

<p><b>Y7</b></p>	<ul style="list-style-type: none"> <li>• <b>Skills</b></li> <li>• <b>Knowledge</b></li> <li>• <b>Assessment</b></li> <li>• <b>Links</b> (to other curriculum or other key stages in your subject)</li> </ul> <p><b>Statistics:</b> mean, median, mode, stem leaf diagrams  <b>Number:</b> fractions, decimals, %ages, decimals, x and <math>\div</math> of fractions  <b>Algebra:</b> basic equations &amp; representation, expressions  <b>Graphs:</b> straight lines, basic concepts. No gradient work.  <b>Probability:</b> sample space</p> <p><b>*Assessment: 3 major tests + end of year exam.</b>  Each broken down into the 6 different areas of the syllabus, allowing a detailed picture to be built up each part of the syllabus over the next 3 years.</p>
<p><b>Y8</b></p>	<p><b>Geometry:</b> properties of polygons, bearing  <b>Algebra:</b> nth term, expanding single bracket, algebraic fractions  <b>Number:</b> ratio &amp; proportion, indices – rules &amp; regicides, standard form; developing percentages by multiples, distance time graphs  <b>Shape:</b> area of parallelograms, volumes of prisms, Pythagoras  <b>Statistics:</b> different types of data, frequency polygons.</p> <p><b>UK Junior Maths Challenge</b> allows a chance for those not as able in ‘traditional’ maths to apply their skills to unusual questions &amp; succeed</p> <p><b>*As in Year 7, but with some shorter tests also used.</b></p>
<p><b>Y9</b></p>	<p><b>Algebra:</b> developing further linear equations, quadratics, fractioning, leading to solving quadratic equations, simultaneous equations  <b>Number:</b> gradients of lines, <math>y = mx + c</math>, basic inequalities, shapes of basic graphs; further ratio &amp; prop; reverse percentages  <b>Probability:</b> tree diagrams, mutually exclusive &amp; independent events  <b>Statistics:</b> cumulative frequency, box whisker plots  <b>Shape:</b> trapeziums, revision of prisms, transformations, lock  <b>Space:</b> SOHCAHTOA</p> <p><b>Individual short assessments used along with end of year exam.</b>  Now a detailed 3-year profile is available which analyses 6 key areas of maths. This is used for setting in Year 10.</p>

## **This course promotes**

Development of knowledge of the subject and its potential uses in real life / independent study skills / ability to work in groups collectively & follow through untried ideas / confidence / perseverance / resilience/ ambition to succeed within sensible confines / mental toughness / willingness to seek help & ask teachers / slowly take ownership of your progress / to make maths a subject which they enjoy / to actively and positively promote the subject and lead to a high take up at A-level / develop reasoning and logical analysis and thought / confidence & ability to 'think outside the box'

## **Specific cross curricular issues highlighted in maths schemes of work**

### **Year 7**

1. **Introduction to probability - Science**

### **Year 8**

1. **Equation solving & quadratics: GCSE Electronics**
2. **Distance time graphs: Science**
3. **Ratio & proportion: Science / Art** (for 'Golden Ratio') / **Food tech** for recipes
4. **Angle property of polygons: Product Design**
5. **Bearings - Geography**
6. **Areas (circles) & volumes (prisms): Science**
7. **Pythagoras: Product design**

### **Year 9**

1. **Further algebraic rearranging: Science** (help move away from 'triangle method')
2. **Gradients of straight lines: Science - Electronics**
3. **Work on inequalities: Science**
4. **Further statistics, deciles, percentiles: Science** (using graphs to read off these quantities)
5. **Ratios: Science** (e.g. constituents of bronze) - **Art** ('Golden Ratio') – **Food tech** (different ratios)
6. **Further percentages: Science/Geography** (% age change) - **ICT** (percentage change)
7. **Constructions: RS** (Islamic art)