Maths Learning Journey

Maths is all around us and in everything we do. The curriculum at Passmores Academy is designed to build on key skills learnt in primary school and years 7 and 8. It is designed to stretch the mind and challenge every student's thinking, regardless of their start point. These challenges will also enable successful progression to Further education and beyond.

Students should:

- Be the best that they can be by;
- Coming to lessons with a scientific calculator, completing homework on time
- Access additional platforms/websites such as
- Dr Frost, Dr Frost Maths, Maths Genie, Corbett Maths

Contact if you need support

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Developing the skills of;

- Critical thinking
- Problem solving
- Analytical thinking
- Quantitative reasoning
- Manipulate precise & intricate ideas
- Constructing logical arguments & exposing illogical arguments
- Communication
- Time management
- Independence

YEAR 11

Sampling
Cumulative frequency and box plots

Histograms (Using Graphs)
Circles, quadratics & cubics

Gradient and area under curves

February Mock Exam
Revision Guide available

(Circle geometry)
Gradients and Tangents
Circle Theorems

Algebraic Fractions
Functions
Algebraic Proof

Congruence & Geometric Proof
Vectors

Similarity in 2d & 3d shapes
Graphs of trigonometric functions

Index laws
Expand and simplify
Factorising

February Mock Examinations
1 x non calc
2 x calc papers

PI DAY
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Past paper
Exam practise

Summer GCSE Examinations

Go through mock papers with students

Form and solve equations
Re-arrange formulae
Averages; Averages from a table

Exam results & POST 16 DESTINATIONS

Conditional Probability
Direct and Inverse Proportion

Quadratics including formula and iteration
Simultaneous equations

Surface Area & Volume

Coordinate Geometry
Transformations

Ratio
Proportion – Recipes
Standard Index form

Reverse percentages
Fractions

Mock results and possible class changes. QLA sheets given to students

November Mock Examinations 1 x non calc, 2 x calc papers

Period 6 and Mentoring sessions available to support students

November Mock Exam
Revision Guide available

Re-arranging Equations
Formulae
Sequences including quadratic

Surds including Rationalising
Expanding & Factorising

Interest & growth
Depreciation & Decay
Use of a Calculator

Product Rule
Upper and Lower Bounds

Percentage of amounts

Best Value
Exchange rates
Rounding and error internals
Estimation

Venn diagrams, Product of Primes
Multiples in Context

Higher Crossover

Recurring Fractions
Fractional indices
negative indices

Forming and solving equations
Simultaneous equations
Direct and inverse proportion

Higher (sets 1, 2 & 3)
Crossover starts for sets 7, 8, 9, & e
Sets 4,5,6 (recap crossover using topics assessment data)

Mock results and possible class changes. QLA sheets given to students
DIRT

(Transformations); Enlargements; Reflections; Rotations; Translation
Mixture

Vectors
Sequences

Two- way tables & Frequency Trees

Surface area & volume
Congruence
Similar shapes

Circumference of a Circle, Area of a Circle, Names of 3D Shapes & Nets, Plans & Elevations, Surface Area of Prisms, Volume of Prisms9

Co-ordinates, Equations of Horizontal & Vertical Lines, Table of Values, Drawing Lines from a Table of Values, Scatter Graphs, Frequency Polygons

Transformations, Describing Transformations, Writing & Simplifying Ratios, Writing a Ratio as a Fraction, Ratios Given an Amount, Recipes & Best Value

Probability Scales, Systematic Listing, Sample Space Diagrams, Two Way Tables & Frequency Trees, Function Machines, Solving Equations

Names & Properties in 2D Shapes, Line & rotational Symmetry, Parts of a Circle, % of an Amount, % Increase and Decrease, % Change, Simple and Compound Interest

YEAR 10

November Mock Exam

(Circles)
Area & Circumference
(Arcs and sectors)
Area & Perimeter

Plans and elevations
Construction and loci

Sampling
Pie charts
Probability from a table
Probability trees

November Mock Exam
Revision Guide available

Dr Frost
Independent learning

(Angles)
Alternate and corresponding
In parallel lines
Interior and Exterior

Bearings
Pythagoras with Trig

Pythagoras
(Trigonometry)
Trig non calc
Trig – finding sides
Trig – finding angles

Be Prepared • Be Respectful • Be the best that you can be

Year 10

Year 9 End of Year Assessments

REVISE

Drawing & Measuring Angles, Angles on a Line & at a Point, Angles in Triangles, Quadrilaterals & Parallel Lines, Pie Charts

Expanding Brackets, Factorising Simple Expressions, Using Formulae, Simplifying Fractions, Adding & Subtracting Fractions, Multiplying & Dividing Fractions

Quadratic and cubic graphs
Coordinate geometry

Independent revision for EOY assessment/mocks

Dr Frost
Independent learning

Intervention support offered

Averages- grouped data
Inequalities
Frequency diagrams/polygons

Straight line graphs
Real life graphs
Scatter Graphs
Time series

Speed, Distance & Time

Compound measures

Converting between FDP, Converting Units of Time, Converting Metric Units & Reading Timetables

Ordering Decimals, Operations with Decimals, Averages from a List, Stem & Leaf Diagrams

Writing Expressions, Collect Like Terms, Multiplying & Dividing Expressions, Substitution, Bar Charts

Form and solve equations
Re-arrange formulae
Averages
Averages from a table

Index laws
Expand and simplify
Factorising

Ratio
Proportion – Recipes
Standard Index form

Reverse percentages
Fractions

Factors & Multiples, Primes & Prime Factors, HCF & LCM, Rounding (dp & sf), Estimation

Powers & Roots, Order of Operations, Using a Calculator, Perimeter & Area

Place Value, Operations with Integers, Multiplying/Dividing by powers of 10, Ordering Numbers, Operations with Negatives, Pictograms

Working Towards
Crossover

Homework club

Intervention support offered

Dr Frost
Independent learning

Working Towards Sets 7, 8, 9 and Equity
Crossover sets 1,2, 3, 4, 5, 6

YEAR 9

Year 8 End of year assessments

REVISE

Interest & growth
Depreciation & Decay
Use of a Calculator

Percentage of amounts

Best Value
Exchange rates
Rounding and error internals
Estimation

Venn diagrams, Product of Primes
Multiples in Context

Two-way tables & Frequency Trees

Representing data (STEP 15)

Tally charts, Bar charts and pictograms	Read & write, + & - and order	Midpoint of a line segment	Find common %, common Fractions
Two way tables and pie charts	X and ÷, convert to fractions & %	Draw line, distance& time graphs	% of an amount, % increase/decrease
Interpreting pie charts. Scatter Graphs	Fractions to recurring decimals	Find gradients and parallel lines	Calculating simple and compound interest & %change
Interpret a frequency polygon	Recurring decimals to fractions	Co-ordinate geometry	Calculating compound depreciation & reverse%

Graphs (STEP 17)

Decimals (STEP 16)

Percentages (STEP 18)

Acquiring · Developing · Securing · Mastering

Units & Measurement (STEP 13)

Probability (STEP 10)

Combing & describing transformations	Converting area & volume units	Solve inequalities and quadratics	Upper/Lower bounds & error intervals
Reflect diagonally, enlarge using COE	SDT, DMV, PFA	Solve 2 step equations and brackets	Estimation with x and ÷
Basic enlargements/brackets; substitution	Conversions of units	Write inequalities and find solutions	Round to significant figures and estimate
Reflect and translate a shape	Reading from scales, metric	Intro to the balance method	Round to 10, 100, 1000 & decimal places

Independent events and probability tree diagrams
Mutually exclusive and experimental probability
Single events, sample space diagrams, outcomes
Probability Scale and describing probability

Transformations (STEP 14)

Equations & Inequalities (STEP 12)

Rounding & Estimation (STEP 11)

Ratio (STEP 8)

Form expressions; collect like terms; multiple terms	Compare and simplify Ratio	Identifying, estimating and measuring angles	
Collect terms with powers; expand single brackets; substitution	1:n and m:1 share in a given ratio	Angles In a quadrilateral , triangle and parallel lines	
Expand two single brackets; expand double brackets, factorise expressions	Share given one part or the difference	Interior and exterior angles involving problem solving	
Complex substitution and rearranging formulae	Problem solving with ratio	Angle problems which involve algebra	

YEAR 8

Year 7 End of year assessments

REVISE

Acquiring · Developing · Securing · Mastering

Angles (STEP 9)

Algebraic Expressions & formulae (STEP 7)

Averages & Range (STEP 5)

Reverse fraction problems	Reverse Mean problems	Writing numbers in standard Index Form	
Operations with mixed numbers and worded problems	Averages and range from a table	Using Indices and roots in the context of BIDMAS	
X and ÷ with fractions, compare, order, fractions of an amount	Finding Averages and Range from a list	+-x÷ negative and positive numbers	
Fractions as Pictures, adding with same denominator	Finding Averages and Range from a list	Ordering negative numbers, BIDMAS with integers only	

Fractions (STEP 6)

Negative Numbers & BIDMAS (STEP 4)

Sequences (STEP 2)

YEAR 7

Factors of a number, identify multiples, identify primes	Linear sequences from pictures, Find the missing terms of a sequence	Find missing sides, Perimeter and area of compound shapes	
Find HCF and LCM using listing method	Linear term to term rule, Fibonacci sequence identify and generate	Area and perimeter of trapezium and using basic algebra to solve	
Worded LCM questions, write a number using its prime factors	Finding the nth term rule of a linear sequence	Find missing sides, Perimeter and area of compound shapes	
Find the HCF and LCM using prime factors	Finding the nth term rule of a fractional sequence	Perimeter & Area by counting squares	

Acquiring · Developing · Securing · Mastering

Factors & Multiples (STEP 1)

Perimeter & Area (STEP 3)

Be Prepared • Be Respectful • Be the best that you can be