funny writing. 	<ul style="list-style-type: none"> Measure the lengths of sides of 2D shapes in millimetres. Draw and name diagonals of 2D shapes and measure them in millimetres Draw the symbol for a turn Recognise quarter turns in 2D shapes as right angles and draw the symbol for a right angle. 	<ul style="list-style-type: none"> Select and use measuring tools for length to measure accurately in cm and in m Select and use measuring tools for mass to measure accurately in g and in kg Select and use measuring tools for volume to measure accurately in ml. 	<p>Look at a Maths Story based on simple information from a grid, e.g. $1 + 3 = 4$, and, say a basic Real-Life Story and say what the Real-Life Story is about</p>	<ul style="list-style-type: none"> For a multiplication Maths Story, e.g. $3 \times 2 = 6$, use the inverse of 'times' to write two division Maths Stories, e.g. $6 \div 3 = 2$ and $6 \div 2 = 3$ Write multiplication Maths Stories and division Maths Stories in a grid in preparation for long multiplication and division, e.g. Use times tables to complete a division Maths Story, e.g. $18 \div 3 = 6$.
3	<ul style="list-style-type: none"> Copy vertical subtractions with up to 4-digit whole numbers and a 'tricky' units column Calculate vertical subtractions with up to 4-digit whole numbers and a 'tricky' units column using 'funny counting'. 	<ul style="list-style-type: none"> Recognise and name 2D faces in 3D shapes Recognise and name 2D faces in pictures of 3D shapes Use the vocabulary side and corner for 2D faces Use the vocabulary edge and vertex for 3D shapes. 	<ul style="list-style-type: none"> Answer 'How many?' and 'Difference between' questions about information presented in a grid or bar chart by recognising related addition and subtraction Maths Stories. 	<ul style="list-style-type: none"> Say and write an addition Maths Story to partition a 2-, 3- or 4-digit whole number. Read and copy mixed numbers accurately. Read subtraction Maths Stories as 'difference between' stories. 	<ul style="list-style-type: none"> For a simple word problem involving addition, subtraction, multiplication or division, write what the basic Real-Life Story is about, e.g. pencils For a simple word problem, identify the correct operations and write the addition, subtraction, multiplication or division Maths Story, e.g. $12 + 7 - 10 = 9$ Answer the question in a simple word problem involving addition, subtraction, multiplication or division.
4	<p>Analyse and work with word problems associated with simple Real-Life Stories, e.g. writing the Maths Story.</p>	<ul style="list-style-type: none"> Judge whether there is a line of symmetry or not on a 2D shape. Draw an arc to show turning through an angle and draw a right angle symbol to show turning through a right angle. Name and label faces in 3D shapes. 	<ul style="list-style-type: none"> Write a cm length in dm and cm. Answer word problems by writing the change from £1. 	<ul style="list-style-type: none"> Complete different types of number puzzles Continue a sequence of numbers or shapes and describe the connection between the steps. 	<ul style="list-style-type: none"> Write what the basic Real-Life Story in a simple word problem involving addition, subtraction, multiplication or division is about, e.g. pencils Write the addition, subtraction, multiplication or division Maths Story from the word problem, e.g. $12 + 7 - 10 = 9$ Answer the question in a simple word problem involving addition, subtraction, multiplication or division, e.g. There are 12 pencils in a box. Julia puts 7 more pencils in the box. Alan takes out 10 pencils. How many pencils are left in the box? (9) Say whether a division Real Story is Type 1, e.g. six cups, divided by two cups, equals three, or Type 2, e.g. six cups, divided by two, equals three cups.
5	<p>Calculate answers to one-step word problems using addition, subtraction, multiplication or division.</p>	<ul style="list-style-type: none"> Recognise 2D shapes and polygons and name individual polygons Recognise and copy the names of 'special' triangles and quadrilaterals, e.g. equilateral, isosceles and right-angled triangles, squares and rectangles. 	<ul style="list-style-type: none"> Understand information presented in a simple bar chart or pictogram, and use related language, e.g. title, label, bar, symbol Answer simple questions and word problems relating to bar charts and pictograms. 	<ul style="list-style-type: none"> Complete a variety of number puzzles Find halves and quarters of numbers and objects. 	<ul style="list-style-type: none"> Select and use appropriate measuring tools to solve word problems involving measures Use the 'Think About the Word Problem!' steps to solve real-life measuring problems, e.g. identify instructions and questions
6	<p>Copy addition and subtraction Maths Stories with up to 4-digit whole numbers as vertical additions or subtractions (with or without a 'tricky' first column) and calculate answers.</p>	<ul style="list-style-type: none"> Recognise squares, rectangles, isosceles triangles and equilateral triangles in different orientations Recognise 3D shapes as 'polyhedra' or 'not polyhedra' Recognise prisms and pyramids Use nets to make 3D shapes, and identify which nets make cubes. 	<ul style="list-style-type: none"> Measure length in millimetres Record a measurement in mm, in cm and mm, in cm using a decimal point, and to the nearest cm. Read the time from an analogue clock for any five-minute interval, in hours and minutes, e.g. five forty, eleven thirty-five Write the 12-hour time for any five-minute interval in figures. Work out the time one hour after a 12-hour time, and record the new time in figures. 	<ul style="list-style-type: none"> Use the vocabulary of place value, e.g. thousands, hundreds, tens and units Write the number shown on an abacus Sort odd and even numbers using Carroll and Venn diagrams. 	<ul style="list-style-type: none"> Use a multiplication Maths Story, e.g. $3 \times 4 = 12$, with Type 1 and Type 2 Real Stories, to write Maths Stories about thousand, e.g. $3000 \times 4 = 12000$ and $3 \times 4000 = 12000$; hundred, e.g. $300 \times 4 = 1200$ and $3 \times 400 = 1200$ and 'ty', e.g. $30 \times 4 = 120$ and $3 \times 40 = 120$ Use the inverse of multiplication to complete division Maths Stories with 1-digit, 2-digit, 3-digit and 4-digit whole numbers.

Year 3

Block	Arithmetic 1	Geometry	Data and Measure	Arithmetic 2	Reasoning
1	<ul style="list-style-type: none"> Respond to <i>I will act the Real Story, you write the Maths Story</i> (including the answer), for addition and subtraction of 1-digit numbers, halves, quarters and mixed numbers Copy and calculate the answers to vertical additions and subtractions with tricky unit columns, with reference to written number pairs if necessary. 	<ul style="list-style-type: none"> Read information from grids to find the number of and the length of sides of shapes, the number of sticks needed to make them and the perimeter of closed shapes Identify a line of symmetry in 2D shapes Use the vocabulary 'line of symmetry' and 'not a line of symmetry'. 	<ul style="list-style-type: none"> Copy grids and bar charts accurately on squared paper Draw hands on a clock face to show times expressed in analogue form Write and say times in digital form Draw hands on a clock face to show times later/earlier than the time shown on a separate clock face (all times in multiples of five minutes) Calculate time differences shown on a pair of clocks. 	<ul style="list-style-type: none"> Calculate fractions of quantities using pupil cups, 	<ul style="list-style-type: none"> Calculate total distances shown on sketch maps and grids using vertical addition and subtraction (including a tricky first column) Calculate total populations for towns shown on grids using vertical addition and subtraction (including a tricky first column) Write populations and distances in ascending order and descending order.
2	<ul style="list-style-type: none"> Write Maths Stories for all four operations (+, −, ×, ÷) using fifths Write Maths Stories as vertical additions and subtractions and calculate with tricky tens columns, using number pairs for reference, if necessary. 	<ul style="list-style-type: none"> Measure the lengths of sides of 2D shapes in millimetres Draw and name diagonals of 2D shapes and measure them in millimetres Draw the symbol for a turn Recognise quarter turns in 2D shapes as right angles and draw the symbol for a right angle. 	<ul style="list-style-type: none"> Draw and label points and measure accurately to draw line segments from written instructions, Use compasses and a pencil to measure accurately and draw a circle following instructions, Accurately measure and draw a regular hexagon using compasses and a ruler. 	<ul style="list-style-type: none"> Solve word problems involving fractions of quantities. 	<ul style="list-style-type: none"> Calculate answers to word problems using multiplication Maths Stories Calculate answers to word problems using division Maths Stories Solve a word problem using a division Maths Story and state whether the implied basic Real-Life Story is Type 1 or Type 2.
3	<ul style="list-style-type: none"> Write Maths Stories for all four operations (+, −, ×, ÷) including fifths and sevenths with mixed numbers (no mixed denominations) Write addition Maths Stories as vertical additions (with tricky units and tens columns) and calculate answers Write subtraction Maths Stories as vertical subtractions (with tricky units or tens columns) and calculate answers. 	<ul style="list-style-type: none"> Recognise and name 2D faces in 3D shapes Recognise and name 2D faces in pictures of 3D shapes Use the vocabulary <i>side</i> and <i>corner</i> for 2D faces Use the vocabulary <i>edge</i> and <i>vertex</i> for 3D shapes. 	<ul style="list-style-type: none"> Look at a grid, bar chart or pie chart and determine the explicit information Interpret data in a grid, bar chart or pie chart and use implicit information to answer questions that use the vocabulary Interpret data in a grid, bar chart or pie chart and write a Maths Story to calculate answers to questions about the data Begin to use ratio when interpreting implicit information in a grid, bar chart or pie chart to answer questions that use the vocabulary Apply the language and notation of comparison to find implicit information in a grid, bar chart, or pie chart, 	<ul style="list-style-type: none"> Multiply a 2-digit whole number by a 1-digit number using a grid Round numbers to the nearest 10. 	<ul style="list-style-type: none"> Multiply a 2-digit number by a 1-digit number by partitioning and calculating the sum of the two products
4	<ul style="list-style-type: none"> Write addition, subtraction, multiplication and division Maths Stories, including negative numbers (no combining positive and negative numbers unless the result is zero) Write addition, subtraction, multiplication and division Maths Stories including fifths, sevenths and other denominations with mixed numbers (no tricky denominations) Write Maths Stories as vertical additions and subtractions (with tricky units or tens columns) and calculate answers 	<ul style="list-style-type: none"> Judge whether there is a line of symmetry or not on a 2D shape Draw an arc to show turning through an angle and draw a right angle symbol to show turning through a right angle Name and label faces in 3D shapes. 	<ul style="list-style-type: none"> Decide which units to use when measuring length (mm/cm/dm/m) and mass (g/kg) Calculate areas of drawn rectangles by counting squares and write the answer using square units, Calculate volumes of drawn cuboids by counting cubes and write the answer using cubic units, For a labelled picture of a cuboid, write the lengths of edges and the perimeters and areas of named faces. 	<ul style="list-style-type: none"> Solve word problems involving division (including answers with remainders) Calculate division Maths Stories with remainders and write remainders as a number and as a fraction, 	<ul style="list-style-type: none"> Use vertical subtraction to calculate answers to 'How much farther' word problems Use grid multiplication for the product of a 2-digit number and a 1-digit number to calculate answers to word problems Use multiplication tables to write the answers to divisions with remainders Write a ratio as a fraction, and use the fraction to write the answers to divisions with remainders as a mixed number
5	<ul style="list-style-type: none"> Write addition and subtraction Maths Stories, including negative numbers (with tricky examples), combining positive and negative numbers to give results other than zero Write addition, subtraction, multiplication and division Maths Stories using fifths and other denominations with mixed numbers (no tricky denominations) Write Maths Stories as vertical additions and subtractions (with tricky units, tens or hundreds columns) and calculate answers. 	<ul style="list-style-type: none"> Recognise 2D shapes and polygons and name individual polygons Recognise and copy the names of 'special' triangles and quadrilaterals, e.g. equilateral, isosceles and right-angled triangles, squares and rectangles. 	<ul style="list-style-type: none"> Draw a bar chart for the data that children have collected using a tally chart Calculate the totals of and differences between two prices 	<ul style="list-style-type: none"> Calculate answers to addition, subtraction, multiplication and division Maths Stories, including tenths written as fractions and decimal fractions Calculate vertical additions and subtractions including decimals (one decimal point only) Write squares and square roots using written multiplication Maths Stories for reference. 	<ul style="list-style-type: none"> Calculate a Maths Story using the complement of a multiple of ten to one hundred Write the fraction shaded and the fraction not shaded for a picture showing a shaded fraction of a shape Write the sum of two fractions that total one and the difference between one and a shaded fraction using the complement to one Partition and rearrange numbers to calculate the answer for sums or differences of two 2-digit numbers.
6	<ul style="list-style-type: none"> Write Maths Stories for all four operations including negative numbers (with tricky examples for addition and subtraction) Write Maths Stories for all four operations using fifths and other denominations with mixed numbers (no tricky denominations) Write Maths Stories as vertical additions and subtractions (with one tricky units, tens or hundreds column) and calculate answers. 	<ul style="list-style-type: none"> Recognise squares, rectangles, isosceles triangles and equilateral triangles in different orientations Recognise 3D shapes as 'polyhedra' or 'not polyhedra' Recognise prisms and pyramids Use nets to make 3D shapes, and identify which nets make cubes. 	<ul style="list-style-type: none"> Estimate, measure and write mass using kg/g and capacity using ℓ/mℓ Calculate the area of drawn rectangles, by recognising that they are made up of several identical rows of 1-cm2 squares Calculate the volume of drawn cuboids, by recognising that they are made up of several identical rows of 1-cm3 cubes Calculate answers to word problems that involve the subtraction of two areas, 	<ul style="list-style-type: none"> Identify when addition is required to solve a word problem Identify when subtraction is required to solve a word problem Identify when multiplication is required to solve a word problem Identify when division is required to solve a word problem. 	<ul style="list-style-type: none"> Calculate answers to word problems using division Maths Stories Solve a word problem using a division Maths Story and state whether the implied basic Real-Life Story is Type 1 or Type 2 Identify odd and even numbers Complete sequences of odd and even numbers Carry out simple calculations using addition or multiplication and say whether the sum or product is odd or even Convert puzzles into simple drawings and answer related questions.

Year 4

Block	Arithmetic 1	Geometry	Data and Measure	Arithmetic 2	Reasoning
1	<ul style="list-style-type: none"> Calculate Maths Stories for all four operations with mixed numbers, 1-digit whole numbers, halves and quarters using pupil tables and pupil cups Mentally calculate Maths Stories combining addition, subtraction and multiplication with mixed numbers, 1-digit whole numbers, halves and quarters Mentally calculate Maths Stories for all operations with vulgar fractions (and mixed numbers) and negative numbers 	<ul style="list-style-type: none"> On a pair of axes, draw the image of an object in a vertical, horizontal or oblique mirror line and label the image accurately 	<ul style="list-style-type: none"> Read metric prefixes, from milli- to kilo-, with any of the basic units of length, mass and volume, and convert between units of measure, Use ratio, vulgar fractions and decimal fractions to compare metric units for length, mass and volume Read metric equivalences using the decimal point for centi- and milli- and the basic unit for length 	<ul style="list-style-type: none"> Use a grid to multiply a 2-digit whole number by a 2-digit whole number Calculate answers to one-step word problems using addition, subtraction, multiplication or division 	<ul style="list-style-type: none"> Read and write tens, hundreds, thousands, ten thousands, hundred thousands, millions, ten millions, hundred millions, billions in figures and words Read and write large products of ten as powers of ten Read and write the value of a power of ten
2	<ul style="list-style-type: none"> Read and write decimal fractions to three decimal places Read and write numbers written in decimal notation (to three places) as vulgar fractions using tenths, hundredths or thousandths as the denomination Mentally calculate addition and subtraction combined with multiplication Maths Stories with decimal fractions Mentally calculate division Maths Stories with decimal fractions (not tricky) Mentally calculate each of the four operations, and combinations of addition and subtraction with multiplication, using vulgar fractions, mixed numbers and negative numbers (no tricky examples) 	<ul style="list-style-type: none"> Use a protractor to draw acute angles Say whether a drawn angle is acute, obtuse or reflex 	<ul style="list-style-type: none"> Calculate the area of a rectangle by writing a multiplication basic Real-Life Story Calculate the volume of a picture combining cuboids by writing a multiplication basic Real-Life Story 	<ul style="list-style-type: none"> Use a calculator to solve one-step addition and subtraction word problems involving measures, with 4-digit numbers Use a calculator to solve one-step addition, subtraction, multiplication and division word problems involving measures, including decimals 	<ul style="list-style-type: none"> Calculate products of two multiples of ten using a 1-digit multiplication Maths Story Deduce and write division Maths Stories for products of two multiples of ten
3	<ul style="list-style-type: none"> Mentally calculate Maths Stories using fractions, mixed numbers and negative numbers (no tricky Examples) Say the value of any indicated digit or combination of digits in a 4-digit whole number and in a 4-digit number to the third decimal place Calculate 4-digit whole number vertical additions and subtractions (no tricky columns) Calculate vertical additions and subtractions with decimal fractions (no tricky columns) Use a grid to multiply two 2-digit numbers (TU by TU) 	<ul style="list-style-type: none"> Use the vocabulary <i>arc</i>, <i>chord</i>, <i>circumference</i>, <i>radius</i> and <i>diameter</i> correctly Follow instructions to use compasses to draw a circle, together with a hexagon and triangle within the circle 	<ul style="list-style-type: none"> Use the formula $C = \pi \times d$ to calculate the circumference of a circle. 	<ul style="list-style-type: none"> Group together additions and subtractions to make calculating 3-digit addition and subtraction Maths Stories easier Solve word problems about measures and everyday objects. 	<ul style="list-style-type: none"> Mentally calculate the product of three 1-digit numbers and write the answer Copy index notation for powers of ten up to 10^9 Write the product of tens for index notation up to 10^9 Use a calculator to calculate and write the product of three numbers, each with a whole number and a decimal fraction.
4	<ul style="list-style-type: none"> Complete vertical additions and subtractions with decimal fractions (any column tricky) Use a grid for long division, dividing a 2-digit or 3-digit number by a 1-digit number (TU ÷ U or HTU ÷ U), using both remainders and fractions. 	<ul style="list-style-type: none"> Draw a pair of axes and label them with positive and negative numbers Follow instructions to draw circles and polygons on a pair of axes (four quadrants) Name lines of symmetry. 	<ul style="list-style-type: none"> Calculate the mean of a sample of piles of cups by dividing the total number of cups by the number of piles. 	<ul style="list-style-type: none"> Solve word problems using the sum of two products Solve word problems involving decimal quantities 	<ul style="list-style-type: none"> Calculate a product of two numbers, each a decimal fraction up to two decimal places
5	<ul style="list-style-type: none"> Mentally calculate whole number percentages of a whole number quantity (no tricky examples) For a decimal number percentage of a whole number quantity, use a calculator to complete the calculation Round a decimal fraction using tenths or tenths and hundredths to the nearest whole number, 	<ul style="list-style-type: none"> Use compasses and a ruler to draw triangles with given lengths of sides 	<ul style="list-style-type: none"> Calculate equivalent fractions by drawing ratio sticks Calculate fractions of quantities and recognise that using an equivalent fraction gives the same answer. 	<ul style="list-style-type: none"> Solve word problems involving percentages of quantities Solve word problems involving percentages of quantities using a calculator but without using the percentage key 	<ul style="list-style-type: none"> Identify and calculate the value of each term in an expression, use the values to add and subtract from left to right, and complete the Maths Story.
6	<ul style="list-style-type: none"> Use 'one add negative one equals zero' ($1 + -1 = 0$) with tricky addition and subtraction Use a grid to multiply two 2-digit whole numbers (TU × TU) Use a grid for long division, dividing a 3-digit whole number by a 1-digit whole number (HTU ÷ U) using both remainders and fractions 	<ul style="list-style-type: none"> Use a protractor to measure acute and obtuse angles in degrees Use the inside and outside protractors to draw specified acute and obtuse angles with centre of rotation C. 	<ul style="list-style-type: none"> Use ratio to convert between pounds and euros, miles and km, and vice versa, with quantities to two decimal places Use ratio to convert between seconds, minutes and hours. 	<ul style="list-style-type: none"> Solve word problems using the four operations, fractions of quantities, percentages of quantities and the sum of two products Use the symbol \approx for 'approximately equal to' (nearly equal to). Round an answer with two decimal places to the nearest one decimal place 	<ul style="list-style-type: none"> For algebraic expressions using the symbols x and y, add and subtract terms, working from left to right, to write an expression with <i>Same Value: Different Appearance</i>

Year 5

Block	Arithmetic 1	Geometry	Data and Measure	Arithmetic 2	Reasoning
1	Write two or three 4-digit whole numbers vertically and calculate (with more than one tricky column) using addition and subtraction. Use the three operations, $+$ / $-$ / \div , with vulgar fractions or mixed numbers with the same denominator Multiply and divide vulgar fractions and mixed numbers by a whole number.	Name the images of objects that are points, line segments or polygons in a symmetrical shape Know the line of symmetry is the perpendicular bisector in a symmetrical shape Name two congruent shapes in a shape with an axis of symmetry.	Solve word problems (involving capacity, volume or length) by using a division Maths Story, identifying the basic Real-Life Story as a Type 1 or Type 2 division. Solve word problems (involving capacity, volume or length) by finding a percentage of a value or the result of a percentage increase or decrease. Choose the correct operations to solve one-step and multi-step word problems involving capacity, volume or length. Make a simple 3D shape by drawing, cutting out and folding a net. Recognise that a cube cut through one diagonal forms two congruent triangular prisms.	Complete missing number grids and missing number sentences Complete sequences involving square Numbers. Use information displayed in grids to solve word problems Solve one- and two-step word problems involving any of the four operations.	Write a.m./p.m. times using 24-hour clock notation Write 24-hour times as a.m./p.m. times Calculate the mean number of days in four consecutive years Calculate the duration between two times written using 24-hour notation.
2	Write two or three 4-digit decimal numbers vertically, with up to three decimal places, and calculate with more than one tricky column, using addition and subtraction. Multiply two vulgar fractions where the denominator of one and the numerator of the other are equal.	Name and draw acute angles, obtuse angles, reflex angles and right angles Name and calculate vertically opposite angles and supplementary angles Use a protractor to draw acute angles, obtuse angles and right angles.	Appreciate the need for standard units Know the metric units of mass: g, kg; length: mm, cm, m, km; and volume/capacity: ml, l, cm ³ m ³ Know imperial units of measure, e.g. pound, ounce, inch, foot, yard, mile, pint, gallon Interpret a reading that lies between two unnumbered divisions on a scale Convert between metric units, e.g. kg and g to kg Convert between imperial units, e.g. lb and oz to oz.	Use $>$ / $<$ / $=$ with positive whole numbers, Use a calculator to check if a number is a factor of another number. Distinguish between a factor and a proper factor.	Solve algebraic equations that have an expression which is the sum of two terms using algebraic methods, one term being solely 'x' and the other term a 1-digit number, e.g. $x + 2 = 5$ Solve algebraic equations that have an expression which consists of one term using algebraic methods, a product of 'x' and a 1-digit number, e.g. $2x = 6$.
3	Use $\frac{a}{b}$ and $a \div b$ interchangeably. Use the division button on a calculator to convert vulgar fractions to finite decimal fractions (no vulgar fractions with infinite decimal equivalents) Use the four operations ($+$ / $-$ / \times / \div) with combinations of positive and negative numbers, including tricky examples (but not the product of two negative numbers).	Use a calculator to calculate the circumference of a circle using $C = \pi \times d$ Use a calculator to calculate the area of a circle using $A = \pi \times r^2$.	Interpret a calendar Interpret a timetable Use durations of minutes, hours, days or months in calculations and word problems Construct a bar chart and use it to find the mode Understand that the mode is the most common value in a set of data.	Use divisibility tests for 2, 3, 4, 5, 6, 10 Distinguish between factors and proper factors.	Solve problems involving measures and fractions by exploring patterns and relationships in diagrams Solve one-, two- and three-step word problems involving money.
4	Use a grid for long multiplication with up to 2-digit by 2-digit whole numbers Use a grid for long multiplication with up to 3-digit by 2-digit decimal numbers (one or two decimal places), with answers up to three decimal places.	Recognise corresponding angles and know they have the same value Recognise vertically opposite angles and know they have the same value. Recognise opposite interior angles in a parallelogram and know they have the same value.	Interpret a distance-time graph Draw a distance-time graph from given information Round measures of distance and time.	Identify prime numbers from 0–100 using Eratosthenes' sieve. Write numbers as the product of their prime factors For n as a positive whole number, respond to a condition that describes a factor.	Solve puzzles by calculating quantities, e.g. numbers of bricks, and dimensions, e.g. lengths and heights, using pictures of 2D and 3D shapes.
5	Use a grid for long division including numbers with up to 3-digits divided by 1-digit whole numbers.	Draw a convex polygon Draw and mark the exterior angles for a convex polygon Show that the sum of the exterior angles of a polygon is 360°.	Use ratio to convert between metric units of measure Use ratio to convert between metric and imperial units of measure Estimate the area of a shape in cm ² .	Evaluate terms in an expression with brackets, e.g. $(2 \times 3) + (1 \times 2) = 6 + 2$ Evaluate products in an expression with brackets, e.g. $2 \times (4 + 1 \times 3) = 2 \times (4 + 3) = 2 \times 7$.	Carry out investigations involving shapes, numbers and real-life situations using the 'What if Not' approach.
6	Multiply decimal numbers with up to three decimal places by multiples of powers of 10 (product no more than three decimal places), using the 'logic of the language' Divide decimal numbers by multiples of powers of 10 (no numbers with more than three decimal places), using the 'logic of the language' Use derived products to calculate multiplication and division.	Recognise, name and sketch polygons (decagon, heptagon, hexagon, nonagon, octagon, pentagon, quadrilateral, triangle) Recognise, name and sketch an equilateral triangle, isosceles triangle, right-angled triangle, scalene triangle Recognise, name and sketch a parallelogram, rectangle, rhombus, square, trapezium Recognise the various special triangles and quadrilaterals, use the special name and recognise them as the more general polygons.	Calculate durations for times specified as a.m./p.m. times and 24-hour clock times Draw and use a double number line showing distance and time to solve word problems involving speed, distance and time Use calculations to solve word problems involving speed, distance and time.	Evaluate terms in an expression that includes brackets, e.g. recognise $5 + 4 + 2 \times 5$ as an expression with three terms, evaluate $5 + 4 + 10$ and recognise $5 + (4 + 2) \times 5$ as an expression with two terms and evaluate $5 + 30$ Insert brackets in an expression so it has a specified value, e.g. calculate and write ' $2 \times 5 + 1 + 2 = 13$ and $2 \times (5 + 1) + 2 = 14$ ' and also insert brackets for $2 \times 5 + 1 + 2$ to have the value 16.	Calculate durations of shop opening times from information in a grid Use information in a grid about duration of tracks on a CD to calculate differences between durations, total durations and mean durations Calculate equivalences and fractions of periods of time using years, days, hours, minutes and seconds.