

Oasis Media City Mathematics Curriculum Plan



Subject: Mathematics

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This document is an overview of the learning that students will experience within their subject area. This is a working document that provides teachers, students and parents with a map of key content that will be delivered during lessons in each year group.

Year	Half Term:	1 (7 weeks)	2 (8 weeks)	3 (7 weeks)	4 (6 weeks)	5 (5 weeks)	6 (7 weeks)
7 Mathematics Mastery	Topic(s): Science Link	Unit 1: Laws of Arithmetic (1 Week) Unit 2: Axioms and Arrays (2 week) Unit 3: Positive and Negative Numbers (3 Weeks) Revision Week	Unit 3: Positive and Negative Numbers (3 Weeks) – Practice Lessons needed Unit 4: Order of Operations (1 week) Unit 5: Factors and Multiples (2Week) Unit 6: Introducing Sequences, Expressions and Equations (3 weeks)	Unit 6: Introducing Sequences, Expressions and Equations (3 weeks) Unit 13: Prime Factor Decomposition (2 Weeks) Unit 14: Fractions (2 Week)- Some primaries only covered this online	Unit 15: All Operations acting on Fractions (2 Weeks)- some primaries only covered this online Unit 16: Ratio (2 weeks)- some primaries only covered this online Unit 17: Percentages (2 weeks)	Unit 17: Percentages (1 week) Unit 7: Angles (2 weeks) Unit 8: Classifying 2D Shapes (2 weeks)	Unit 11: Area of 2D Shapes (2 Weeks) Unit 10: Co-ordinates (2 weeks) Unit 12: Transforming 2D Figures (2 weeks) Unit 9: Constructing Triangles and Quadrilaterals (2 Weeks)
	Hegarty Skills: Higher skills in red	Commutative Law 7 Associative Law 8 Addition/Subtraction 1 – 3/9 Distributive law 12 Multiplication/division 4 -6/ 10/11 Negative numbers 37 Add/Subtract Negative 39 – 41 Multiply/divide Negative 42/43 Accountant	Order of operation 24/44/120/150 Factors 27 Multiples 33 LCM 34 HCF 31 Sequences 197/261/263 Form Expressions 151-154 Collect Like Terms 156/157 Expand 160 Factorise 168/169 Solve 177 – 183	Prime numbers 28 Prime Factors 29/30 HCF 32 LCM 35 Equivalent Fractions 59/61 Convert Mixed numbers/improper 63/63 Add/Subtract Like Fractions 65 Add/Subtract Unlike Fractions 66 Multiply Fractions 68/69 Divide Fractions 70 Reciprocals 71	Compare ratio 328 Writing ratio 331 Ratio/fractions 330 Equivalent Fractions 329 Divide by ratio 332 – 334 FDP 73 – 76 Percentage of amounts 84-87 Percentage increase/decrease 88 – 90 Reverse % 96 Solve problems 98	Measure angles 458 – 461 Identify angles 455 Angles in straight lines 477/478 Angles around a point 812 – 814 Vertically opposite 480 Complementary Angles 815 Angles on parallel Lines 481 – 483 Types of triangles 823 Angles in triangle 485 – 487 Quadrilaterals 824 – 826 Angles in quadrilaterals 560 Construct triangles 683	Co-ordinates 199 Midpoints 200 Area of rectangles 554 Area of triangle 557/558 Compound Shape 555 Area of parallelograms 556 Area of trapeziums 559 Enlargement 642 – 647 Rotation 648/649 Reflection 639 – 641 Translation 637/638
	Key Words	Integer, Associativity, Commutativity, Distributivity, Equality, Inverse Operation, Reciprocal	Equal Priority, Unequal Priority, Product, Sum, BIPS, Factor, Expression	Prime, Product, Equivalent, Operation, Simplest Form	Mixed Number, Ratio, Quantity, Percentage, Equivalent, Revise	Protractor, Reflex, Classify, Two-Dimensional, Construct, Quadrilateral	Co-ordinate, Axis, Area, Squared, Transform, Symmetry
	Link to context/Character /careers:	Mental Strategies of addition and subtraction/Basic Numeracy	Manipulation of Decimals- Context of money and wider use of units of measure/ product design	Introduction to algebraic manipulation/coding and software engineering	Calculating with fractions/ Calculating amounts in recipes/food preparation	Properties of angles, Triangles and quadrilaterals-awareness of space/architecture and design	Percentages and data interpretation/statistical analysis

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	Assessment Type:	End of Unit topic tests+Growth lessons and Mathematics Mastery End of Half Term Assessment	End of Unit topic tests+Growth lessons and Mathematics Mastery End of Half Term Assessment	End of Unit topic tests+Growth lessons and Mathematics Mastery End of Half Term Assessment	End of Unit topic tests+Growth lessons and Mathematics Mastery End of Half Term Assessment	End of Unit topic tests+Growth lessons and Mathematics Mastery End of Half Term Assessment	End of Unit topic tests+Growth lessons and Mathematics Mastery End of Year Assessment
8 Mathematics Mastery	Topic(s): <i>Science Link</i>	Unit 1: Sequences (2 weeks) Unit 2: Forming and Solving Equations (2 weeks)- re-do Solving equations later on. Unit 3: Inequalities *NB: The sequences unit here should cover everything needed on the KS3 curriculum, as the Y9 unit was removed due to repetition.	Unit 4: Linear Graphs (4 weeks) Year 7: Transforming 2D figures unit (missed in year 7) Unit 5: Accuracy and Estimation (2 weeks)	Unit 6: Ratio (2 weeks) Unit 7: Real Life Graphs and Rates of Change (2 weeks) Unit 8: Direct and inverse proportion (2 weeks)	Unit 9: Univariate Data (2 weeks) Unit 10: Bivariate Data (2 weeks)	Unit 11-Angles in parallel lines and polygons Unit 12-Bearings	Unit 13-Circles and composite shapes Unit 14-volume of prisms Unit 15 – surface area of prisms.
	<i>Hegarty Skill</i> <i>Higher skills in red</i>	Fibonacci Sequence 263 Important Sequences 261 Term to term 197 Nth term 198 Expressions, identities and formulae 154 Form equations 176 Solve equations 178 – 176 Inequalities 265 – 268 Solve inequalities 269 - 271	Enlargement 642 – 647 Rotation 648/649 Reflection 639 – 641 Translation 637/638 Co-ordinates 199 Mid points 200 Plotting graphs 205/206 Gradient 201 – 204 $y = mx + c$ 207 – 213 Rounding decimals 56 Significant Figures 130 Estimation 131 Accuracy 132	Compare ratio 328 Writing ratio 331 Ratio/fractions 330 Equivalent Fractions 329 Divide by ratio 332 – 334 Recipes 739 – 742 Best Buys 763 – 772 Currency conversion 707 – 708 Convert time 709 – 710 Speed 716 – 724 Density 725 – 731 Distance-time graphs 874 – 879 Real life graphs 894 – 895 Conversion graphs 712 – 713 Direct proportion 339 – 341 Algebraic direct proportion 343 – 345 Indirect proportion 342 Algebraic Indirect proportion 346 – 347 Proportion graphs 348	Mean 405 – 408 Mean from Frequency table 417 – 418 Mode 404 Mode from Frequency table 415 Median 409 Median from frequency table 416 Range 410 Range from frequency table 414 Questionnaire 399 – 400 Types of data 392 – 393 Scatter Graphs 453 - 454 Pie Charts 427 – 429 Bar Charts 425 Pictograms 426 Two-way tables 422 - 424	Vertically opposite angles 480 Alternate angles 481 Co interior angles 482 Corresponding angles 483 Bearings 492 - 496	Area of circles 539 – 543 Circumference 534 – 538 3D shapes 829 – 830 Nets 833 – 836 Volume of cuboids 568 – 569 Volume of prisms 570 – 571 Volume of cylinders 572 – 574 Part Cylinders 575 Surface area of cuboids 584 Surface area of prisms 585 Surface area of cylinders 586 Convert units of area 700 – 701 Convert units of volume 702 – 703

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	<i>Key Words</i>	<i>Sequences, Term, Identity, equations, Solve, inequalities</i>	<i>Linear, gradient, Coordinates, Plane, graph</i>	<i>Ratio, equivalence, rate of change, speed, distance, time, density</i>	<i>Averages, mean, median, mode, range, questionnaire, secondary data, primary data, qualitative, quantitative</i>	<i>Alternate, co interior, Corresponding, bearing</i>	<i>Circumference, diameter, ratio, area, arc, sector, segment, tangent, volume, surface area, prism, net</i>
	<i>Link to context/Character :</i>	<i>Pattern spotting (banking and investment trend identification) Problem solving algebraically</i>	<i>Properties of shapes around us/Design Comparing quantities. Accountancy</i>	<i>Relationship between quantities- Recipes- culinary skills,</i>	<i>Collecting and representing data-when is data misleading? /Statistical analysis</i>	<i>Construction</i>	<i>Estimation and how it corresponds to Area and volume of solids/Engineering</i>
	<i>Assessment Type:</i>	<i>End of Unit topic tests+Growth lessons and Mathematics Mastery End of Half Term Assessment</i>	<i>End of Unit topic tests+Growth lessons and Mathematics Mastery End of Half Term Assessment</i>	<i>End of Unit topic tests+Growth lessons and Mathematics Mastery End of Half Term Assessment</i>	<i>End of Unit topic tests+Growth lessons and Mathematics Mastery End of Half Term Assessment</i>	<i>End of Unit topic tests+Growth lessons and Mathematics Mastery End of Half Term Assessment</i>	<i>End of Unit topic tests+Growth lessons and Mathematics Mastery End of Half Term Assessment</i>
9 Mathematics Mastery	<i>Topic(s):</i> <i>Science Link</i>	Unit 1: coordinates (1 week) Unit 2: linear graphs (2 weeks) Unit 3: direct and inverse proportion (1 week) Algebraic direct and indirect Unit 4: Standard Form (1 week) Unit 5: Algebra Recap (2 weeks)	Unit 6: expanding and factorising brackets (2 weeks) and Expanding Triple brackets Unit 7: Algebraic manipulations (2 weeks) NB: Unit 5: Sequences was originally here, but this is now replaced it with algebra recap, as sequences was covered in Y8.	Unit 8: constructions (1 week)-missed in year 7 due to covid Unit 9: congruence and similarity (2 weeks) Unit 10: triangles and quadrilaterals (1 week) Unit 11: Angles in Polygons (1 week) Year 8 Covid catch up unit on Area of 2D shapes including circles (1 week) Year 8 covid catch up unit on Volume (1 week) *NB: Unit 11: Angles in Polygons remains *NB Area of 2D shapes including circles and volume was missed in year 8	Unit 12: linear equations and inequalities (2 weeks) Unit 13: simultaneous equations (1 week) Graphical representation Unit 14: quadratic and other graphs (2 weeks)	Unit 15: Pythagoras (2 Weeks) Unit 16: trigonometry Unit 17: proof	Unit 18 – Probability Unit 19 – Mean from Grouped Data Year 8 Unit 10: Bivariate Data (2 weeks)- missed in year 8 due to covid Unit 20 – Comparing Distributions Unit 21 – Cumulative Frequency and Box Plots
	Hegarty Skills: <i>Higher skills in Red.</i>	Co-ordinates 199 Mid points 200 Plotting graphs 205/206 Gradient 201 – 204 $y = mx + c$ 207 – 213	Expand Linear 160/161 Expand Double 162 – 164 Expand triple	Similar Shapes 608 – 613 Similar Problems 614 Congruency 680/681/682 Types of triangle 823	Form Equations 176 Solve Equations 178 – 186 Inequalities 265 – 268 Solve inequalities 269 – 271	Pythagoras 497-504 Trigonometry 508 - 515 Proof • Angle facts 484 Congruent triangles 684 - 690	Probability language 349/350 Experimental/Reflective Frequency 355/356/357 Listing Outcomes 352/670 Discrete/continuous 393

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		<p>Parallel lines 214 Perpendicular lines 215/216 Real Life 894/895 Recipes 739 – 742 Direct Proportion 339/430/341 Algebraic Direct proportion 343 – 345 Indirect proportion 342 Algebraic Indirect proportion 346/346 Standard form 121-128 Algebra recap Intro to algebra 151-155 Collecting like terms 156-157 Simplifying expressions 158-159</p>	<p>166 Factorise Linear 168/169 Expressions, identities and formulae 154 Substitution 780 – 787 Rearranging Formulae 280 – 286 Perpendicular bisector 660/662/663 Angle bisector 661 Construct triangles 683</p>	<p>Properties of Quadrilaterals 824 – 826 Interior angles in polygons 561/562 Exterior angles in polygons 563/564 Area of 2D shapes 553-559 Parts of a Circle 592 Circumference 537 Area of a Circle 541 Volume counting cubes 567 Volume of a cuboids 568-569 Volume of Prisms 570-571 Volume of Cylinders 572-575</p>	<p>Solve Simultaneous Equations 190 – 195 Graphical Simultaneous Equations 218/219 Plot Quadratic Graphs 251 Plot Reciprocal 300/301 Plot Exponential 302</p>	<p>Estimate Mean 417/418 Stem and Leaf 430 – 433 Scatter Graphs 453/454</p> <p>Averages Mean 405-408 Mean from a table 417-418 Mode 404 Mode from a table 415 Median 409 Median from a table 416 Cumulative frequency 437 – 439 Box plot - 440</p>	
	Key Words:	Coordinate, Linear, Gradient, Inverse, Scale, Direct Proportion, Indirect Proportion	Expand, Factorise, Formula, Subject, Simplify, construct	Congruent, Similar, Quadrilateral, Polygons, Sum, Circumference, Diameter, radius, Volume	Inequality, Linear, Simultaneous, Quadratic, Graph, Substitute	Hypotenuse, Opposite, adjacent, squared, Proof	Probability, Sum to one, Interval, Compare, Distribution, Correlation, averages
	Link to context/Character /Careers:	Proportion and scale/ Hair dressing, food preparation, Design	Algebra in real life-coding and software engineering	Spatial awareness and dexterity through construction/ architecture	Resilience and problem solving/relates to all careers	Ancient Egyptian architecture links to trigonometry/ architecture and design	Comparison of data through averages-how data can be misleading/statistical analysis
	Assessment Type:	End of Unit topic tests+Growth lessons and Mathematics Mastery End of Half Term Assessment	End of Unit topic tests+Growth lessons and Mathematics Mastery End of Half Term Assessment	End of Unit topic tests+Growth lessons and Mathematics Mastery End of Half Term Assessment	End of Unit topic tests+Growth lessons and Mathematics Mastery End of Half Term Assessment	End of Unit topic tests+Growth lessons and Mathematics Mastery End of Half Term Assessment	End of Unit topic tests+Growth lessons and Mathematics Mastery End of Half Term Assessment
10 Foundation	Topic(s): <i>Science Link</i>	<p>Unit 1: factors, multiples and primes Unit 2: powers and roots Unit 3: indices</p>	<p>Unit 4: standard form- here Unit 6: sequences Unit 6: algebra (KS3 review)</p>	<p>Unit 7: quadratics Unit 8: quadratic graphs Unit 9: simultaneous equations - Recap solving equations first.</p>	<p>Unit 10: fractions, decimals and percentages Unit 11: percentages Unit 12: probability, sets and Venn diagrams.</p>	<p>Unit 13: transformations Unit 14: 2D shapes including circle geometry Unit 15: 3D shapes Unit 16: volume and surface area Unit 17: ratio review</p>	<p>Unit 18: compound measure and direct and indirect proportion Unit 19: Pythagoras' Theorem review Unit 20: similarity and Trigonometry Unit 21: averages and range Unit 22: data collection and sampling Unit 23: presenting data including scatter graphs</p>
	Hegarty Skills:	<p>Factors 27 Primes 28 Multiples 33 Calculating with roots 100- 103 Surd 111- 115</p>	<p>Standard Form 122 -124 Calculate with Standard Form 125-127 Nth term linear 198</p>	<p>Factorise quadratics 223/224/226 Solve Quadratics 230 – 233 Quadratic Formula 241/242 Quadratic Worded 245</p>	<p>FDP 149 Percentages (Increase Decrease, reverse and percentage change) 88-97 Relative Frequency 357 Mutually Exclusive 354</p>	<p>Enlargement 642 – 647 Rotation 648/649 Reflection 639 – 641 Translation 637/638 Combine Transformations 656/657</p>	<p>Distance Time Graphs 876-878 Pythagoras 497 – 504 Trigonometry 508 – 515 Exact Values 845 – 849 3D Pythagoras 505 – 507 3D Trigonometry 854 – 863</p>

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		<p>Index Laws 104 -110</p> <p>Nth term quadratic 247 – 250</p> <p>Geometric Sequences 264</p> <p>Expand brackets 162 – 164</p> <p>Expand Triple brackets 166</p> <p>Factorise quadratics 223/224/226</p> <p>Solve Quadratics 230 – 233</p> <p>Quadratic Formula 241/242</p> <p>Quadratic Worded 245</p>	<p>Solve simultaneous Equations 190 – 193</p> <p>Form Simultaneous equations 195</p> <p>Graphical Simultaneous equations 218/219 39 1</p>	<p>Sample Space 359</p> <p>Frequency trees 368/369</p> <p>Tree diagrams (with replacement) 361 – 363</p> <p>Tree diagrams (without replacement) 364 – 367</p> <p>Harder Tree Diagrams 389/390</p> <p>Venn diagrams 372/373</p> <p>Set notation 374 – 380</p> <p>Venn diagrams probability 383 – 388</p> <p>Harder Venn Diagrams</p>	<p>3D Shapes 829 – 836</p> <p>Plans & Elevations 837 – 844</p> <p>Volume of prisms 570 -574</p> <p>Surface area of prisms 584 – 586</p> <p>Volume of spheres 580/581</p> <p>Volume of cones 576/577</p> <p>Volume of pyramids 579</p> <p>Surface area of cones and spheres 587/588</p> <p>Ratio 328-338</p>	<p>Similarity 608 – 614</p> <p>Similar area/volume 615 – 62</p> <p>Congruency 680 – 682</p> <p>Prove congruency 684 – 690</p> <p>Averages</p> <p>Mean 405-408</p> <p>Mean from a table 417-418</p> <p>Mode 404</p> <p>Mode from a table 415</p> <p>Median 409</p> <p>Median from a table 416</p> <p>Data Collection Tally 401</p> <p>Sampling 394/395</p> <p>Stratified Sampling 396 – 398</p> <p>Scatter Diagrams 453-454</p> <p>Two way Tables 422 – 424</p>	
	Key Words:	<i>Multiple, Factor, Prime, Root, Index, Indices, Reciprocal, Revise</i>	<i>Standard Form, Sequence, Quadratic, Expand, Factorise, Graph, Root</i>	<i>Equation, Solution, Quadratic, Simultaneous, Intersect</i>	<i>Percentage, Interest, Probability, Sum, Venn, Universal set.</i>	<i>Transformation, Translation, 2D, 3D, Volume, Surface Area</i>	<i>Hypotenuse, trigonometry, Mean, Sampling, Stratified, Data, Scatter Diagram, Two Way Table, Statistical</i>
	Assessment Type:	<i>End of Unit topic tests+Growth lessons Mathematics mastery end of topic test AQA Mock Papers during PPE</i>	<i>End of Unit topic tests+Growth lessons Mathematics mastery end of topic test AQA Mock Papers during PPE</i>	<i>End of Unit topic tests+Growth lessons Mathematics mastery end of topic test AQA Mock Papers during PPE</i>	<i>End of Unit topic tests+Growth lessons Mathematics mastery end of topic test AQA Mock Papers during PPE</i>	<i>End of Unit topic tests+Growth lessons Mathematics mastery end of topic test AQA Mock Papers during PPE</i>	<i>End of Unit topic tests+Growth lessons Mathematics mastery end of topic test AQA Mock Papers during PPE</i>
10 Higher (Set 1 and Set 2 Only)	Topic(s): <i>Science Link</i>	<p>Unit 1: powers and roots</p> <p>Unit 2: surds and irrational Number</p> <p>Unit 3: Indices</p>	<p>Unit 4: standard form</p> <p>Unit 5: sequences -here</p> <p>Unit 6: quadratics</p> <p>Unit 7: quadratic graphs</p>	<p>Unit 8: algebraic fractions</p> <p>Unit 9: simultaneous equations</p> <p>Unit 10: fractions, decimals and percentages</p>	<p>Unit 11: percentages</p> <p>Unit 12: probability, sets and Venn diagrams.</p> <p>Unit 13: transformations</p> <p>Unit 14: upper and lower bounds</p> <p>Unit 15: 2D shapes including circle geometry</p>	<p>Unit 16: 3D shapes</p> <p>Unit 17: volume and surface area</p> <p>Unit 18: ratio review</p> <p>Unit 19: compound measure and direct and indirect proportion</p>	<p>Unit 20: Pythagoras' Theorem review</p> <p>Unit 21: similarity and Trigonometry</p> <p>Unit 22: 3D Trigonometry and Pythagoras</p> <p>Unit 23: averages and range</p> <p>Unit 24: data collection and sampling</p> <p>Unit 25: presenting data including scatter graphs</p> <p>Unit 26: further statistical diagrams</p>
	Hegarty Skills:	<p>Calculating with roots 100- 103</p> <p>Surds 111- 115</p> <p>Expand Surds 116/117</p> <p>Rationalise the denominator 118/119</p> <p>Index Laws 104 -110</p>	<p>Standard Form 122 -124</p> <p>Calculate with Standard Form 125-127</p> <p>Nth term linear 198</p> <p>Nth term quadratic 247 – 250</p> <p>Geometric Sequences 264</p> <p>Expand brackets 162 – 164</p> <p>Expand Triple brackets 166</p>	<p>Simplify Algebraic Fractions 229</p> <p>Expressions with algebraic fractions 172</p> <p>Solve Algebraic fractions 187</p> <p>Solve simultaneous Equations 190 – 193</p> <p>Form Simultaneous equations 195</p> <p>Graphical Simultaneous equations 218/219</p>	<p>Percentages (Increase Decrease, reverse and percentage change) 88-97</p> <p>Relative Frequency 357</p> <p>Mutually Exclusive 354</p> <p>Sample Space 359</p> <p>Frequency trees 368/369</p> <p>Tree diagrams(with replacement) 361 – 363</p> <p>Tree diagrams (without replacement) 364 – 367</p> <p>Harder Tree Diagrams 389/390</p> <p>Venn diagrams 372/373</p>	<p>3D Shapes 829 – 836</p> <p>Plans & Elevations 837 – 844</p> <p>Bounds 137 – 139</p> <p>Volume of prisms 570 -574</p> <p>Surface area of prisms 584 – 586</p> <p>Volume of spheres 580/581</p> <p>Volume of cones 576/577</p> <p>Volume of pyramids 579</p> <p>Frustums 578</p> <p>Surface area of cones and spheres 587/588</p> <p>Ratio 328-338</p>	<p>Pythagoras 497 – 504</p> <p>Trigonometry 508 – 515</p> <p>Exact Values 845 – 849</p> <p>Similarity 608 – 614</p> <p>Similar area/volume 615 – 62</p> <p>Congruency 680 – 682</p> <p>Prove congruency 684 – 690</p> <p>Bearings 492 – 496</p> <p>3D Pythagoras 505 – 507</p> <p>3D Trigonometry 854 – 863</p> <p>Averages</p> <p>Mean 405-408</p> <p>Mean from a table 417-418</p>

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			Factorise quadratics 223/224/226 Solve Quadratics 230 – 233 Quadratic Formula 241/242 Quadratic Worded 245 Roots 253 Y- intercept 252 Turning point 255/256 Symmetry 254 Plot Quadratics and find solutions 251/260 Plot reciprocal 300/301	Quadratic Simultaneous equations 246 FDP 149	Set notation 374 – 380 Venn diagrams probability 383 – 388 Harder Venn Diagrams 391 Enlargement 642 – 647 Rotation 648/649 Reflection 639 – 641 Translation 637/638 Combine Transformations 656/657	Distance Time Graphs 876-878	Mode 404 Mode from a table 415 Median 409 Median from a table 416 Data Collection Tally 401 Sampling 394/395 Stratified Sampling 396 – 398 Scatter Diagrams 453-454 Two way Tables 422 – 424
	<i>Key Words:</i>	<i>Index, Root, Surd, Irrational, Rationalise, Indices, Reciprocal, Revise</i>	<i>Standard Form, Sequence, Quadratic, Expand, Factorise, Graph,</i>	<i>Algebraic Fraction, Simultaneous, Equation Percentage, Decimal, Fraction</i>	<i>Interest, Probability, Transformation, Bound, 2D, Circumference, diameter, radius</i>	<i>3D, Volume, Ratio, Direct Proportion, Pythagoras Theorem, Similarity, Congruence,</i>	<i>Hypotenuse, Pythagoras, Trigonometry, Similar, Mean, Sampling, Stratified, Data, Scatter Diagram, Two Way Table</i>
	<i>Assessment Type:</i>	<i>End of Unit topic tests+Growth lessons Mathematics mastery end of topic test AQA Mock Papers during PPE</i>	<i>End of Unit topic tests+Growth lessons Mathematics mastery end of topic test AQA Mock Papers during PPE</i>	<i>End of Unit topic tests+Growth lessons Mathematics mastery end of topic test AQA Mock Papers during PPE</i>	<i>End of Unit topic tests+Growth lessons Mathematics mastery end of topic test AQA Mock Papers during PPE</i>	<i>End of Unit topic tests+Growth lessons Mathematics mastery end of topic test AQA Mock Papers during PPE</i>	<i>End of Unit topic tests+Growth lessons Mathematics mastery end of topic test AQA Mock Papers during PPE</i>
11 Foundation (set 3, 4, 5)	<i>Topic(s):</i>	Missed due to Covid Unit 18: compound measure and direct and indirect proportion Unit 19: Pythagoras' Theorem review Unit 20: similarity and Trigonometry Unit 21: averages and range	Unit 22: data collection and sampling Unit 23: presenting data including scatter graphs Unit 24 – vectors Unit 27 – congruence Unit 28 – construction and loci	Unit 25 – geometric reasoning-Angles in Polygons Unit 26 – bearings Unit 29 – linear inequalities Unit 30 – linear graphs Unit 31 – non-linear graphs	Revision using Pinpoint	Revision	
	<i>Hegarty Skills:</i>	Compound measures: Speed 716-724 Density 725-733 Pressure 734-737 Direct proportion 339-341	Vectors 622-636 Angles in polygons 561-564 Circle theorem 594- 606 Bearings 492-496	Linear inequalities on a number line 265, 268 Solving linear inequalities 269-271 Regions 273-276			

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		<p>Inverse proportion 342</p> <p>Pythagoras 498-504</p> <p>Similarity 608-621</p> <p>Trigonometric Ratios 508-514</p> <p>Averages and range 413, 419-421</p> <p>Data collection 401</p> <p>Sampling 394, 395, 396-398</p> <p>Presenting data and scatter graph:</p> <p>Pictograms 426</p> <p>Bar charts 425</p> <p>Pie Charts 427-429</p> <p>Scatter diagrams 453, 454</p> <p>Frequency Polygon 441</p>	<p>Congruence 680- 689</p> <p>Construction 659-669, Construct triangles 683</p> <p>Loci 674-679</p>	<p>Linear graphs- 206-216</p> <p>Quadratic graphs 251-260</p> <p>Cubic graphs 298-299</p> <p>Trigonometric graphs 303-305</p>			
	Assessment Type:	<p>End of Unit topic tests+Growth lessons</p> <p>AQA Practice Papers pre PPE and AQA Mock Papers during PPE</p>	<p>End of Unit topic tests+Growth lessons</p> <p>AQA Practice Papers pre PPE and AQA Mock Papers during PPE</p>	<p>End of Unit topic tests+Growth lessons</p> <p>AQA Practice Papers pre PPE and AQA Mock Papers during PPE</p>	<p>End of Unit topic tests+Growth lessons</p> <p>AQA Practice Papers pre PPE and AQA Mock Papers during PPE</p>	<p>End of Unit topic tests+Growth lessons</p> <p>AQA Practice Papers pre PPE and AQA Mock Papers during PPE</p>	<p>End of Unit topic tests+Growth lessons</p> <p>AQA Practice Papers pre PPE and AQA Mock Papers during PPE</p>
11 Higher (set 1 and 2)	Topic(s):	<p>Missed due to Covid</p> <p>Unit 20: Pythagoras' Theorem review</p> <p>Unit 21: similarity and Trigonometry</p> <p>Unit 22: 3D Trigonometry and Pythagoras</p> <p>Unit 23: averages and range</p> <p>Unit 24: data collection and sampling</p> <p>Unit 25: presenting data including scatter graphs</p> <p>Unit 26: further statistical diagrams</p>	<p>Unit 27 - vectors</p> <p>Unit 28 – geometric reasoning</p> <p>Unit 29 – circle theorems</p> <p>Unit 30 – bearings</p> <p>Unit 31 – congruence</p> <p>Unit 32 – construction and loci</p>	<p>Unit 33 – linear inequalities</p> <p>Unit 34 – linear graphs</p> <p>Unit 35 – non-linear graphs</p> <p>Unit 36 – trigonometric graphs</p>	<p>Unit 37 – algebraic proof and reasoning</p> <p>Unit 38 – recurrence relations</p> <p>Unit 39 – functions</p> <p>Unit 40 – transformation of graphs</p> <p>Unit 41 – further graphs</p>	Revision	
	Hegarty Skills:	<p>Compound measures: Speed 716-724</p> <p>Density 725-733</p> <p>Pressure 734-737</p> <p>Direct proportion 339-341</p> <p>Inverse proportion 342</p> <p>Pythagoras 498-504</p> <p>Similarity 608-621</p> <p>Trigonometric Ratios 508-514</p>	<p>Vectors 622-636</p> <p>Angles in polygons 561-564</p> <p>Circle theorem 594- 606</p> <p>Bearings 492-496</p> <p>Congruence 680- 689</p> <p>Construction 659-669, Construct triangles 683</p> <p>Loci 674-679</p>	<p>Linear inequalities on a number line 265, 268</p> <p>Solving linear inequalities 269-271</p> <p>Regions 273-276</p> <p>Linear graphs- 206-216</p> <p>Quadratic graphs 251-260</p> <p>Cubic graphs 298-299</p> <p>Trigonometric graphs 303-305</p>	<p>Algebraic proof 325-327</p> <p>Iteration and recurrence relations 262</p> <p>Functions 286-296</p> <p>Transformation of graphs 307-313</p>		

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		Averages and range 413, 419-421 Data collection 401 Sampling 394, 395, 396-398 Presenting data and scatter graph: Pictograms 426 Bar charts 425 Pie Charts 427-429 Scatter diagrams 453, 454 Frequency Polygon 441					
	<i>Key Words:</i> <i>Assessment Type:</i>	<i>End of Unit topic tests+Growth lessons</i> <i>AQA Practice Papers pre PPE and AQA Mock Papers during PPE</i>	<i>End of Unit topic tests+GROWTH lessons</i> <i>AQA Practice Papers pre PPE and AQA Mock Papers during PPE</i>	<i>End of Unit topic tests+GROWTH lessons</i> <i>AQA Practice Papers pre PPE and AQA Mock Papers during PPE</i>	<i>End of Unit topic tests+Growth lessons</i> <i>AQA Practice Papers pre PPE and AQA Mock Papers during PPE</i>	<i>End of Unit topic tests+Growth lessons</i> <i>AQA Practice Papers pre PPE and AQA Mock Papers during PPE</i>	<i>GCSE Examination</i>

Key Questions:

1. What is the overarching intent for your curriculum?

To develop the knowledge, and love of Maths in our students that will enable them to be Numerate, Enthusiastic and Mathematically confident problem solvers who will be successful in their GCSE examinations, go on and achieve their chosen career paths with a specific emphasis on encouraging the learning of Maths post-GCSE.

2. How does this curriculum build student's knowledge of the world around them both locally and nationally?

The KS3 Mathematics Mastery Curriculum gives our students the skills they need to be numerate and financially aware of their surroundings through context-based learning. This develops their ability to spot the Maths around them and to carry this through to KS4 where their results for practice examinations are input into Pinpoint Learning that compares their progress against other schools nationally thus enabling our students to see how they fit in the bigger picture both compared to other schools in the area and national basis.

3. How is this curriculum designed to engage students and develop a passion for the subject?

Mathematics Mastery is a prescribed Scheme of work for Oasis Academy that encourages a depth of understanding and knowledge of Mathematical concepts. This at KS3 gives our students a promising start to their secondary Mathematics education as it is designed to show the beauty of Maths by exposing our students to Mathematics in context; an example of this is showing our students a variety of number systems that have either been used historically or are still in use around the world. This steps away from just learning Maths by rote as it encourages our students to see that Maths is an exciting companion to every day life through furthering their knowledge of Maths and as this develops through to KS4 the added parameter of GCSE preparation opens the door for our students to not only pass but to excel in the subject and continue their Maths education post 16.

4. How does this curriculum cater for the needs of our students?

Our curriculum enables all our students to access the Maths curriculum through differentiated outcomes and challenges in addition to exam style questioning and preparation at KS4. Mathematics Mastery at KS3, and Year 10. The Continuation of the AQA Scheme of Work for Year 11 are all differentiated by our teachers to suit our students' individual needs, be they SEN related (supported by our SENCO), designed to enable access of our LPA and MPA students in addition to providing challenge to our HPA students. The linear setting of our groups this year and the reassessing of these sets following data capture windows will help to make sure our students are all taught at a level and pace that is right for them.

5. How is assessment used to improve learning?

End of topic assessments to identify key areas of improvement and allocated Growth Lesson time to respond to growth tasks are two formative assessment methods that we employ on a day-to-day basis. These tie in with End of Term assessments that are used in data capture windows to grade students and ensure they are both accurately set and supported. Pixl and Pinpoint learning are tools we use at KS4 to identify individual areas of weakness for our students following End of Term Assessments for year 10 and PPE examinations for year 11. Resources are then produced to help students overcome these weaknesses, quality first teaching of these problem areas is then employed to address these areas for improvement.

6. What skills will students develop that can be used in other subject areas and beyond their school life?

Our curriculum provides our students with arithmetic skills that enable them to be financially numerate; these skills are transferable across all subject areas and are essential for everyday life. Reasoning and Problem solving is built in within all our schemes of work as it is of high priority for the Maths GCSE- this skill promotes resilience across all areas of the curriculum and will see our students in good stead beyond their school life. Cross-curricular topics are shared with other departments such as Speed Distance and Time with Science as it is important for us to mirror our teaching of these cross-curricular topics. Statistical analysis and the use of averages is another area that is transferable to Geography and History in addition to the Statistics Programme of study that we offer our year 11 students.

7. How is learning planned to progressively develop pupil's knowledge and understanding over time?

Mathematics Mastery at KS3, and Year 10 then the continuation of the 2nd year of the AQA SOW at year 11 provide the layering of knowledge, and the interleaving and overlearning of mathematical concepts that develop over time; these progressively offer opportunities for depth of understanding. During our differentiated lessons we focus highly on planning lessons that start with Do Now Activities designed for the recall of knowledge and encouraging students to overlearn by seeing the same style of targeted questions for a week. The main part of the lesson relies on modelling how questions should be answered with high level questioning to check understanding throughout.

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Students are then required to work independently and practice the skills they are taught- Maths is a subject where practice is key for Mastery and it is highly emphasised within our department. Students are required to self/peer assess every lesson to make sure they have instant feedback and they are required to reflect on their learning at the end of each lesson.

8. How is learning sequenced over time to ensure students retain knowledge and are more successful at recalling?

We use Knowledge Organisers for all year groups for home learning to encourage students to recall key concepts from a half term. These are also shared on the school website in addition to the curriculum overview so that students have access to what we are learning and that parents and carers are involved in their children's Learning.

KS3 starters that target areas of development provide the opportunity to both recall and improve learning of essential topics.

End of topic assessments ensure that students do not forget a topic at the end of the lesson as this is revisited at the end of a topic and then again at the end of a term. Students are also given the opportunity to reflect and respond to feedback that is given to them during Growth Task lessons.

9. How is this curriculum adapted to cater for the needs of students with different starting points?

The curriculum is scaffolded through differentiated outcomes by our teachers, and tasks are used to develop the learning of all our students enabling them to take pride in what they have achieved each lesson. The Do Now activities promote the recall of knowledge and the students are given the opportunity to improve on a daily basis. Modelling is also key to help students achieve our high expectations of them and what they can achieve. We agree as a department on the importance of providing all our students regardless of their starting points with tangible outcomes for every lesson; this keeps our students motivated and develops a love for the subject.

10. How will you ensure teachers have the relevant knowledge, expertise and practical skills to deliver your curriculum effectively?

For KS3 we all use the same resources provided by our OCL NLP and these are saved centrally- ideas on delivery are discussed and agreed upon during JPPA.

KS4 resources are also saved centrally for teachers to adapt but the MediaCity Lesson is followed by all teachers in the department to maintain consistency across the school. Any problem areas are discussed during JPPA.

Following regular learning walks, lesson observations, and book scrutiny staff will be given personalised feedback to help them improve their practice and if CPD needs arise these will be addressed to further support members of the department deliver the curriculum effectively.

Attending Whole School CPD is a requirement for all staff and I will ensure department staff attend.

The regular analysis of data will ensure that where students are underperforming intervention is introduced through our TA and that if it is a whole class issue I will provide coaching support to the teacher by identifying problem areas and providing achievable action steps to follow. This will be monitored to ensure progress is made.