

Year 11

Subject: Mathematics

Intent for the Year

Year 11 pupils will continue towards mastery of mathematical concepts learnt in key stage 3 and further developed in year 10. Pupils will be more confident, secure and fluent in interpreting diagrams and solutions, selecting the appropriate method to break down and solve problems and reason geometrically. They will be able to independently apply, interpret and evaluate their solution to complex problems. They will leave All Saints Church of England Academy confident in their ability to relate their knowledge to real-life contexts, from personal finances to managing their own business, solving every-day problems and prepared for further mathematical studies and/or the modern workplace.

Topics Covered: Higher Tier

- Skills Check in Number, Ratio & Proportion, Algebra, Shape space and measure and Data
- Further Trigonometry
- Equations and graphs
- Further Algebra
- Vectors
- Direct and indirect proportion
- Transformation of Graphs
- Tailored lessons based on Question Level Analysis feedback

Topics Covered: Foundation Tier

- Indices
- Algebraic Manipulation
- Linear Graphs and Coordinate Geometry
- Real-life graphs & Speed, Distance, Time
- Plans & Elevations, Constructions, Loci & Scale Drawings
- Ratio/proportion
- Tailored lessons based on Question Level Analysis feedback

Parents/Carers can help by...

- Ensuring that your child has the correct equipment for every lesson including the Casio FX991 scientific calculator.
- Supporting your child with their weekly Hegarty Maths and exam paper work as well as their knowledge organiser activities.
- Support your child with their weekly revision papers.
- Encourage your child to attend after school maths enrichment opportunities.
- Attending parent's evenings to discuss your child's progress in their maths learning.
- Talk about and embrace the maths that surrounds us in everyday life.

Useful Websites

- <https://www.sparxmaths.uk/>
- <https://hegartymaths.com/>
- <https://www.mymaths.co.uk/>
- <https://corbettmaths.com/contents/>
- <https://www.onmaths.com/>
- <https://parallel.org.uk/>
- <https://nrich.maths.org/>
- <https://www.themathsfactor.com/>
- <http://chalkdustmagazine.com>
- <https://www.worldometers.info>
- <https://www.gapminder.org>

Recommended Reading

Book Title	Author	Brief Reasoning
	<p>The Tiger That Isn't: Seeing Through a World of Numbers Paperback by Andrew Dilnot</p>	<p>The Tiger That Isn't: Seeing Through a World of Numbers is a statistics book written by Michael Blastland and Andrew Dilnot, the creator and presenter of BBC Radio 4's More or Less. Like the radio show, it addresses the misuse of statistics in politics and the media</p>
	<p>Naked Statistics STRIPPING THE DREAD FROM THE DATA By Charles Wheelan</p>	<p>The best-selling author of Naked Economics defies the odds with a book about statistics that you'll welcome and enjoy. Once considered tedious, the field of statistics is rapidly evolving into a discipline Hal Varian, chief economist at Google, has actually called "sexy."</p>
	<p>Alex's Adventures in Numberland By Alex Bellos</p>	<p>Alex's adventures in numberland. The world of maths can seem mind-boggling, irrelevant and, let's face it, boring. This groundbreaking book reclaims maths from the geeks. Mathematical ideas underpin just about everything in our lives: from the surprising geometry of the 50p piece to how probability can help you win in any casino.</p>
	<p>Fermat's Last Theorem: The Story of a Riddle That Confounded the World's Greatest Minds for 358 Years by Simon Singh</p>	<p>For over 350 years, proving Fermat's Last Theorem was the most notorious unsolved mathematical problem, a puzzle whose basics most children could grasp but whose solution eluded the greatest minds in the world.</p>

Maths Exam board – Edexcel Specification - Pearson Edexcel Level 1/Level 2 GCSE (9-1) in Mathematics (1MA1)	
Exam units	Revision areas
Paper 1 Non-calculator 80 Marks 1 hr 30 mins	Any of the course content could be examined on any of the three papers Fractions Decimals Percentages Standard form Index form Surds
Paper 2 Calculator 80 Marks 1 hr 30 mins	Ratio Proportion Collecting, processing and presenting data Probability Sequences Graphs Equations Inequalities Formulae and functions
Paper 3 Calculator 80 Marks 1 hr 30 mins	Quadratics Angles, area and volume Transformations, constructions and loci Pythagoras Trigonometry Measures Conversions Vectors Paper One is the only paper where a calculator is not permitted. All three papers feature significant problem-solving elements