

Super-Curricular Opportunities							
Subject	Key Stage Three	KS3 Book/Broadcast /Competition	Pre GCSE/GCSE	GCSE Book/Broadcast /Competition	Post-16	Post-16 Book/Broadcast/Competition	Websites / Virtual Tours
Maths	<ul style="list-style-type: none"> Visit the Science Museum Visit Bletchley Park Playing collectable card games eg Net Runner, magic the gathering. Playing strategy games e.g. poker, bridge, chess, go, Risk, Monopoly, dominos, Scrabble... <p>Puzzles</p> <ul style="list-style-type: none"> Draw a 3 x 3 grid and colour the squares either red, white or blue so that each red touches a white square, each white touches a blue square and each blue touches a red square. Complete the star challenge Stars (maths.org) Watch and discuss TV programmes such as: - Dara O Briain: School of Hard Sums - Deal or No Deal – 	<p>Books:</p> <ul style="list-style-type: none"> 'Why do Buses Come in Threes?' by Rob Eastaway 'How Long is a Piece of String?' By Rob Eastaway 'The Curious Incident of the Dog in the Night time' By Mark Haddon. Books by Martin Gardener Books by Raymond Smullyan Snowflake, Seashell, Star - a colouring book by Alex Bellos Watch 'The Story of Maths' Presented by Marcus Du Sautoy BBC Documentary The Story Of Maths 1 The Language Of The Universe YouTube via torchbrowser.com - YouTube The Code - a 3 part documentary by Marcus du Sauto BBC Two - The Code - Episode guide The Code - a 3 part documentary by Marcus du Sauto BBC Two - The Code - Episode guide 	<ul style="list-style-type: none"> Watch Ted Talks lectures by people such as Marcus du Sautoy Marcus du Sautoy Search Results TED Playing strategy games e.g. poker, bridge, chess, go, Risk, Monopoly, dominos, Scrabble... If August 5th falls on a Tuesday, on which day will Christmas Day fall? Can you find out how many ways you can arrange the letters in a four-letter word. Is there a formula? How would you do this for a five-letter word? 	<ul style="list-style-type: none"> Freakonomics and Superfreakonomics by Steven D. Levitt, Stephen J. Dubner Alex's Adventures in Numberland by Alex Bellos Outliers by Malcolm Gladwell <p>Films</p> <ul style="list-style-type: none"> 'Apollo 13.' 'Hidden Figures.' Moneyball – film starring Brad Pitt about using statistical analysis to make a great baseball team The Imitation Game – film about Alan Turing X+Y – film about a socially awkward teenager who excels at the Maths Challenge! <p>Books:</p> <ul style="list-style-type: none"> 'Alex's Adventures in Numberland' by Alex Bello 'The Cabinet of Mathematical 	<ul style="list-style-type: none"> Paper trading online Demo Trading Account: Try IG's Paper Trading Simulator IG UK Listen to Radio 4 More or Less BBC Radio 4 - More or Less Research and make notes on the concepts of the post-16 books listed <p>STEP support programme by the University of Cambridge to help students develop problem-solving skills and prepare for university entrance exams: https://maths.org/step/</p> <p>STEP questions with solutions: https://undergroundmathematics.org/browsers?typeOption=ReviewQuestion&reviewQuestionType=6</p>	<p>Books:</p> <ul style="list-style-type: none"> What the Numbers Say: A Field Guide to Mastering Our Numerical World (Derrick Niederman and David Boyum) The Cartoon Guide to Statistics (Larry Gonick & Woolcott Smith) The Mathematical Experience by Philip J. Davis and Reuben Hersh. Euler: The Master of Us ALL by William Dunham Mathematics: A Very Short Introduction by Timothy Gowers A Concise Introduction to Pure Mathematics (Martin Liebeck) Year 12 Master classes at University of Kent <p>Competitions:</p>	<p>Challenge yourself: Sudouku Play Free Sudoku online - solve web sudoku puzzles</p> <p>Plus Magazine – Online general interest articles relating to practical uses of mathematics https://plus.maths.org/content/</p> <p>Nrich - a selection of rich tasks for developing subject content knowledge as well as mathematical thinking and problem-solving skills. https://nrich.maths.org/9088</p> <p>Virtual Tours: The History of Science Museum Displays and Exhibitions History of Science Museum (ox.ac.uk)</p> <p>The Science Museum Virtual tour of the</p>

	<p>mathematically, are the contestants making the right decisions?</p> <p>Year 9 Master classes at University of Kent</p>			<p>Curiosities' by Ian Stewart</p>	<p>Ebook: Advanced Problems in Mathematics by Stephen Siklos https://www.openbookpublishers.com/read/r/1050#page/1/mode/2u</p>	<p>International Mathematical Olympiad The British Mathematical Olympiad (ukmt.org.uk)</p> <p>University of Waterloo Mathematics Competitions (CEMC)</p>	<p>Science Museum Science Museum</p>
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