UNIT	Maths topic	Learning objectives/expected outcomes	NC programmes of study
1	**Number and place value (1)**	• Count in steps of 1, 2, 5 and 10, from any number forwards or backwards • Read and write two-digit numbers as numerals and in words • Recognise the place value of each digit in a two-digit number • Compare and order two-digit numbers *I can count in 2s, 5s and 10s backwards and forwards* *I can read and write two-digit numbers and show what each digit stands for* *I can write numbers in order and position them on a number line*	• count in steps of 2, 3, and 5 from 0, and in tens from any number, forward or backward • recognise the place value of each digit in a two-digit number (tens, ones) • identify, represent and estimate numbers using different representations, including the number line • compare and order numbers from 0 up to 100; use <, > and = signs • read and write numbers to at least 100 in numerals and in words • use place value and number facts to solve problems
2	**Addition and subtraction (1)**	• Add and subtract one-digit and two-digit numbers to 20 (9 + 9, 18 - 9), including zero • Use the addition (+), subtraction (-) and equals (=) signs • Show that addition of two numbers can be	• solve 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

		done in any order (commutative) and subtraction of one number from another cannot • Understand that subtraction is the inverse of addition and vice versa • Find the difference between two numbers by counting on *I know the pairs of numbers that total 20* *I can remember or work out add and take away calculations with answers to 20.* *I can add using counting on* *I can subtract by taking away and by counting up to find the difference between the numbers* *I can add and subtract some numbers in my head* *I know that addition and subtraction 'undo' each other*	• recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 • 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 • show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot • recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems.
3	**Shapes and patterns (1)**	• Describe patterns and relationships involving shapes, make predictions and test these with examples • Visualise common 2-D shapes and 3-D solids;	• order and arrange combinations of mathematical objects in patterns • identify and describe the properties of 2-D shapes, including the number of sides and symmetry in a vertical

		identify shapes from pictures of them in different positions and orientations • Sort, make and describe 2-D and 3-D shapes, referring to their properties *I can continue a shape pattern* *I can sort a set of 3-D shapes* *I can look at pictures of 2-D shapes and name them*	line • identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces • identify 2-D shapes on the surface of 3-D shapes, for example a circle on a cylinder and a triangle on a pyramid • compare and sort common 2-D and 3-D shapes and everyday objects
4	**Measures (1)**	• Estimate, compare and order length, height, mass and capacity • Measure length, height, mass and capacity choosing and using suitable standard units and measuring instruments • Read the numbered divisions on a scale and interpret the divisions between them • Use a ruler to draw and measure lines to the nearest centimetre *I can use a metre rule to mark out 1 metre* *I can find out if something is longer or shorter than a metre*	• 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 • compare and order lengths, mass, volume/capacity and record the results using >, < and =

		I can use a balance to compare two things to see which is lighter *I can use a balance to find out if something is lighter or heavier than a kilogram or half-kilogram* *I can measure out a litre of water* *I can read numbers on a scale*	
5	**Fractions, position and movement (1)**	• Recognise, find, name and write one-half and one-quarter of shapes, lengths and quantities • Recognise and use whole, half, quarter and three-quarter turns, both clockwise and anticlockwise • Describe, follow and give instructions involving position, direction and movement • Use units of time and know the relationships between them • Read and write the time to the quarter hour *I can find half and a quarter of a set of objects or a shape* *I can follow and give instructions to mark a position*	• recognise, find, name and write fractions 1/3, 1/4, 2/4 and 3/4 of a length, shape, set of objects or quantity • write simple fractions e.g. 1/2 of 6 = 3 and recognise the equivalence of 2/4 and 1/2 • 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 in a straight line • compare and sequence intervals of time • 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. • know the number of minutes in an hour and the number of hours in a day

		on a grid *I know how to turn right and to turn left* *I can make whole, half, quarter and three-quarter turns* *I can estimate how long an activity might take, then check using a timer* *I can tell the time when it is quarter past, half past or quarter to the hour*	
6	**Number and place value (2)**	• Read and write numbers to 100 and beyond as numerals and in words • Describe and extend number sequences and recognise odd and even numbers • Explain what each digit in a two-digit number represents • Partition two-digit numbers in different ways, including into multiples of 10 and 1 • Use the greater than (>) and less than (<) signs • Recognise and use symbols for pounds (£) and pence (p) and combine amounts to make a particular value	• count in steps of 2, 3, and 5 from 0, and in tens from any number, forward or backward • recognise the place value of each digit in a two-digit number (tens, ones) • identify, represent and estimate numbers using different representations, including the number line • compare and order numbers from 0 up to 100; use <, > and = signs • read and write numbers to at least 100 in numerals and in words • use place value and number facts to solve problems • recognise and use symbols for pounds (£) and pence (p)

		I can read and write numbers up to 100 in figures and in words *I know which numbers are odd and which are even* *I can explain what each digit in a two-digit number stands for* *I can partition numbers in different ways* *I can use the < and > signs to show that one number is larger or smaller than another* *I know the coins and notes we use and can make different amounts*	and combine amounts to make a particular value
7	**Addition and subtraction (2)**	• Add or subtract mentally a one-digit number or a multiple of 10 to or from any two-digit number • Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 • Use practical and informal written methods to add and subtract two-digit numbers • Recognise and use the inverse relationship	• solve 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 • recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 • add and subtract numbers using concrete objects, pictorial representations, and mentally, including:

		between addition and subtraction • Add and subtract money of the same unit, including giving change *I can add and subtract some numbers in my head* *I can add and subtract bigger numbers, using practical equipment or by writing notes to help me* *I know that addition and subtraction 'undo' each other* *I can total different coins and give change*	- a two-digit number and ones - a two-digit number and tens - two two-digit numbers - adding three one-digit numbers • show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot • recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems • find different combinations of coins that equal the same amounts of money • solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change
8	**Multiplication and division (1)**	• Count on or back in twos, fives and tens and use this knowledge to derive the multiples of 2, 5 and 10 to the tenth multiple and beyond • Represent repeated addition and arrays as multiplication, and sharing and repeated subtraction (grouping) as division • Derive and recall multiplication facts for the 2, 5 and 10 times-tables and the related division	• recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers • calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (.), division (÷) and equals (=) signs • show that multiplication of two numbers can be done in any order (commutative) and division of one number by

		facts • Understand that halving is the inverse of doubling and derive and recall doubles of all numbers to 20, and the corresponding halves • Use the symbols ×, ÷ and = to record and interpret number sentences *I can recognise some of the 2, 5 and 10 times-tables and can explain the patterns I see* *I can count in steps of 2, 5 or 10* *I know doubles of numbers up to 10 and I can use what I know to work out halves* *I know that if I double a number then halve the answer I get back to the number I started with* *I know how to write number sentences for multiplication and for division*	another cannot • solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.
9	**Shapes and patterns (2)**	• Describe patterns and relationships involving shapes, make predictions and test these with examples • Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces	• order and arrange combinations of mathematical objects in patterns • identify and describe the properties of 2-D shapes, including the number of sides and symmetry in a vertical line • identify and describe the properties of 3-D shapes,

		• Sort, make and describe 2-D and 3-D shapes, referring to their properties • Identify reflective symmetry in patterns and 2-D shapes and draw lines of symmetry in shapes *I can describe and continue the pattern for a set of shapes* *I can name and sort 2-D and 3-D shapes* *I can complete a symmetrical picture by drawing the 'other half'*	including the number of edges, vertices and faces • identify 2-D shapes on the surface of 3-D shapes, for example a circle on a cylinder and a triangle on a pyramid • compare and sort common 2-D and 3-D shapes and everyday objects
10	**Measures (2)**	• Estimate, compare and order length, height, mass and capacity • Measure length, height, mass, capacity and temperature, choosing and using suitable standard units and measuring instruments • Read the numbered divisions on a scale and interpret the divisions between them • Use a measuring jug to measure the capacity of different containers *I can estimate whether a container holds more or*	• 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 • compare and order lengths, mass, volume/capacity and record the results using >, < and =

		less than a litre *I can estimate whether an object is heavier or lighter than a half-kilogram by putting a half-kilogram in one hand and the object in the other* *I can estimate length in centimetres and metres* *I can use a measuring jug to find the capacity of different containers* *I can read numbers on a scale and work out the numbers between them*	
11	**Fractions, position and movement (2)**	• Recognise, find, name and write one-half, one-quarter and three-quarters of shapes, lengths and quantities • Recognise and use whole, half, quarter and three-quarter turns, both clockwise and anticlockwise • Know that a right angle represents a quarter turn • Describe, follow and give instructions involving position, direction and movement • Use units of time and know the relationships	• recognise, find, name and write fractions 1/3, 1/4, 2/4 and 3/4 of a length, shape, set of objects or quantity • write simple fractions e.g. 1/2 of 6 = 3 and recognise the equivalence of 2/4 and 1/2 • 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 in a straight line • compare and sequence intervals of time • tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to

		between them • Read and write the time to the quarter hour *I can find three-quarters of a set of objects or shape* *I can fold a piece of paper into halves or quarters* *I can turn on the spot through whole, half or quarter turns, either clockwise or anticlockwise* *I know that a quarter turn is a right angle* *I know that one hour is the same as 60 minutes* *I know that a quarter past three is the same time as three fifteen*	show these times. • know the number of minutes in an hour and the number of hours in a day
12	**Multiplication and division (2)**	• Recognise and use the inverse relationship between multiplication and division in calculations • Recall and use multiplication facts for the 2, 5 and 10 times-tables and the related division facts • Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot	• recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers • calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (.), division (÷) and equals (=) signs • show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot

		• Recognise multiples of 2, 5 and 10 *I can use grouping to work out divisions and can explain what I did* *I know that multiples of 2 are even numbers* *I know some of my times-tables for 2, 5 and 10 and can work out related division facts* *I know that multiples of 5 end in 5 or 0* *I know that 3x5 gives the same answer as 5x3*	• solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.
13	**Number and place value (3)**	• Read and write numbers up to and beyond 100 • Describe and extend number sequences, including counting in 3s • Explain what each digit in a two-digit number represents, demonstrating their understanding using different representations • Partition two-digit numbers in different ways, using multiples of 10 and 1 • Compare and order numbers and estimate numbers represented on a number line	• count in steps of 2, 3, and 5 from 0, and in tens from any number, forward or backward • recognise the place value of each digit in a two-digit number (tens, ones) • identify, represent and estimate numbers using different representations, including the number line • compare and order numbers from 0 up to 100; use <, > and = signs • read and write numbers to at least 100 in numerals and in words • use place value and number facts to solve problems

		I can count in 3s from any number *I can explain what each digit in a two-digit number stands for and show this using place value apparatus* *I can partition 2-digit numbers in different ways using tens and ones* *I can put numbers in order and compare numbers using the < and > signs* *I can estimate the value of a number shown on a number line*	• recognise and use symbols for pounds (£) and pence (p) and combine amounts to make a particular value
14	**Addition and subtraction (3)**	• Add or subtract mentally a one-digit number or a multiple of 10 to or from any two-digit number • Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 • Use the inverse relationship between addition and subtraction to calculate the value of an unknown in a number sentence (e.g. ☐ + 2 = 14, 30 – ☐ = 24) • Use more formal written methods to add and subtract two-digit numbers	• solve 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 • recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 • 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

		• Add and subtract money of the same unit, including giving change *I can add several one-digit numbers in my head* *I can add and subtract two-digit numbers using practical equipment or a written method to help me* *I can work out the missing number in a number sentence such as 14 + ☐ = 35* *I can total different amounts of money and give change*	- adding three one-digit numbers • show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot • recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems • find different combinations of coins that equal the same amounts of money • solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change
15	**Shapes and patterns (3)**	• Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces • Identify and describe the properties of 2-D shapes, including 2-D shapes on the surface of 3-D shapes • Compare and sort common 2-D and 3-D shapes and everyday objects. • Identify reflective symmetry in patterns and 2-D shapes and draw lines of symmetry in	• identify and describe the properties of 2-D shapes, including the number of sides and symmetry in a vertical line • identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces • identify 2-D shapes on the surface of 3-D shapes, for example a circle on a cylinder and a triangle on a pyramid • compare and sort common 2-D and 3-D shapes and everyday objects

		shapes *I can name and sort 2-D and 3-D shapes and talk about their properties* *I can draw a line of symmetry on a shape* *I can draw pictures of 2-D shapes that I know* *I can use a construction kit to make models of 3-D solids that I know*	
16	**Measures (3)**	• Estimate, compare and order length, height, mass and capacity • Measure length, height, mass, capacity and temperature, choosing and using suitable standard units and measuring instruments • Read the numbered divisions on a scale and interpret the divisions between them • Use weighing scales to measure the mass of different objects *I can use a measuring jug to measure a litre of water and to find out how much water other containers hold* *I can use scales to measure weight in kilograms*	• 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 • compare and order lengths, mass, volume/capacity and record the results using >, < and =

		and half-kilograms *I know that a metre is 100 centimetres long* *I know that a kilogram is 1000 grams* *I know that a litre is 1000 millilitres* *I can read scales marked in 2s, 5s and 10s* *I can measure and draw lines to the nearest centimetre*	
17	**Multiplication and division (3)**	• Use practical and informal written methods and related vocabulary to support multiplication and division, including calculations with remainders • Use the symbols ×, ÷ and = to record and interpret number sentences and calculate the value of an unknown in a number sentence (e.g. ☐ ÷ 2 = 6, 3 x ☐ = 30) • Recall and use multiplication facts for the 2, 5 and 10 times-tables and the related division facts • Recognise multiples of 2, 5 and 10 beyond the 10th multiple	• recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers • calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (.), division (÷) and equals (=) signs • show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot • solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.

		I can multiply and divide in different ways and show how I do it *I can work out the missing numbers in number sentences* *I know my 2, 5 and 10 times-tables and the division facts that go with them* *I can tell if a number is a multiple of 2, 5 or 10*	
18	**Fractions, position and movement (3)**	• Recognise, find, name and write one-half, one-quarter, three-quarters and one-third of shapes, lengths and quantities • Recognise the equivalence of two quarters and one half • Recognise and use whole, half, quarter and three-quarter turns, both clockwise and anticlockwise • Know that a right angle represents a quarter turn and that two right angles make a straight line • Describe, follow and give instructions involving position, direction and movement • Read and write the time to five minutes	• recognise, find, name and write fractions 1/3, 1/4, 2/4 and 3/4 of a length, shape, set of objects or quantity • write simple fractions e.g. 1/2 of 6 = 3 and recognise the equivalence of 2/4 and 1/2 • 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 in a straight line • compare and sequence intervals of time • 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. • know the number of minutes in an hour and the number of hours in a day

		• Identify time intervals, including those that cross the hour *I can find one-third of a set of objects or of a shape* *I know that two-quarters is the same as one-half* *I know that a quarter turn makes a right angle and can point out right angles in the classroom* *I can use a clock face to help me to count in steps of 5 minutes* *I can work out how many minutes there are between 2.30 and 3.10*	