



Year 8 set 3 Maths Learning Journey

YEAR GROUP: 8 Set 3 Curriculum Journey
SUBJECT: Maths

When ?	Chapter	Key Learning Objectives Key Questions	Unit Assessments (End of Chapter tests)
HALF TERM 1	<p>CH 1: Percentages</p> <p>CH 2: Equations and formulae</p> <p>CH 3: Polygons</p> <p>CH 4: Using data</p>	<ul style="list-style-type: none"> • how to calculate simple interest • how to use a multiplier to calculate percentage increases and decreases • how to calculate the original value after a percentage change • how to expand brackets and factorise algebraic expressions • how to solve more complex equations • how to rearrange formulae • how to calculate the interior and exterior angles of polygons • how to calculate the interior and exterior angles of regular polygons • how regular polygons tessellate • how to make accurate geometric constructions • how to interpret correlation from two scatter graphs • how to interpret time-series graphs • how to construct and interpret two-way tables • how to compare two sets of data from statistical diagrams • how to plan a statistical investigation 	<p>EOC 1: Percentages</p> <ul style="list-style-type: none"> • Simple interest • Percentage increases and decreases • Calculating the original value • Using percentages <p>EOC 2: Equations and formulae</p> <ul style="list-style-type: none"> • Multiplying out brackets • Factorising algebraic expressions • Equations with brackets • Equations with fractions <p>EOC 3: Polygons</p> <ul style="list-style-type: none"> • Angles in polygons • Construction • Angles in regular polygons • Tessellations and regular polygons <p>EOC 4: Using data</p> <ul style="list-style-type: none"> • Scatter graphs and correlation • Time series graphs • Two-way tables • Comparing two or more sets of data • Statistical investigations

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HALF TERM 2	CH 5: Application of graphs	<ul style="list-style-type: none"> • how to interpret and draw step graphs • how to interpret and draw time graphs • how to interpret and draw exponential growth graphs 	EOC 5: Application of graphs <ul style="list-style-type: none"> • Step graphs • Time graphs • Exponential growth graphs
	CH 6: Pythagoras' theorem	<ul style="list-style-type: none"> • how to use Pythagoras' theorem to calculate the lengths of sides in right-angled triangles • how to use Pythagoras' theorem to solve problems 	EOC 6: Pythagoras' theorem <ul style="list-style-type: none"> • Introducing Pythagoras' theorem • Calculating the length of the hypotenuse • Calculating the length of a shorter side • Using Pythagoras' theorem to solve problems
HALF TERM 3	CH 7: Fractions	<ul style="list-style-type: none"> • how to multiply any two fractions or mixed numbers • how to divide any two fractions or mixed numbers 	EOC 7: Fractions <ul style="list-style-type: none"> • Adding and subtracting fractions • Multiplying fractions • Multiplying mixed numbers • Dividing fractions and mixed numbers
	CH 8: Algebra	<ul style="list-style-type: none"> • how to expand a bracket when powers are involved • how to factorise an expression when powers are involved • how to expand the product of two brackets 	EOC 8: Algebra <ul style="list-style-type: none"> • More about brackets • Factorising expressions containing powers • Expanding the product of two brackets
	CH 9: Decimal Numbers	<ul style="list-style-type: none"> • how to extend your ability to work with powers of 10 • when to make suitable rounding and how to use rounded numbers to estimate the results of calculations • how to use your calculator efficiently 	EOC 9: Decimal Numbers <ul style="list-style-type: none"> • Powers of 10 • Standard form • Rounding appropriately • Mental Calculations • Solving problems

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HALF TERM 4	<p>CH 10: Prisms and cylinders</p> <p>CH 11: Solving equations graphically</p> <p>CH 12: Compound units</p>	<ul style="list-style-type: none"> • how to convert from one metric unit to another for area and volume • how to calculate the surface area and the volume of a prism • how to calculate the surface area and the volume of a cylinder • how to solve linear equations graphically • how to draw a quadratic graph • how to solve quadratic equations graphically • how to solve simultaneous equations graphically • how to solve problems involving speed • how to calculate and use density • how to solve problems involving compound units • how to calculate unit prices and use them to find value for money 	<p>EOC 10: Prisms and cylinders</p> <ul style="list-style-type: none"> • Metric units for area and volume • Volume of a prism • Surface area of a prism • Volume of a cylinder • Surface area of a cylinder <p>EOC 11: Solving equations graphically</p> <ul style="list-style-type: none"> • Graphs from equations in the form $ay \pm bx = c$ • Graphs from quadratic equations • Solving quadratic equations by drawing graphs • Solving simultaneous equations by drawing graphs <p>EOC 12: Compound units</p> <ul style="list-style-type: none"> • Speed • More compound units • Unit costs
HALF TERM 5	<p>CH 13: Right-angled triangles</p>	<ul style="list-style-type: none"> • what trigonometric ratios are and how to recognise them in right-angled triangles • how to use trigonometry to calculate angles from two known sides in a right-angled triangle • how to find an unknown length in a right-angled triangle where all angles and one other length are known 	<p>EOC 13: Right-angled triangles</p> <ul style="list-style-type: none"> • Introduction to trigonometric ratios • How to find trigonometric ratios of angles • Using trigonometric ratios to find angles • Using trigonometric ratios to find lengths

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HALF TERM 6	CH 14: Revision	<ul style="list-style-type: none"> • help you to practise and revise topics covered in your current course • get you started on your GCSE course 	EOC 14: Revision <ul style="list-style-type: none"> • Practice • Revision • GCSE-type question