# Maths Curriculum KS3
## Learning Journey

Fareham Academy | Unlocking Potential Creating Opportunity

## YEAR 7

### Numeracy 1
**Core Learning Aim:**
Types of number, addition and subtraction, multiplication and division, decimals, rounding, area and perimeter, HCF and LCM.

### Geometry 1
**Core Learning Aim:**
Angle facts, area of parallelograms and trapezia, bearings, draw, name and estimate angles.

### Numeracy 2
**Core Learning Aim:**
Fractions, FDP conversion, calculator skills, fractions of amounts, fraction calculations, percentage of amounts, percentage increase and decrease.

### Algebra 1
**Core Learning Aim:**
Negative numbers, substitution, indices, simplify expressions, BIDMAS.

### Ratio & Percentages
**Core Learning Aim:**
Percentage change, percentages of amounts, calculator and non-calculator methods, pie charts.

### Statistics 1
**Core Learning Aim:**
Analysing data, graphs, averages and the range, data collection.

## YEAR 8

### Functional Skills
**Core Learning Aim:**
Probability, real world applications.

### Geometry 3
**Core Learning Aim:**
Translation, rotation, reflection, enlargement, constructions, SDT, converting time.

### Ratio & Statistics 2
**Core Learning Aim:**
Probability, scatter diagrams, mean from grouped data, stem and leaf, comparing two data sets, ratio.

### Geometry 2
**Core Learning Aim:**
Volume and surface area of prisms, measures, nets, accurate drawing, angles in parallel lines, composite shapes, area of trapezia, area and circumference of circles, properties of 3D shapes.

### Algebra 2
**Core Learning Aim:**
Inequalities, substitution, algebraic manipulation, function machines, linear equations, known formulae, rearranging formulae.

### Numeracy 3
**Core Learning Aim:**
Types of number, primes, factors and multiples, HCF and LCM, indices, standard form.

## YEAR 9

### Numeracy 1
**Core Learning Aim:**
Non-calculator arithmetic, negative numbers, calculator use, standard form, percentages, rounding and estimation, BIDMAS, growth and decay.

### Algebra 1
**Core Learning Aim:**
Inverse operations, simplifying, expressions, expanding and factorising, solving equations, sequences, quadratic, cubic and reciprocal graphs, substitution, linear graphs, real life graphs.

### Geometry 1
**Core Learning Aim:**
Properties of shapes, coordinates, area and perimeter, plans and elevations, constructions and loci, circles.

### Data 1
**Core Learning Aim:**
Frequency diagrams, pie charts, two-way tables, averages, grouped data, scatter diagrams, comparing two data sets.

**SMSC Links:**
Maths explores real-world issues like inflation, savings, gambling, and population change. It develops critical thinking through data analysis, media literacy, and understanding misleading statistics. Cultural awareness is fostered via global data, landmark transformations, and internet security concepts like prime numbers.

**Greener Curriculum Links:**
Maths supports environmental awareness through topics like climate-related temperature changes, data analysis on sustainability habits, and the role of prime numbers in nature. It includes real-world statistics, sustainable housing, and the impact of human activity on natural patterns.

# Maths Curriculum KS4
## Learning Journey

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**YEAR 10**

### Number 2

**Core Learning Aim:**
Fraction operations, percentage conversions, indices, HCF and LCM, symbols, ratio, direct and inverse proportion, recurring decimals.



### Geometry 2

**Core Learning Aim:**
Pythagoras' theorem, standard formulae, trigonometry, transformations exact trig ratios, parallel lines, polygons, angle rules, bearings.



### Algebra 2

**Core Learning Aim:**
Kinematics, quadratic equations, simultaneous equations, rearranging formulae, proof, functions, forming and solving equations, solving inequalities.



### Data 2

**Core Learning Aim:**
Sampling, probability, relative frequency, sample space, questionnaires, Venn diagrams and sets.



### Revision and Reteach

**Core Learning Aim:**
Bespoke reteach lessons.



### Mock Examinations

**Core Learning Aim:**
To prepare for, undertake and review mock examinations.



### Geometry 3

**Core Learning Aim:**
Similarity and congruence, surface area and volume, bounds, compound measures, metric conversions, vectors, standard formulae.



**YEAR 11**

**SMSC Links:**
Historical development of trigonometric techniques.
Probability links to gambling.
Misleading statistics and misuse of statistics for propaganda purposes.