

Key Stage 3 Long Term Planning

Year 7 2021-2022 INTENT:

Faculty Area: Mathematics (core) – Theta 1

(Please note that knowledge, related skills and connections to previous learning are linked by colour coding)

Year 7	Transition	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Knowledge	Transition Unit	Analysing and displaying data Number skills	Expressions, functions and formulae Decimals and measures	Fractions Probability	Ratio and Proportion	Lines and angles Sequences and graphs	Transformations
Skills	Resilience. Determination. Having a positive work ethic. Development of thinking skills Recognition that is not a failure to make mistakes and get things wrong – the only failure is in giving up and not learning from them. Importance and expectation that they always do their very best. Activities:- Introduction of weekly starter activities. Introduction of weekly homework Baseline testing of pupils.	Mode, median and range Displaying data Grouping data Averages and comparing data Line graphs and more bar charts Using spreadsheets Mental maths Addition and Subtraction Multiplication Division Time and money Negative numbers Factors, multiples and primes Square and triangle numbers	Functions Simplifying expressions 1 and 2 Writing expressions Substituting into formulae Writing formulae Decimals and rounding Length, mass and capacity Scales and coordinates Working with decimals mentally Working with decimals Perimeter Area More units	Comparing Fractions Simplifying fractions Working with fractions Fractions and decimals Understanding percentages Percentages of amounts The language of probability Calculating probability More probability calculations Experimental probability Expected outcomes	Direct Proportion Writing ratios Using ratios Scale and measures Proportions and fractions Proportions and percentages	Lines, angles and triangles Estimating, measuring and drawing angles Drawing triangles accurately Calculating angles Angles in a triangle Quadrilaterals Sequences Pattern sequences Coordinates Extending sequences Straight-line graphs Position-to-term rules	Congruency and enlargements Symmetry Reflection Rotation Translations and combined transformations

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<p>Connections to previous learning (KS2)</p>		<p>Describing positions on Coordinate grids Construct and interpret pie charts Calculate and interpret mean as an average Using negative numbers Divide using long division Use order operations</p>	<p>Use simple formulae Express missing number problems algebraically Multiply and divide using numbers with at least two decimal places Recall equivalences between decimals, percentages and fractions Solve problems involving similar shapes where scale factor is known Area of parallelograms and triangles Volume of cubes and cuboids Name parts of a circle</p>	<p>Use common factors to simplify fractions -Compare and order fractions of any size Add and subtract fractions and mixed numbers Multiply and divide proper fractions Calculate decimal fraction equivalents Recall equivalences between decimals, fractions and percentages Use fractions to solve problems involving proportion n/a</p>	<p>Solve problems using ratio using multiplication and division facts</p>	<p>Similar shapes involving scale factor Find missing angles in triangles, quadrilaterals and regular polygons Recognise vertically opposite angles and find missing angles Generate and describe linear number sequences</p>	<p>Translate shapes on a coordinate grid and reflect in the axes</p>
<p>Assessment</p>		<p>Skills check at the end of each unit (4 during this term)</p>	<p>Skills check at the end of each unit (3 during this term)</p>	<p>Skills check at the end of each unit (3 during this term)</p>	<p>Skills check at the end of each unit (3 during this term)</p>	<p>Skills check at the end of each unit (3 during this term)</p>	<p>Skills check at the end of each unit (3 during this term) End of year exam</p>
<p>Homework</p>		<p>Revision/numeracy booklet</p>	<p>Revision/numeracy booklet</p>	<p>Revision/numeracy booklet</p>	<p>Revision/numeracy booklet</p>	<p>Revision/numeracy booklet</p>	<p>Revision/numeracy booklet</p>
<p>Literacy</p>		<p>Mathematical key terms for each unit. Correct terminology used when answering questions (using standard English and full sentences) Read and understand written questions</p>	<p>Mathematical key terms for each unit. Correct terminology used when answering questions (using standard English and full sentences) Read and understand written questions</p>	<p>Mathematical key terms for each unit. Correct terminology used when answering questions (using standard English and full sentences) Read and understand written questions</p>	<p>Mathematical key terms for each unit. Correct terminology used when answering questions (using standard English and full sentences) Read and understand written questions</p>	<p>Mathematical key terms for each unit. Correct terminology used when answering questions (using standard English and full sentences) Read and understand written questions</p>	<p>Mathematical key terms for each unit. Correct terminology used when answering questions (using standard English and full sentences) Read and understand written questions</p>
<p>CIAG</p>		<p>Why maths is important?</p>					

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	sentences) Read and understand written questions	sentences) Read and understand written questions	sentences) Read and understand written questions	sentences) Read and understand written questions	sentences) Read and understand written questions	sentences) Read and understand written questions
CIAG		My dream career 1		My dream career 2		My dream career 3

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CIAG	When will I need maths? 1	When will I need maths? 2	When will I need maths? 3	When will I need maths? 4	When will I need maths? 5	When will I need maths? 6

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CIAG	See the maths in..... 1	See the maths in..... 2	See the maths in..... 3	See the maths in..... 4	See the maths in..... 5	See the maths in..... 6

Key Stage 4 Long Term Planning

Year 11 2021-2022 SYLLABUS: AQA GCSE Mathematics 8300

Curriculum Area: Mathematics (core) – Foundation

(Please note that knowledge, related skills and connections to previous learning are linked by colour coding)

Year 11	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1
Knowledge	Volume Quadratics, rearranging formula and identities	Inequalities Algebra and graphs Sketching graphs	Direct and inverse proportion Trigonometry	Solving quadratic equations Quadratic graphs Growth and decay	Vectors Exam preparation - Revision
Skills	Calculate the volume of cubes, cuboids and prisms. Expand and factorise quadratics. Simplify expressions. Use mathematical formula and change the subject. Show that algebraic expressions are equivalent.	Represent inequalities on a numbers line. Solve linear inequalities. Solve equations. Plot linear graphs. Find solutions using graphs. Recognise graphs if linear, quadratic, cubic and reciprocal functions	Solve problems using direct and inverse proportion. Interpret equations for direct and inverse proportion. Use graphs for proportion problems Know the trigonometric ratio. Use trigonometric ratios to find sides and angles. Know the exact values for 0, 30, 45, 60 and 90 degrees.	Solve quadratic equations by factorizing. Find approximate solutions from a graph. Recognise, sketch and interpret quadratic graphs. Solve growth and decay problems including compound interest.	Add and subtract vectors. Multiply a vector by a scalar. Use diagrams and column representation of vectors.
Connection to previous learning	Year 10 Spring 2 Perimeter and area Year 10 Spring 1 Algebra recap	Year 10 Spring 2 Graphs recap and extension. Year 9 summer 1 Equations. Year 10 Spring 2 Graphs recap and extension Year 10 Spring 2 Graphs recap and extension	Year 10 Spring 2 Graphs recap and extension. Year 9 Summer 2 Pythagoras' Year 10 Spring 1	Year 10 Spring 1 Algebra recap Year 11 Autumn 2 Algebra and graphs Year 10 Autumn 2 indices Year 10 Autumn 1 Calculating with percentages.	Year 9 summer 2 Transformations
Assessment	Skills check at the end of each unit (2 during this term)	Skills check at the end of each unit (3 during this term) Mock 1 CAP1	Skills check at the end of each unit (2 during this term)	Skills check at the end of each unit (3 during this term) Mock 2 CAP2	Skills check at the end of each unit (1 during this term) GCSE Examinations
Homework	Revision/numeracy booklet	Revision/numeracy booklet	Revision/numeracy booklet	Revision/numeracy booklet	Revision/numeracy booklet

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CIAG		Why Study Maths?		Mathematics KS5 taster sessions	