Edexcel Award in Number and Measure Level 1

This Scheme of Work should be read alongside the specification here.

Maths Scheme of Work – Edexcel Award Number and Measure Level 1

Module	Prior Knowledge from ELC 3	Learning Opportunities	Colour band	Edexcel Award	Functional skills	GCSE
1 Number size and rounding	The ability to order simple numbers An appreciation of place value Knowledge of integer complements to 10 and to 100 An appreciation of monetary units and/or unitary values for pounds and pence	1 Use and order positive integers 2 Write numbers in words and write numbers from words 3 Recall all multiplication facts up to 10 × 10, and use them to derive quickly the corresponding division facts 4 Multiply or divide any number by powers of 10 5 Round whole numbers to the nearest 10, 100 and 1000 Teaching ideas and resources here				
Extension Opportunities		Read, write, order and compare positive and negative integers of any size. Add, subtract, multiply and divide integers of any size. Multiply and divide using negative integers		Level 2	Level 1	Unit 1a
Additional Teacher Notes		Present all working clearly Start by ordering small numbers, then work up to higher numbers If necessary work with objects that can assist with counting, eg compare the number of objects in several boxes and order the boxes by number of contents Unit assessments here				

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2 Integers and the four rules	The ability to order numbers An appreciation of place value Experience of the four operations using whole numbers Knowledge of integer complements to 10 and to 100 Knowledge of strategies for multiplying and dividing whole numbers by 2, 4, 5 and 10	1. Use and order positive and negative numbers 2. Add and subtract integers, including negative numbers 3. Multiply or divide any number by powers of 10 4. Multiply and divide positive numbers, add and subtract negative numbers 5. Round numbers to one decimal place and to the nearest integer 6. Carry out calculations using money, having an appreciation for money notation 7. Check calculations by rounding or considering whether the answer is sensible, eg $29 \times 31 \approx 30 \times 30$ Teaching ideas and resources here				
Extension Opportunities		Read, write, order and compare positive and negative integers of any size Add, subtract, multiply and divide integers of any size Multiply and divide using negative integers Check solutions to questions and problems by using suitable approximations		Level 2	Level 1	Foundation Unit 1a, 1b
Additional Teacher Notes		Present all working clearly For non-calculator methods, ensure that remainders are shown as evidence of working Show what is entered into your calculator, not just the answer Try different methods from traditional ones, eg Russian or Chinese methods for multiplication Start with small numbers (< 6) to secure understanding of necessary operations, move to larger numbers once confidence has been established Sudoku puzzles are useful for looking at number bonds and links with numbers Unit assessments here				

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Module	Prior Knowledge from ELC 3	Learning Opportunities	Colour band	Edexcel Award	Functional skills	GCSE
3 Decimals	The concept of a decimal The four operations	1. Understand place value, identifying the values of the digits 2. Write decimals in order of size 3. Round decimals to the nearest integer or to one decimal place 4. Add and subtract decimals 5. Multiply and divide decimal numbers by integers and decimal numbers Teaching ideas and resources here				
Extension Opportunities		Multiply decimals with up to two decimal places (two digit multiplier and divisor for non-calculator section) Round decimals to two decimal places Add and subtract any decimal		Level 2	Level 1	Foundation Unit 1b
Additional Teacher Notes		Advise students not to round decimals used in calculations until stating them in the final answer For non-calculator methods ensure that remainders are shown as evidence of working Advise students to show decimal points clearly, and to keep them in line when adding and subtracting Unit assessments here				

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Module	Prior Knowledge from ELC 3	Learning Opportunities	Colour band	Edexcel Award	Functional skills	GCSE
4 Reading scales	An awareness of the imperial system of measures An awareness of place value in decimal numbers (to 1 d.p.) A right angle is 90°; greater than a right angle is more than 90° (for using protractor scales)	1. Interpret scales on a range of metric measuring instruments including: mm, cm, m, km, m*l*, c*l*, *l*, mg, g, kg, tonnes, °C 2. Interpret scales on a range of imperial measuring instruments including: 3. inches, feet, ounces, pounds, fluid ounces, mph 4. Indicate given values on a scale Teaching ideas and resources here				
Extension Opportunities		Read decimal scales		Level 2	Level 1	Foundation Unit 6a, 8
Additional Teacher Notes		**Note: Imperial Units do not appear in FS or GCSE** Measurement is essentially a practical activity Use a range of everyday objects to bring reality to lessons Provide opportunities for students to select the unit of measure to use Unit assessments here				

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Module	Prior Knowledge from ELC 3	Learning Opportunities	Colour band	Edexcel Award	Functional skills	GCSE
5 Converting units	An awareness of the imperial system of measures Strategies for multiplying and dividing by 10 (for converting metric units)	1. Know that measurements using real numbers depend upon the choice of unit 2. Convert metric units to metric units (metric equivalents should be known) 3. Write a set of measurements in order 4. Estimate conversions Teaching ideas and resources here				
Extension Opportunities		Convert between metric and imperial units e.g. 5 miles = 8 km 12 inches = 1 foot = 30 cm 2.2 pounds = 1 kg 8 pints = 1 gallon = 4.5 litres		Level 2	Level 1	Foundation Unit 8
Additional Teacher Notes		**Note: Imperial Units do not appear in FS or GCSE** Use a range of everyday objects to bring reality to lessons Use estimation to give a 'reality check' to answers Unit assessments here				

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Module	Prior Knowledge from ELC 3	Learning Opportunities	Colour band	Edexcel Award	Functional skills	GCSE
6 Tables and charts	An understanding of why data needs to be collected and some idea about different types of charts	1. Draw: Bar charts Mileage charts Line graphs 2. Interpret: Bar charts Mileage charts Line graphs Conversion tables and charts Teaching ideas and resources here				
Extension Opportunities		Draw and interpret pie charts and frequency tables		Level 2	Level 1	Foundation Unit 3a
Additional Teacher Notes		Reiterate that clear presentation with axes correctly labelled is important, and to use a ruler to draw straight lines Encourage group work and presenting their charts (useful display material for classrooms or corridors) Use Excel Graph wizard Unit assessments here				

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7 Types of number	Number complements to 10 and multiplication/division facts Recognise basic number patterns Experience of classifying integers	1. Recognise even and odd numbers 2. Identify factors, multiples and prime numbers 3. Find the common factors of two numbers Teaching ideas and resources here				
Extension Opportunities		Find the Highest Common Factor and Lowest Common Multiple of any two positive integers Read, write and use squares, cubes and square roots Read, write and use index notation for small positive integer powers		Level 2	Level 1	Foundation Unit 1d
Additional Teacher Notes		All of the work in this module can be easily reinforced by using it as 'starters' or 'plenaries' Calculators should be used only when appropriate Use of dot patterns to identify types of numbers, eg odd, even, multiples, square numbers Unit assessments here				

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Module	Prior Knowledge from ELC 3	Learning Opportunities	Colour band	Edexcel Award	Functional skills	GCSE
8 Fractions	Multiplication facts Ability to find common factors A basic understanding of fractions as being 'parts of a whole unit'	1. Visualise a fraction diagrammatically 2. Understand a fraction as part of a whole 3. Recognise and write fractions in everyday situations 4. Write a fraction in its simplest form and find equivalent fractions 5. Compare the sizes of fractions using a common denominator 6. Add and subtract simple fractions by using a common denominator 7. Write an improper fraction as a mixed number 8. Multiply a fraction by a positive integer Teaching ideas and resources here				
Extension Opportunities		Multiply fractions, including mixed numbers Divide fractions, including mixed numbers, using a calculator Add and subtract fractions with different denominators and mixed numbers Use fractions to compare quantities		Level 2	Level 1	Foundation Unit 4a
Additional Teacher Notes		Regular revision of fractions is essential Demonstrate how to use the fraction button on a calculator in order be able to check solutions Unit assessments here				

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Module	Prior Knowledge from ELC 3	Learning Opportunities	Colour band	Edexcel Award	Functional skills	GCSE
9 Fractions, decimals and percentages	Four operations of number The concepts of a fraction and a decimal Number complements to 10 and multiplication tables Awareness that percentages are used in everyday life	1. Understand that a percentage is a fraction in hundredths 2. Convert between fractions and decimals 3. Convert between fractions, decimals and percentages Teaching ideas and resources here				
Extension Opportunities		Convert between currencies		Level 2	Level 1	Foundation Unit 4a
Additional Teacher Notes		Keep using non-calculator methods, eg start with 10%, then 1% in order to reach the required percentage Unit assessments here				

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Module	Prior Knowledge from ELC 3	Learning Opportunities	Colour band	Edexcel Award	Functional skills	GCSE
10 Percentages and applications	Four operations of number The concepts of a fraction and a decimal Number complements to 10 and multiplication tables Awareness that percentages are used in everyday life	1. Use percentages to solve problems 2. Find a percentage of a quantity 3. Use percentages in real-life situations VAT Value of profit or loss Income tax calculations NI calculations Teaching ideas and resources here				
Extension Opportunities		Find percentages of quantities of any value Calculate percentage increase and decrease Calculate simple interest Calculate wages and salaries, including national insurance and tax deductions		Level 2	Level 1	Foundation Unit 4b
Additional Teacher Notes		Unit assessments here				

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Module	Prior Knowledge from ELC 3	Learning Opportunities	Colour band	Edexcel Award	Functional skills	GCSE
11 Perimeter and area	Properties of rectangles Concept of perimeter and area Units of measurement Four operations of number Ability to use a ruler for measurement and drawing	1. Measure shapes to find perimeters and areas 2. Find the perimeter of rectangles 3. Find the perimeter of compound shapes 4. Find the area of a rectangle 5. Recall and use the formulae for the area of a rectangle 6. Calculate areas of compound shapes made from rectangles Teaching ideas and resources here				
Extension Opportunities		Work out the area and perimeter of rectangles, triangles, circles and semi-circles Work out areas of composite shapes made from rectangles, triangles, circles and/or semi-circles		Level 2	Level 1	Foundation Unit 8
Additional Teacher Notes		Start with exercises involving counting squares and lengths, but move soon into use for the common formulae Discuss the correct use of language and units, particularly when method marks are for the correct unit of measure Ensure that students can distinguish between perimeter and area Practical examples help to clarify the concepts, eg floor tiles Unit assessments here				

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Module	Prior Knowledge from ELC 3	Learning Opportunities	Colour band	Edexcel Award	Functional skills	GCSE
12 Time and timetables	Know that 1 hour = 60 mins, 1 min = 60 seconds Know how to read information from tables and other forms of illustration	1. Read times and work out time intervals 2. Read times from analogue and digital clocks, working out time intervals 3. Convert between 12–hour and 24–hour clock times 4. Read bus and train timetables and plan journeys Teaching ideas and resources here				
Extension Opportunities		Use timetables to plan journeys Consider international time zones; planning for a long haul flight		No link to level 2	Level 1	Foundation Unit 3a
Additional Teacher Notes		Use of units with answers is important Ensure students are aware of the pitfalls when using a calculator by explaining the difference between expressions of time, eg comparing 2.30 and 2:30 Unit assessments here				

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Module	Prior Knowledge from ELC 3	Learning Opportunities	Colour band	Edexcel Award	Functional skills	GCSE
13 Volume	Concept of volume Concept of a cuboid as a prism Experience of constructing cubes or cuboids from multi-link	1. Find volumes of shapes by counting cubes 2. Recall and use formulae for the volume of cubes and cuboids 3. Calculate the volumes of shapes made from cubes and cuboids Teaching ideas and resources here				
Extension Opportunities		Volumes of prisms and cylinders		Level 2	Level 1	Foundation Unit 8
Additional Teacher Notes		Discuss the correct use of language and units Remind students that there is often a mark attached to writing down the correct unit Use practical problems to enable the students to understand the difference between perimeter, area and volume Unit assessments here				