CELT Maths Curriculum 2026 – 2027 | Year 8 Autumn Term

Module	What will learners learn?	How does this build a strong foundation?	Links to other subjects
Transformations 1	Learners represent, add and subtract vectors, then use them to describe and perform translations. They rotate shapes about a given centre and describe rotations precisely on coordinate grids.	Builds on directed number and coordinates. Develops spatial reasoning and understanding of properties preserved by transformations, preparing learners for congruence and further vector work.	• Art: repeating and rotated patterns. • Computing: movement in animations.
Fractions, Decimals and Percentages	Learners convert between fractions, decimals and percentages using division, place value and equivalent fractions. They recall common conversions and select useful representations.	Builds on Year 7 fraction and percentage calculations. Flexible use of equivalent forms supports pie charts, percentage change, ratio and probability.	• Science: express proportions in results. • Geography: compare population data. • PSHE: understand financial information.
Expression, Functions and Formulae 2	Learners revisit expanding single brackets before expanding products of two brackets. They simplify the resulting expressions, including those with negative terms.	Extends Year 7 work with the distributive law and like terms. Prepares learners for quadratic expressions, equations and later factorising quadratics.	• Design and Technology: express rectangular areas algebraically.
Representing Data 1	Learners draw and interpret bar charts, vertical line charts, pictograms, pie charts and scatter graphs. They measure angles, use proportion and assess correlation and predictions.	Connects Year 7 statistics with fractions, angles and proportion. Distinguishing correlation from causation and considering prediction limits develops critical interpretation.	• Science: analyse relationships in experimental data. • Geography: present survey findings.
Sequences	Learners recognise arithmetic, geometric and Fibonacci-type sequences. They generate terms, find position-to-term rules for arithmetic sequences and determine whether a value belongs to a sequence.	Connects number patterns, substitution and equations. Prepares learners for linear graphs, more complex sequences and later iterative methods.	• Computing: generate patterns using rules. • Art: explore patterns based on number sequences.

CELT Maths Curriculum 2026 – 2027 | Year 8 Spring Term

Module	What will learners learn?	How does this build a strong foundation?	Links to other subjects
Algebraic Graphs 1 (Linear)	Learners plot coordinates and linear graphs, using non-calculator methods and calculator-generated tables. They find gradients and intercepts and connect these to equations in the form y = mx + c.	Builds on substitution, sequences and coordinates. Interpreting gradient as a rate of change supports conversion graphs, speed and later simultaneous equations.	• Science: interpret graphs and gradients. • Geography: represent relationships between quantities.
Circles 1	Learners identify circle parts and explore π. They calculate circumference, area, sector areas, arc lengths and sector perimeters, including shaded regions, keeping exact answers in terms of π.	Connects Year 7 area and perimeter with fractions and proportional reasoning. Prepares learners for cylinder volume and more complex circular geometry.	• Design and Technology: dimensions of circular components. • Art: circular designs and sectors.
Percentages 1	Learners express one quantity as a percentage of another, calculate percentage change and use multipliers for increases and decreases. They reverse percentage changes to find original amounts.	Extends Year 7 percentages through Year 8 fraction–decimal equivalence. Supports financial reasoning and later repeated percentage change.	• PSHE: discounts and financial decisions. • Geography: population change. • Science: percentage changes in results.
Ratio	Learners connect ratios with fractions and solve sharing problems. They use map scales, combine two ratios into a three-part ratio and convert between currencies.	Builds on Year 7 proportional reasoning and equivalent fractions. Prepares learners for conversion graphs, compound measures, scale and similarity.	• Geography: map scales. • Food Technology: ingredient proportions. • PSHE: compare costs in different currencies.
Compound Measures and Graphs 1	Learners draw and interpret conversion graphs, work with time and calculate speed, distance and time using proportional reasoning. They draw and interpret distance–time graphs, linking gradient to speed.	Combines ratio, unit conversion and linear graphs. Understanding quantities "per unit" prepares learners for further compound measures and rates of change.	• Science: speed and motion graphs. • PE: analyse performance. • Geography: journey times and distances.

CELT Maths Curriculum 2026 – 2027 | Year 8 Summer Term

Module	What will learners learn?	How does this build a strong foundation?	Links to other subjects
Expressions, Functions and Formulae 3	Learners simplify simple algebraic fractions through division and factorise expressions into a single bracket. They identify numerical and algebraic highest common factors and check by expanding.	Connects Year 7 factors and fractions with expanding brackets. Understanding equivalent expressions prepares learners for algebraic fractions and later quadratic factorisation.	• Design and Technology: express and simplify dimensions algebraically. • Computing: equivalent expressions in calculations.
Area and Volume 1	Learners calculate compound areas and find missing lengths, including in trapezia. They calculate volumes of cubes, cuboids, prisms and cylinders, then find missing dimensions of prisms.	Builds on Year 7 area, equations and Year 8 circles. Connecting cross-sectional area to volume prepares learners for surface area and more complex solids.	• Design and Technology: material quantities. • Food Technology: container capacity. • Science: volume measurements.
Indices, Powers and Roots	Learners consolidate squares, cubes and roots. They apply index laws to products, quotients and powers, including zero, negative and unit-fraction indices, and combine laws in mixed problems.	Connects prime factors, reciprocals and algebraic multiplication. Prepares learners for standard form, surds and more complex algebraic expressions.	• Computing: powers of two in memory sizes. • Science: powers in area and volume units.
Angles – Circles and Parallel Lines	Learners apply angle facts in parallel lines, angles in a semicircle and cyclic quadrilaterals. They form and solve equations, including unknowns on both sides, and justify their reasoning.	Extends Year 7 angle facts and equations using Year 8 circle vocabulary. Prepares learners for further circle theorems, geometric proof and complex equations.	• Design and Technology: parallel structures and precise angles. • Art: geometric constructions.