

## Key Stage 3 Long Term Planning

### Year 7 2021-2022 INTENT:

Faculty Area: Mathematics (support) – Pi 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
<b>Knowledge</b>	Transition Unit	Analysing/displaying data <b>Calculating</b>	Expressions, functions and formula <b>Graphs</b>	Factors and multiples <b>Decimals and measures</b>	Angles <i>and lines</i>	Measures and shapes <b>Fractions decimals and percentages</b>	Transformations
<b>Skills</b>	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.	Tables and pictograms Bar charts Grouped data Mode and modal class Range and mean <b>Adding subtracting multiplying dividing</b> <b>Multiply and divide by 10.100 and 1000</b> <b>Positive and negative numbers</b>	Using functions Function machines Simplifying expressions Writing expressions Using formula Writing formula <b>Real-life graphs</b> <b>Coordinates</b> <b>Graphs of functions</b> <b>Scientific graphs</b>	Number rules and relationships Multiples Multiplication Division Solving problems Factors and primes Common factors and multiples <b>Estimate and measures</b> <b>Decimal numbers</b> <b>Metric units</b> <b>Adding and subtracting decimals</b> <b>Rounding</b> <b>Multiplying and dividing decimals</b> <b>Calculations with money</b>	Right angles and lines Measuring angles Drawing and estimating angles Putting angles together – angle rules	Shapes Symmetry in shapes Rotational symmetry Regular polygons Perimeter Area <b>Comparing fractions</b> <b>Equivalent fractions</b> <b>Calculating fractions</b> <b>Adding and subtracting fractions</b> <b>Introducing percentages</b> <b>Finding percentages</b>	Reflection Translation Rotation Congruency
<b>Connections to previous learning</b>		Simple charts 9 (Yr2) Bar charts /pictograms (Yr3) Simple time graphs (Yr4) Number bonds (Yr1)	Use simple formula (Yr6) Missing number problems algebraically (Yr6) <b>Coordinates positive</b>	Count in steps of 2's,3's, 5's, 10's(Yr1) Count in multiples of 4,8,50,100(Yr2) Use factor pairs (Yr4) Identify factors and	<b>Identify angles bigger/smaller than a right angle (Yr3)</b> <b>Know acute, obtuse and reflex. Draw and measure angles,</b>	Recognise names of 2D and 3D shapes (Yr1) Properties of 3D shapes including symmetry (Yr2)	Translation s(Yr4) Reflect and translate (Yr5) Translate on a coordinate grid and reflect in axes (Yr6)

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		Add to 20 (Yr1) Add/subtract mentally (Yr2) Tables 2x,5x,10x(Yr2) Add/subtract HTU(Yr3) Tables 3x, 4x, 8x (Yr3) Short multiplication (Yr4) Multiply by 10,100, 1000(including decimals (Yr5) Interpret negative numbers(Y5) Use long multiplication and short division (Yr5) Long division (Yr6) Add/subtract negative on a number line (Yr6)	(Yr4) <i>Coordinates full grid (Yr6)</i>	multiples and common factors. Know prime numbers up to 19(yr5) Use common factors (Yr6) <i>Simple money problems (Yr2) Count in 10<sup>th</sup> (Yr3) Understand 10<sup>th</sup> (Yr3) Add and subtract money (Yr3) Use standard units (Yr3) Round decimals to nearest whole number. Compare 2 decimals. Convert between metric units (Yr4) Compare numbers with up to 3 decimal places. Multiply decimals y 10,100,1000(Yr5) Multiply and divide decimals (Yr6)</i>	<i>identify angles on a straight line and point (Yr5) Find missing angles in polygons (Yr6)</i>	3D shapes including FEV(Yr2) Measure perimeter (Yr3) Area by counting. Symmetry (Yr4) Area and perimeter of rectangular composite shapes (Yr5) Area of triangles and parallelograms (Yr6) <i>Recognise ½, 1/3, ¼, ¾(Yr2) Compare/order simple fractions. Simple equivalent fractions. Add and subtract simple fractions with same denominator (Yr3) Add and subtract fractions (Yr5)</i>	
<b>Assessment</b>		<i>Skills check at the end of each unit (4 during this term)</i>	<i>Skills check at the end of each unit (3 during this term)</i>	<i>Skills check at the end of each unit (3 during this term)</i>	<i>Skills check at the end of each unit (3 during this term)</i>	<i>Skills check at the end of each unit (3 during this term)</i>	<i>Skills check at the end of each unit (3 during this term) End of year exam</i>
<b>Homework</b>		Revision/numeracy booklet	Revision/numeracy booklet	Revision/numeracy booklet	Revision/numeracy booklet	Revision/numeracy booklet	Revision/numeracy booklet
<b>Literacy</b>		Mathematical key terms/vocabulary for each unit. Correct terminology used when answering questions. Read and understand written questions	Mathematical key terms/vocabulary for each unit. Correct terminology used when answering questions. Read and understand written questions	Mathematical key terms/vocabulary for each unit. Correct terminology used when answering questions. Read and understand written questions	Mathematical key terms/vocabulary for each unit. Correct terminology used when answering questions. Read and understand written questions	Mathematical key terms/vocabulary for each unit. Correct terminology used when answering questions. Read and understand written questions	Mathematical key terms/vocabulary for each unit. Correct terminology used when answering questions. Read and understand written questions
<b>CIAG</b>		Why maths is important?					

## Key Stage 3 Long Term Planning

### Year 8 2021-2022 INTENT:

Faculty Area: Mathematics (support) – Pi 2/3

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

Year 8	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<b>Knowledge</b>	Number and number properties Shapes and measures in 3D	Statistics Expressions and equations	Decimal calculations Angles	Number properties	Sequences Fractions and percentages	Probability
<b>Skills</b>	Add and subtract large numbers. Understand and use negative numbers (including calculations). Write ratios and solve problems (STEM) Identify 3D shapes Draw nets. Work out surface area. Calculate volume. Know and use metric units	Data collection sheets Interpret and draw bar charts Pie charts (STEM) Simplify expressions Use simple functions Solve simple equations Use brackets	Add, subtract and multiply decimals. Order decimals Solve problems with decimals (STEM) Measure and draw angles. Calculate missing angles. Draw accurate triangles and nets	Know and use squares, cubes and roots. Calculate with brackets and powers. Find HCF and LCM. Use Prime decomposition.	Generate and extend sequences Know special sequences Find the nth term Compare fractions. Find fractions of amounts. Add and subtract fractions. Calculate with simple percentages	Use the language of probability Calculate simple probabilities Experimental probability.
<b>Connections to previous learning</b>	Year 7 Autumn 1 Calculating Year 7 Summer 1 Measures and shapes	Year 7 Autumn 1 Analysing/displaying data Year 7 Autumn 2 Expressions, functions and graphs	Year 7 Spring 1 Decimals and measures Year 7 Spring 2 Angles and lines	Year 7 Spring 1 Angles and lines	Year 7 Autumn 2 Expressions, functions and graphs Year 7 Summer 1 Fractions, decimals and percentages	
<b>Assessment</b>	Skills check at the end of each unit (4 during this term)	Skills check at the end of each unit (3 during this term)	Skills check at the end of each unit (3 during this term)	Skills check at the end of each unit (3 during this term)	Skills check at the end of each unit (3 during this term)	Skills check at the end of each unit (3 during this term) End of year exam
<b>Homework</b>	Revision/numeracy booklet	Revision/numeracy booklet	Revision/numeracy booklet	Revision/numeracy booklet	Revision/numeracy booklet	Revision/numeracy booklet
<b>Literacy</b>	Mathematical key terms/vocabulary for each unit. Correct terminology used when answering questions. Read and understand written questions	Mathematical key terms/vocabulary for each unit. Correct terminology used when answering questions. Read and understand written questions	Mathematical key terms/vocabulary for each unit. Correct terminology used when answering questions. Read and understand written questions	Mathematical key terms/vocabulary for each unit. Correct terminology used when answering questions. Read and understand written questions	Mathematical key terms/vocabulary for each unit. Correct terminology used when answering questions. Read and understand written questions	Mathematical key terms/vocabulary for each unit. Correct terminology used when answering questions. Read and understand written questions
<b>CIAG</b>		My dream career 1		My dream career 2		My dream career 3



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	when answering questions. Read and understand written questions	when answering questions. Read and understand written questions	when answering questions. Read and understand written questions	when answering questions. Read and understand written questions	when answering questions. Read and understand written questions	when answering questions. Read and understand written questions
<b>CIAG</b>	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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<b>Literacy</b>	Mathematical key terms/vocabulary for each unit. Correct terminology used when answering questions. Read and understand written questions	Mathematical key terms/vocabulary for each unit. Correct terminology used when answering questions. Read and understand written questions	Mathematical key terms/vocabulary for each unit. Correct terminology used when answering questions. Read and understand written questions	Mathematical key terms/vocabulary for each unit. Correct terminology used when answering questions. Read and understand written questions	Mathematical key terms/vocabulary for each unit. Correct terminology used when answering questions. Read and understand written questions	Mathematical key terms/vocabulary for each unit. Correct terminology used when answering questions. Read and understand written questions
<b>CIAG</b>	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 (support) – 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
<b>Knowledge</b>	Properties of polygons Review and extension probability	Probability Further circumference and area Real life graphs	Inequalities Volume	Algebra and graphs Sketching graphs Quadratic graphs	Exam preparation - revision
<b>Skills</b>	Know the properties of polygons. Calculate interior and exterior angles of polygons. Understand the probability scale. Work out probabilities and solve problems. Use tree diagrams.	Understand the probability scale. Work out probabilities and solve problems. Use tree diagrams. Know the parts of a circle. Know and use the formula for the areas and circumference of a circle Plot graphs of real-life situations and find solutions, including speed/distance graphs	Represent inequalities on a numbers line. Solve linear inequalities. Calculate the volume of cubes, cuboids and prisms.	Solve equations. Plot linear graphs. Find solutions using graphs. Recognise graphs if linear, quadratic, cubic and reciprocal functions Recognise, sketch and interpret quadratic graphs.	
<b>Connections to previous learning</b>	Year 9 Autumn 1 Angles Year 9 Summer 1 Probability	Year 9 Summer 1 Probability Year 9 Spring 2 Area and circumference	Year 10 Summer 1 Algebra recap and extension Year 8 Autumn 1 Shapes and measures in 3D	Year 10 Summer 1 Algebra recap and extension Year 10 Graphs recap and extension Year 10 Graphs recap and extension	
<b>Assessment</b>	Skills check at the end of each unit (2 during this term)	Skills check at the end of each unit (2 during this term) Mock 1 CAP1	Skills check at the end of each unit (3 during this term)	Skills check at the end of each unit (2 during this term) Mock 2 – CAP2	GCSE Examinations
<b>Homework</b>	Revision/numeracy booklet	Revision/numeracy booklet	Revision/numeracy booklet	Revision/numeracy booklet	Revision/numeracy booklet
<b>Literacy</b>	Mathematical key terms/vocabulary for each unit. Correct terminology used when answering questions. Read and understand written questions	Mathematical key terms/vocabulary for each unit. Correct terminology used when answering questions. Read and understand written questions	Mathematical key terms/vocabulary for each unit. Correct terminology used when answering questions. Read and understand written questions	Mathematical key terms/vocabulary for each unit. Correct terminology used when answering questions. Read and understand written questions	Mathematical key terms/vocabulary for each unit. Correct terminology used when answering questions. Read and understand written questions
<b>CIAG</b>		Why Study Maths?		Mathematics KS5 taster sessions	