

# Maths Opens Doors...



**FCAT**  
The best we can be

**YEAR 11**

**GRAPHS**

**ALGEBRA**

**REASONING**

**REVISION AND COMMUNICATION**

NON LINEAR GRAPHS

USING GRAPHS

EXPANDING AND FACTORISING

MULTIPLICATIVE

SHOW THAT.....

GRADIENTS AND LINES

CHANGING THE SUBJECT

FUNCTIONS

GEOMETRIC

ALGEBRAIC

TRANSFORMING AND CONSTRUCTING

LISTING AND DESCRIBING

**USING NUMBER**

TYPES OF NUMBER AND SEQUENCES

NON CALCULATOR METHODS

PROBABILITY

RATIOS AND FRACTIONS

WORKING WITH CIRCLES

REPRESENTING SOLUTIONS OF EQUATIONS AND INEQUALITIES

CONGRUENCE, SIMILARITY AND ENLARGEMENTS

INDICES AND ROOTS

**DELVING INTO DATA**

**PROPORTIONS AND PROPORTIONAL CHANGE**

**GEOMETRY**

**DEVELOPING ALGEBRA**

**SIMILARITY**

COLLECTING, REPRESENTING AND INTERPRETING DATA

PERCENTAGES AND INTEREST

VECTORS

ANGLES AND BEARINGS

SIMULTANEOUS EQUATIONS

TRIGONOMETRY  
SOLVING PROBLEMS USING GRAPHS TABLES AND ALGEBRA

**YEAR 10**

**REPRESENTATIONS**

FORMING AND SOLVING EQUATIONS

TESTING CONJECTURES

3D SHAPES

USING PERCENTAGES

NUMBERS

ROTATION AND TRANSLATION

RATES

**REASONING WITH ALGEBRA**

**CONSTRUCTING IN 2 AND 3D**

**REASONING WITH NUMBER**

**REASONING WITH GEOMETRY**

**REASONING WITH PROPORTION**

STRAIGHT LINE GRAPHS

CONSTRUCTIONS AND CONGRUENCY

MATHS AND MONEY

DEDUCTION

PYTHAGORAS' THEOREM

ENLARGEMENT AND SIMILARITY

SOLVING RATIO AND PROPORTION PROBLEMS

**YEAR 9**

**REASONING WITH DATA**

MEASURES OF LOCATION

THE DATA HANDLING CYCLE

**DEVELOPING GEOMETRY**

**DEVELOPING NUMBER**

**ALGEBRAIC TECHNIQUES**

**REPRESENTATIONS**

**PROPORTIONAL REASONING**

**YEAR 8**

**REASONING WITH NUMBER**

AREA OF TRAPEZIA AND CIRCLES

NUMBER SENSE

STANDARD INDEX FORM

SEQUENCES

TABLES AND PROBABILITY

REPRESENTING DATA

MULTIPLICATIVE CHANGE

RATIO AND SCALE

LINE OF SYMMETRY AND REFLECTION

ANGLES IN PARALLEL LINES AND POLYGONS

FRACTIONS AND PERCENTAGES

INDICES

BRACKETS, EQUATIONS AND INEQUALITIES

WORKING IN THE CARTESIAN PLANE

MULTIPLYING AND DIVIDING FRACTIONS

PRIME NUMBERS AND PROOF

EQUALITY AND EQUIVALENCE

PLACE VALUE AND ORDERING INTEGERS AND DECIMALS

SOLVING PROBLEMS WITH ADDITION AND SUBTRACTION

FRACTIONS AND PERCENTAGES OF AMOUNTS

ADDITION AND SUBTRACTION OF FRACTIONS

SETS AND PROBABILITY

UNDERSTAND AND USE ALGEBRAIC NOTATION

**PLACE VALUE AND PROPORTION**

**APPLICATIONS OF NUMBER**

**DIRECTED NUMBER**

**FRACTIONAL THINKING**

**LINES AND ANGLES**

DEVELOPING NUMBER SENSE

SEQUENCES

FRACTION, DECIMAL AND PERCENTAGE EQUIVALENCE

SOLVING PROBLEMS WITH MULTIPLICATION AND DIVISION

OPERATIONS AND EQUATIONS WITH DIRECTED NUMBER

CONSTRUCTING, MEASURING AND USING GEOMETRIC NOTATION

DEVELOPING GEOMETRIC REASONING

**YEAR 7**

Schemes of learning are designed to ensure students progress based on their security of understanding and readiness for the next stage. STRETCH and CHALLENGE is at the heart of our curriculum

Students will be able to SOLVE PROBLEMS and APPLY their knowledge to routine and non routine problems

Students will be able to REASON, CONJECTURE and JUSTIFY their arguments using mathematical language

Fortnightly low stakes quizzes, as well as cycle assessments are designed to accurately assess knowledge and maximise progression.

Our scheme is designed with INTERLEAVING as a key element

Multiple representations will be used, where appropriate, within a CPA approach to develop CONCRETE, PICTORIAL and ABSTRACT understanding

Students will develop CONCEPTUAL UNDERSTANDING and become FLUENT mathematicians leading to ability to RECALL and APPLY knowledge rapidly

At Montgomery we want to develop a can-do culture so that student's mathematical thinking by enhancing their fluency so that they can both reason and solve unfamiliar problems. This will enable our students to be confident, numerate citizens who can contribute positively to society.