



Maths Objectives Year 5

Units	Objectives covered
4A Unit 1 Whole Numbers: Numbers to 100,000	<p>recognise that 10 thousands = 1 ten thousand</p> <p>translate 5-digit numbers from: (i) numerals and words to place value models (ii) numerals to words (iii) words to numerals</p> <p>recognise that 10 ten thousands = 1 hundred thousand</p> <p>state the place and value of each digit in a 5-digit number</p> <p>write a number as the sum of the values of each digit in the number</p>
4A Unit 1 Whole Numbers: Comparing numbers within 100,000	<p>compare and order numbers up to 100 000</p> <p>state how much more or less one number is than another</p> <p>find the pattern in a number sequence</p>
4A Unit 2 Whole Numbers: Rounding numbers to the nearest 10	<p>use the number line representation to round numbers to the nearest ten</p> <p>use the symbol \approx to show a number has been approximated or rounded to the nearest ten</p> <p>make a list of whole numbers that can round to a number</p>
4A Unit 2 Whole Numbers: Rounding numbers to the nearest hundred	<p>use the number line representation to round numbers to the nearest hundred</p> <p>use the symbol \approx to show a number has been approximated or rounded to the nearest hundred</p> <p>make a list of numbers that can round to a number</p>
4A Unit 2 Whole Numbers: Estimation	<p>use the 'rounding' strategy to estimate the answers in calculations involving addition, subtraction, multiplication and division</p> <p>estimate to check the reasonableness of their answers by rounding the numbers in calculations involving addition, subtraction, multiplication and division</p>
4A Unit 2 Whole Numbers: Factors	<p>state that if $a \div b = c$, where a, b and c are whole numbers, then b is a factor of a</p> <p>determine if a 1-digit whole number is a factor of another whole number by division</p> <p>recognise that if $c = a \times b$, then a and b are factors of c, where a, b and c are whole numbers</p> <p>list the factors of a whole number (up to 100)</p> <p>identify the common factors of two whole numbers</p> <p>determine if a 1-digit number is a common factor of two numbers</p>
4A Unit 2 Whole Numbers: Multiples	<p>state that a multiple of a whole number is a product of this whole number and another whole number</p> <p>determine if a whole number is a multiple of another 1-digit whole number by division</p> <p>list the first 12 multiples of a given 1-digit whole number</p>

	<p>identify the common multiples of two or three 1-digit whole numbers</p> <p>relate the concepts of 'factors' and 'multiples'</p>
4A Unit 3 Whole Numbers: Multiplication by a 1-digit number	<p>use the procedures in multiplication to multiply whole numbers (up to 4 digits) by a 1-digit number with or without regrouping</p> <p>use an alternative method to multiply whole numbers (up to 4 digits) by a 1-digit number</p> <p>estimate the product of a 4-digit whole number and a 1-digit whole number to determine whether the answer is reasonable</p>
4A Unit 3 Whole Numbers: Multiplication by a 2-digit number	<p>use the procedures in multiplication to multiply a whole number (up to 3 digits) by 10 or tens using two different methods with or without regrouping</p> <p>multiply a whole number (2 or 3 digits) by another 2-digit whole number with or without regrouping</p> <p>estimate the product of a 2- or 3-digit whole number and a 2-digit whole number to determine whether the answer is reasonable</p>
4A Unit 3 Whole Numbers: Division by a 1 -digit number	<p>use the procedures in division to divide a whole number (up to 4 digits) by a 1-digit number with or without regrouping and without remainder</p> <p>use the procedures in division to divide a whole number (up to 4 digits) by a 1-digit number with or without regrouping and with remainder</p> <p>estimate the quotient when a whole number (up to 4 digits) is divided by a 1-digit whole number to determine whether the answer is reasonable</p>
4A Unit 3 Whole Numbers: Word Problems	<p>solve up to three-step whole number word problems involving the four operations</p> <p>use model drawing and the unitary method to solve word problems</p> <p>use part-whole, comparison, adding on or taking away model drawings to solve word problems</p>
4A Unit 4 Tables and Line Graphs: Presenting and interpreting data in a table	<p>collect data and enter the data into a table</p> <p>use tallies to collect data using a table</p> <p>read and interpret simple data presented in a table involving terms such as 'more than', 'less than', 'the most' and 'the least', etc.</p> <p>transfer data from a graph to a table</p>
4A Unit 4 Tables and Line Graphs: More tables	<p>read and interpret more complex data presented in a table</p> <p>complete a table and interpret the data</p> <p>collect data and present the data in a table</p>
4A Unit 4 Tables and Line Graphs: Line Graphs	<p>use the strategy to read and interpret line graphs</p> <p>transfer data from a table to a line graph</p> <p>read and interpret line graphs with different scales</p> <p>read the values on the y-axis and x-axis given a point on the graph</p> <p>complete a table by reading the graph</p> <p>recognise the relationship between two values</p>
4A Unit 5 Fractions Mixed Numbers	<p>express the sum of a whole number and a proper fraction as a mixed number</p> <p>interpret region models of mixed numbers</p> <p>read and interpret mixed numbers on a number line</p> <p>draw region models of mixed numbers</p> <p>mark mixed numbers on a number line</p> <p>reduce the fractional part of a mixed number to its simplest form</p>
4A Unit 5 Fractions Improper Fractions	<p>interpret an improper fraction as an extension of a proper fraction</p> <p>express region models of a mixed number as an improper fraction</p>

	<p>read and interpret improper fractions on a number line</p> <p>draw region models of improper fractions</p> <p>mark improper fractions on a number line</p> <p>reduce improper fractions to their simplest form</p>
4A Unit 5 Fractions Conversion of Fractions	<p>convert an improper fraction to a mixed number by separating it into a whole and part of a whole</p> <p>convert an improper fraction to a mixed number by division</p> <p>convert a mixed number to an improper fraction by multiplication</p>
4A Unit 5 Fractions Adding and Subtracting Fractions	<p>add two or three related fractions</p> <p>subtract two related fractions</p> <p>subtract a fraction from a whole number</p> <p>find equivalent fractions of a given fraction</p>
4A Unit 5 Fractions Fractions of a set	<p>interpret a fraction as part of a set (e.g. $\frac{3}{4}$ is 3 apples out of 4 apples or 3 groups of y apples out of 4 groups of y apples)</p> <p>calculate the fraction of a set of items using the unitary method</p> <p>calculate the fraction of a set of items using multiplication and division</p> <p>interpret a bar model of a fraction as a set divided into equal subsets</p>
4A Unit 5 Fractions Word Problems	<p>solve up to two-step word problems on addition and subtraction of fractions</p> <p>solve up to two-step word problems on fractions of a set</p> <p>use models to represent problem situations and solve the problems</p>
4A Unit 6 Angles	<p>state that an angle is made when two straight lines meet at a point (or vertex)</p> <p>use three ways of naming an angle as $\angle ABC$, $\angle CBA$ or $\angle x$</p>
4A Unit 6 Angles: Measuring Angles	<p>state that an angle is measured in degrees ($^{\circ}$)</p> <p>measure angles (up to 180°) with a protractor</p> <p>use the outer scale and the inner scale of the protractor discriminately</p> <p>compare angles and state whether an angle is greater or smaller than a right angle</p> <p>estimate the size of an angle</p> <p>estimate if an angle is a right angle, smaller than a right angle or greater than a right angle</p>
4A Unit 6 Angles: Drawing angles to 180	<p>draw an angle (up to 180°) using a protractor and ruler</p> <p>draw an angle at a point on a line in two ways using a protractor and ruler</p>
4A Unit 6 Angles: Turns and right angles	<p>associate a $\frac{1}{4}$ turn with 90° or 1 right angle</p> <p>associate a $\frac{1}{2}$ turn with 180° or 2 right angles</p> <p>associate a $\frac{3}{4}$ turn with 270° or 3 right angles</p> <p>associate a complete turn with 360° or 4 right angles</p>
4A Unit 6 Angles: 8-point compass	<p>name these 8 directions on the compass: north (N), south (S), east (E), west (W), north-east (NE), north-west (NW), south-east (SE), south-west (SW)</p> <p>state that the angle between any two adjacent directions above is 45°</p> <p>recognise the direction of a turn as clockwise or anticlockwise</p> <p>state the direction of a place, person or object with respect to a given north</p> <p>state the direction faced after turning through an angle from a given direction</p> <p>locate or name the direction of a place in relationship to a person or object</p> <p>locate a point or name the position of the point on a square grid in relationship to another point</p>
4A Unit 7	<p>draw perpendicular lines using a ruler and a set-square</p>

Perpendicular and Parallel Lines: Drawing perpendicular lines	draw a perpendicular line that passes through a given point outside the line using a ruler and a set-square draw lines perpendicular to a given line on grid lines without using a set-square
4A Unit 7 Perpendicular and Parallel Lines: Drawing parallel Lines	draw parallel lines using a set-square and a ruler draw a parallel line that passes through a given point outside the line using a ruler and a set-square
4A Unit 7 Perpendicular and Parallel Lines: Horizontal and vertical lines	identify horizontal and vertical lines state that a vertical line is perpendicular to a horizontal line it meets
4A Unit 8 Squares and Rectangles	state that a square has four equal sides and four right angles state that the opposite sides of a square are parallel state that the opposite sides of a rectangle are equal and parallel state that a rectangle has four right angles differentiate a square from a rectangle and vice versa solve simple geometrical problems using properties of squares and rectangles
4A Unit 8 Squares and Rectangles More on squares and rectangles	Pupils will be able to find unknown angles and sides of squares and rectangles
4A Unit 9 Decimals	read and write tenths as decimals (1 decimal place) represent and interpret tenths in region, number line and place value models recognise that 10 tenths = 1 one write a fraction with denominator 10 as a decimal
4A Unit 9 Decimals understanding hundredths	read and write hundredths as decimals (2 decimal places) represent and interpret hundredths in region, number line and place value models recognise that 10 hundredths = 1 tenth write a fraction with denominator 100 as a decimal
4A Unit 9 Decimals understanding thousandths	read and write thousandths as decimals (3 decimal places) represent and interpret thousandths in region, number line and place value models recognise that 10 thousandths = 1 hundredth write a fraction with denominator 1000 as a decimal
4A Unit 9 Decimals Comparing decimals	Pupils will be able to compare and order decimals
4A Unit 9 Decimals: Rounding decimals	round decimals to the nearest whole number round decimals to the nearest tenth or 1 decimal place round decimals to the nearest hundredth or 2 decimal places
4A Unit 9 Decimals: Fractions and decimals	express a fraction (whose denominator is a factor of 10 or 100) as a decimal by changing the denominator to 10 or 100 express a decimal as a fraction in its simplest form

4B Unit 10 Decimals: Addition	regroup decimals add decimals up to 2 decimal places
4B Unit 10 Decimals: Subtraction	regroup decimals subtract decimals up to 2 decimal places subtract a decimal up to 2 decimal places from a whole number
4B Unit 10 Decimals: Word Problems	Pupils will be able to solve up to two-step word problems involving addition and subtraction of decimals. Pupils will be able to solve up to two-step word problems involving multiplication and division of decimals.
4B Unit 10 Decimals: Multiplication	Pupils will be able to multiply decimals up to 2 decimal places by a 1-digit whole number.
4B Unit 10 Decimals: Division	divide decimals up to 2 decimal places by a 1-digit whole number round quotients to 1 or 2 decimal places
4B Unit 10 Decimals: Estimation of decimals	Pupils will be able to estimate the answers in calculations involving addition, subtraction, multiplication and division.
4B Unit 11 Time: Seconds	state that 60 seconds = 1 minute use seconds to measure duration estimate duration in seconds
4B Unit 11 Time: 24 hour clock	write the time using the 24-hour clock convert time from the 12-hour clock to the 24-hour clock and vice versa find the duration between two given times using the 24-hour clock find the starting/ending time given the duration and the ending/starting time
4B Unit 12 Area and Perimeter: rectangles and squares	recall the formulas to find the perimeter and area of a square and a rectangle use the formula that the sum of the length and width of a rectangle is half of its perimeter find the length or width of a rectangle given its perimeter and the width or length respectively find the side of a square given its perimeter find the length or width of a rectangle given its area and the width or length respectively find the side of a square given its area
4B Unit 12 Area and Perimeter: Composite Shapes	find the perimeter of a composite shape made up of squares and/or rectangles find the area of a composite shape made up of squares and/or rectangles visualise that a composite shape can be dissected into two or more shapes
4B Unit 12 Area and Perimeter: Solving word problems	solve word problems involving composite shapes apply the strategy 'whole – parts = parts' when solving problems visualise new and old shapes when a shape has been folded
4B Unit 13 Symmetry: Identifying symmetrical shapes	recognise symmetrical shapes demonstrate whether a shape is symmetrical by folding paper
4B Unit 13 Symmetry:	Pupils will be able to determine whether a straight line is a line of symmetry of a shape.

Identifying lines of symmetry	
4B Unit 13 Symmetry: Making symmetrical shapes and patterns	cut out a symmetrical shape from a folded piece of paper use a symmetrical shape to make a pattern complete a symmetrical shape or pattern using a given line of symmetry
4B Unit 14 Tessellations: Identifying Tessellations	recognise a tessellation identify the unit shape used in a tessellation make a tessellation using a given shape
4B Unit 14 Tessellations: More Tessellations	tessellate a given unit shape in different ways create a new tessellating shape from a given shape which tessellates
5A Unit 1 Whole Numbers: Numbers to 10 million	count on in ten thousands to 1 hundred thousand count on in hundred thousands to 1 million state that 10 ten thousands = 1 hundred thousand and that 10 hundred thousands = 1 million translate place value models of numbers up to 10 million to numerals and words read and write 6- and 7-digit numbers up to 10 million in numerals and words use a calculator to type in 6- and 7-digit numbers
5A Unit 1 Whole Numbers: Place and Value	identify the value and place of each digit in a 6- and 7-digit number represent a number as the sum of the values of each digit in the number
5A Unit 1 Whole Numbers: Comparing numbers within 10 million	state which number is greater or smaller using the strategy of comparing the values of their digits from the left arrange a set of numbers in order identify the pattern in a number sequence
5A Unit 1 Whole Numbers: Rounding to the nearest thousand and estimating	round numbers to the nearest thousand recognise and use the symbol '≈' mark the approximate position of a number on a given number line use rounding to estimate answers in addition, subtraction, multiplication and division
5A Unit 2 Whole Numbers: Using a Calculator	type in whole numbers add whole numbers subtract whole numbers multiply whole numbers divide whole numbers
5A Unit 2 Whole Numbers: Multiplying by tens, hundreds or thousands	multiply a number by 10, 100 or 1000 by: (i) moving each digit 1, 2 or 3 places to the left respectively in the place value chart (ii) adding 1, 2 or 3 zeros respectively at the end of the number multiply numbers up to 4 digits by tens, hundreds or thousands use rounding and approximation to estimate answers in multiplication
5A Unit 2 Whole Numbers: Dividing by tens, hundreds	divide a number by 10, 100 or 1000 by: (i) moving each digit 1, 2 or 3 places to the right respectively in the place value chart (ii) dropping 1, 2 or 3 zeros respectively from the end of the number

or thousands	divide numbers up to 6 digits by tens, hundreds or thousands use rounding and approximation to estimate answers in division
5A Unit 2 Whole Numbers: Order of operations	state the order of operations in a number sentence with two or three operations and use a calculator to compute it state the order of operations in a number sentence which has brackets and two or three operations, and use a calculator to compute it