

| | Year 7 | Year 8 | Year 9 |
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| Mod 1 | Smoothie Business Collecting, analysing and presenting data, recipe proportions and nets of packaging design for a smoothie business. | Airport Design Substituting into 'suvat' equations to calculate take-off distances of different planes, plot regions defined by inequalities to represent restricted airspace. | Olympic Arenas Use mensuration (perimeter, area and volume) to design and cost an olympic arena. Sit a KS4-style test with grade boundaries on mensuration and costing questions. |
| Mod 2 | F1 Maths in Motion Using proportional reasoning for complex calculations and measuring angles and scaled distances to simulate a F1 race. | Largest Ever Use language of integers, standard form, significant figures and index laws to describe something huge or tiny from history or nature. Stage Design Classify rectilinear shapes by their mathematical properties and use the appropriate symbology to create a stage design. | Textbook Design Create a textbook representing number and numeracy topics (factors, multiples, primes, fractions/ decimals/ percentages/ ratios, sequences). Sit a KS4-style test with grade boundaries on number and numeracy questions. |
| Mod 3 | Taxi App Forming and substituting into expressions, equations and formulas for use in a taxi app fare calculator. Winter Wonderland Calculating scaled perimeters and areas of rectilinear and circular shapes for use in a festival design in Hyde Park. | Takeaway Packaging Design Plotting linear graphs and using $y=mx+c$, plotting quadratic graphs to represent the heat retention of different materials. Calculate volume and surface area of prisms, cones and spheres and derived shapes. | Wage Calculation Formula Design a wage calculation formula based on relevant variables, substituting, factorising, expanding and rearranging as needed. Sit a KS4-style test with grade boundaries on algebraic fundamentals questions.. |
| Mod 4 | Outbreak Use coordinates, plot and measure three-figure bearings and use pythagoras' theorem to locate infected people on a set of axes. Mix antidotes using fractions, decimals, percentages and ratios of amounts. Devise a treatment plan for the city using google sheets. | Brunel's Bridges Calculate missing angles and distances in a bridge design using angle facts in straight lines, triangles (scalene, isosceles and equilateral), quadrilaterals, parallel lines, regular and irregular polygons, Pythagoras' theorem and the trigonometric formulas of SohCahToa. | Data Project Work with frequency tables to plot and analyse all charts, plot and analyse boxplots, use bivariate data to create and analyse scatter graphs. Sit a KS4-style test with grade boundaries on data analysis questions. |
| Mod 5 | Mission Rainforest Use map reading, scaling and geometric problem-solving to establish base camp, use proportional reasoning to produce figures for a report to the UN on illegal logging activity. | Architectural Refurbishment Solving equations (including with unknowns on both sides and simultaneous) to find missing weights for load-bearing pillars. Fashionista Use frequency tables, cumulative frequency tables and time-series graphs to predict fashion trends for a fashion business. | BMX Trick Design Use plans & elevations as well as analysis of transformations (rotation, reflection, translation and enlargement) to describe the steps of a BMX trick. Sit a KS4-style test with grade boundaries on transformations and constructions questions. |

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| Mod 6 | Islamic Geometry Use compass and ruler skills to construct complex geometric designs, with tessellation and step-by-step instructions. | Football Tournament Use probability calculations (including conditional probability in tree diagrams) to predict outcomes of a football tournament (e.g. Euro 2020). | EoY Test Revision Sit a KS4-style test with grade boundaries on all GCSE-style topics covered so far and go through key 'gap analysis' process to work on key individualised topics. |
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