

| YEAR 9 Edexcel GCSE (9-1) Mathematics Foundation | | | | |
|--------------------------------------------------|-----------------------------|----------------------------------------------------------------------------------------------|-------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TERM | UNIT / LESSON | STEPS (GRADES) FROM | STEPS (GRADES) TO | LEARNING OUTCOME |
| AUTUMN | P.8 | 1 Number calculations 4 Fractions, decimals and percentages | 4th (grade 2) 5th (grade 3) | |
| WK. | P.9 | 1.1 Adding and subtracting 1.2 Multiplying | 5th (grade 3) 5th (grade 3) | Solve problems by adding and subtracting. Add and subtract decimal numbers. Multiply numbers including decimals. Use multiplicative reasoning to multiply numbers. |
| 1 | 06/07/2017 | | | |
| 2 | 11/07/2017 | | | |
| 3 | 18/07/2017 | | | |
| 4 | 25/07/2017 | 1.3 Dividing 1.4 Multiplying and dividing decimal numbers 1.5 Squares, cubes and roots | 4th (grade 2) 4th (grade 2) 5th (grade 3) | Divide by a decimal number. Multiply and divide with negative numbers. Know all square numbers to 10 ² . Find all positive and negative square roots of square numbers. Use mental methods to find cubes and cube roots. Work out calculations involving squares and brackets. |
| | | 1.7 Calculations | 4th (grade 2) | Work out calculations involving brackets, squares, cubes and square roots. Estimate answers. |
| | | 2.3 Recurring decimal | 6th (grade 3) | Write recurring decimals as fractions. |
| | | UNIT 1(A) TEST | | |
| AUTUMN | 1 Number | 2nd (grade 1) | 7th (grade 4) | |
| 5 | 02/10/2017 | 1.1 Calculations | 4th (grade 2) | Use priority of operations with positive and negative numbers. Simplify calculations by cancelling. Use inverse operations. |
| 6 | 09/10/2017 | | | |
| 7 | 16/10/2017 | 1.2 Decimal numbers 1.3 Place value | 3rd (grade 2) 2nd (grade 1) | Round to a given number of decimal place. Multiply and divide decimal numbers. Write decimal numbers of millions. Round to a given number of significant figures. Estimate answers to calculations. Use one calculation to find the answer to another. |
| | | 1.4 Factors and multiples | 3rd (grade 2) | Recognise 2 digit prime numbers. Find factors and multiples of numbers. Find common factors and common multiples of two numbers. Find the HCF and LCM of two numbers by listing. |
| | | 1.5 Squares, cubes and roots | 4th (grade 2) | Find square roots and cube roots. Recognise powers of 2, 3, 4 and 5. Understand and notations on a calculator. |
| | | 1.6 Index notation | 4th (grade 2) | Find square roots and cube roots. Recognise powers of 2, 3, 4 and 5. Understand and notations on a calculator. |
| | | 1.7 Prime factors | 7th (grade 4) | Write a number as the product of its prime factors. Use prime factor decomposition and Venn diagrams to find the HCF and LCM. |
| | | UNIT 1(B) TEST | | |
| | | HALF TERM | | |
| AUTUMN | 2 Algebra | 3rd (grade 2) | 7th (grade 4) | |
| 8 | 30/10/2017 | 2.1 Algebraic expressions | 3rd (grade 2) | Use correct algebraic notation. Write and simplify expressions. |
| 9 | 06/11/2017 | | | |
| 10 | 13/11/2017 | 2.2 Simplifying expressions | 4th (grade 2) | Use the index laws. Multiply and divide expressions. |
| | | 2.3 Substitution | 4th (grade 2) | Substitute numbers into expressions. |
| | | 2.4 Formulae | 5th (grade 3) | Recognise the difference between a formula and an expression. Substitute numbers into a simple formula. |
| | | 2.5 Expanding brackets | 4th (grade 2) | Expand brackets. Simplify expressions with brackets. |
| | | 2.6 Factoring | 6th (grade 3) | Substitute numbers into expressions with brackets and powers. Recognise factors of algebraic terms. Factorise algebraic expressions. Use the identity symbol = and the not equals symbol ≠ |
| | | 2.7 Using expressions and formulae | 5th (grade 3) | Write expressions and simple formulae to solve problems. Use maths and science formulae. |
| | | UNIT 2 TEST | | |
| 11 | 20/11/2017 | REVISION & TEST OFFICIAL COMBINED UNIT TESTS: 1 & 2 | | |
| AUTUMN | 3 Graphs, tables and charts | 3rd (grade 2) | 7th (grade 4) | |
| 12 | 27/11/2017 | 3.1 Frequency tables | 4th (grade 2) | Present tables and data collection sheets. Reading data from tables. |
| 13 | 04/12/2017 | 3.2 Two-way tables | 4th (grade 2) | Use data from tables. Design and use two-way tables. |
| | | 3.3 Representing data | 3rd (grade 2) | Draw and interpret comparative and composite bar charts. Interpret and compare data shown in bar charts, line graphs and histograms. |
| | | 3.4 Time series | 4th (grade 2) | Plot and interpret time series graphs. Use trends to predict what might happen in the future. |
| | | 3.5 Stem and leaf diagrams | 6th (grade 3) | Construct and interpret stem and leaf and back-to-back stem and leaf diagrams. |
| | | 3.6 Pie charts | 3rd (grade 2) | Draw and interpret pie charts. |
| | | 3.7 Scatter graphs | 6th (grade 3) | Plot and interpret scatter graphs. Determine whether or not there is a relationship between sets of data. |
| | | 3.8 Line of best fit | 6th (grade 3) | Draw a line of best fit on a scatter graph. Use the line of best fit to predict values. |
| 14 | 11/12/2017 | UNIT 3 TEST | | |
| | | PROBLEM-SOLVING ACTIVITIES | | |

| TERM | UNIT / LESSON | STEPS (GRADES) FROM | STEPS (GRADES) TO | LEARNING OUTCOME |
|--------|-----------------------------------------|-----------------------------------------------------------------------|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SPRING | 4 Fractions and percentages | 3rd (grade 2) | 7th (grade 4) | |
| 15 | 01/01/2018 | 4.1 Working with fractions | 3rd (grade 2) | Compare fractions. Add and subtract fractions. Use fractions to solve problems. |
| 16 | 08/01/2018 | | | |
| 17 | 15/01/2018 | | | |
| | | 4.2 Operations with fractions | 4th (grade 2) | Find a fraction of a quantity or measurement. Use fractions to solve problems. |
| | | 4.3 Multiplying fractions | 4th (grade 2) | Multiply whole numbers, fractions and mixed numbers. Simplify calculations by cancelling. |
| | | 4.4 Dividing fractions | 5th (grade 3) | Divide a whole number by a fraction. Divide a fraction by a whole number or a fraction. |
| | | 4.5 Fractions and decimals | 3rd (grade 2) | Convert fractions to decimals and vice versa. Use decimals to find quantities. |
| | | 4.6 Fractions and percentages | 2nd (grade 1) | Write one number as a fraction of another. Convert percentages to fractions and vice versa. Write one number as a percentage of another. |
| | | 4.7 Calculator exercises 1 | 4th (grade 2) | Use percentages of a quantity. Find percentages to solve problems. Calculate simple interest. |
| | | 4.8 Calculating percentages 2 | 4th (grade 2) | Calculate percentage increases and decreases. Use percentages in real-life situations. Calculate VAT (value added tax). |
| | | UNIT 4 TEST | | |
| SPRING | 5 Equations, inequalities and sequences | 3rd (grade 2) | 7th (grade 4) | |
| 18 | 22/01/2018 | 5.1 Solving equations 1 | 3rd (grade 2) | Understand and use linear equations. Rearrange simple linear equations. Solve simple linear equations. |
| 19 | 29/01/2018 | | | |
| 20 | 05/02/2018 | 5.2 Solving equations 2 | 3rd (grade 2) | Solve two-step equations. |
| | | 5.3 Solving equations with brackets | 6th (grade 3) | Solve linear equations with brackets. Solve equations with unknowns on both sides. |
| | | 5.4 Introducing inequalities | 4th (grade 2) | Use correct notation to show inclusive and exclusive inequalities. Solve simple linear inequalities. Write down whole numbers which satisfy an inequality. Represent inequalities on a number line. |
| | | 5.5 More inequalities | 5th (grade 3) | Solve two-sided inequalities. |
| | | 5.6 More formulae | 3rd (grade 2) | Substitute values into formulae and solve equations. Change the subject of a formula. Know the difference between an expression, an equation, a formula and an identity. |
| | | 5.7 Generating sequences | 6th (grade 3) | Recognise and extend sequences. |
| | | 5.8 Using the nth term of a sequence | | Use the nth term to generate terms of a sequence. Find the nth term of an arithmetic sequence. |
| | | UNIT 5 TEST | | |
| | | HALF TERM | | |
| 21 | 19/02/2018 | REVISION & TEST OFFICIAL COMBINED UNIT TESTS: 3, 4 & 5 | | |
| SPRING | 6 Angles | 3rd (grade 2) | 8th (grade 5) | |
| 22 | 26/02/2018 | 6.1 Properties of shapes | 4th (grade 2) | Solve geometric problems using side and angle properties of quadrilaterals. Identify congruent shapes. |
| 23 | 05/03/2018 | 6.2 Angles in parallel lines | 5th (grade 3) | Understand and use the angle properties of parallel lines. Find missing angles using corresponding and alternate angles. |
| 24 | 12/03/2018 | 6.3 Angles in triangles | 3rd (grade 2) | Solve angle problems in triangles. Understand angle proofs about triangles. |
| | | 6.4 Exterior and interior angles | 4th (grade 2) | Calculate the interior and exterior angles of regular polygons. |
| | | 6.5 More exterior and interior angles | 4th (grade 2) | Calculate the interior and exterior angles of polygons. Explain why some polygons fit together and some others do not. |
| | | 6.6 Geometrical patterns | 6th (grade 3) | Solve angle problems using equations. Solve geometrical problems showing reasoning. |
| | | UNIT 6 TEST | | |
| SPRING | 7 Averages and range | 2nd (grade 1) | 7th (grade 4) | |
| 25 | 19/03/2018 | 7.1 Mean and range | 3rd (grade 2) | Calculate the mean from a list and from a frequency table. Compare sets of data using the mean and range. |
| 26 | 26/03/2018 | 7.2 Mode, median and range | 4th (grade 2) | Find the mode, median and range from a stem and leaf diagram. Identify outliers. Estimate the range from a grouped frequency table. |
| | | 7.3 Type of average | 2nd (grade 1) | Recognise the advantages and disadvantages of each type of average. Find the modal class. Find the median from a frequency table. |
| | | 7.4 Estimating the mean | 7th (grade 4) | Estimate the mean of grouped data. |
| | | 7.5 Sampling | 6th (grade 3) | Understand the need for sampling. Understand how to avoid bias. |
| | | UNIT 7 TEST | | |

| STEPS REFER TO THE 12-STEP PEARSON MODEL | | | | |
|------------------------------------------|--------------------------------|-----------------------------------------------------------------------|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| TERM | UNIT / LESSON | STEPS (GRADES) FROM | STEPS (GRADES) TO | LEARNING OUTCOME |
| SUMMER | 8 Perimeter, area and volume 1 | 4th (grade 2) | 8th (grade 5) | |
| 27 | 16/04/2018 | 8.1 Rectangles, parallelograms and trapezium | 6th (grade 3) | Calculate the perimeter and area of rectangles, parallelograms and triangles. Estimate length, area and cost. Calculate a missing length given the area. |
| 28 | 20/04/2018 | | | |
| 29 | 30/04/2018 | 8.2 Trapezia and changing units | 6th (grade 3) | Calculate the area and perimeter of trapezia. Find the height of a trapezium given its area. Convert between area measures. |
| | | 8.3 Area of compound shapes | 6th (grade 3) | Calculate the perimeter and area of shapes made from triangles and rectangles. Calculate areas in hectares, and convert between ha and m ² . |
| | | 8.4 Surface area of 3D solids | 6th (grade 3) | Calculate the surface area of a cuboid. Calculate the surface area of a prism. |
| | | 8.5 Volume of prisms | 4th (grade 2) | Calculate the volume of a cuboid. Calculate the volume of a prism. |
| | | 8.6 More volume and surface area | 6th (grade 3) | Solve problems involving surface area and volume. Convert between measures of volume. |
| | | UNIT 8 TEST | | |
| 30 | 07/05/2018 | REVISION & TEST OFFICIAL COMBINED UNIT TESTS: 6, 7 & 8 | | |
| 31 | 14/05/2018 | REVISION FOR END OF YEAR TESTS | | |
| 32 | 21/05/2018 | REVISION FOR END OF YEAR TESTS | | |
| | | HALF TERM | | |
| 33 | 04/06/2018 | REVISION FOR END OF YEAR TESTS | | |
| 34 | 11/06/2018 | REVISION FOR END OF YEAR TESTS | | |
| 35 | 18/06/2018 | END OF YEAR TESTS: NON-CALCULATOR & CALCULATOR | | |
| 36 | 25/06/2018 | MAYFIELD HIGH INVESTIGATION | | |
| 37 | 02/07/2018 | MAYFIELD HIGH INVESTIGATION | | |
| 38 | 09/07/2018 | FEEDBACK FROM END OF YEAR TESTS | | |
| 39 | 16/07/2018 | FEEDBACK FROM END OF YEAR TESTS | | |
| 40 | 23/07/2018 | FUNCTIONAL SKILLS MATHS | | |