



Specifications:

Maths: Pearson Edexcel Level 3 Advanced GCE in Mathematics (9MA0)

Further Maths: Pearson Edexcel Level 3 Advanced GCE in Further Mathematics (9FM0)

Visit the Science Museum, Maths Room, London. The Winton Gallery is bold and thought provoking, revealing how maths has shaped the world.

Visit Bletchley Park, Milton Keynes. The main decryption establishment for deciphering German code in the Enigma Machine in World War 2.

Attend a Royal Institution Lecture or a Summer Workshop

<http://www.rigb.org/whats-on>

Do some puzzles

<https://nrich.maths.org/secondary-upper>

<http://mathwire.com/archives/enrichment.html>

Watch some TED TALKS

<http://blog.ted.com/8-math-talks-to-blow-your-mind/>

Answer some puzzles and problems – write them up

nrich.maths.org/secondary-upper

Watch Numberphile videos to learn some wonderful maths ideas.

www.numberphile.com Good numberphile videos that feature James Grime include [Infinity is bigger than you think](#), [17 and Sudoku Clues](#), and [Rubik Cube Combinations](#). But you should check out all the videos.

Turn a photograph into spreadsheet

www.think-maths.co.uk/spreadsheet

Watch Matt Parker, maths comedian

<https://www.youtube.com/user/standupmaths>



Books

The Penguin Dictionary of Curious and Interesting Numbers D.Wells (Penguin, 1997)

A brilliant idea. The numbers are listed in order of magnitude with historical and mathematical information. Look up 1729 to see why it is 'among the most famous of all numbers'.

Does God Play Dice by Ian Stewart.

An introduction to chaotic dynamics. Doesn't contain that many actual sums, but lots of pictures, and a good overview of the role of chaos. Quite a popularist style.

Fermat's Last Theorem by Simon Singh

It seems that everyone reads this. You won't stand out at all. An enjoyable read all the same.

The Music of the Primes by Marcus du Sautoy

About the Riemann hypothesis and other various topics in number theory.

The Number Devil: A Mathematical Adventure by Hans Magnus Enzensberger

An entertaining book, and certainly one for people looking for some interesting, yet accessible, mathematics in an easy-to-read style.

Alex's Adventures in Numberland (Alex Bellos)

A very accessible and well-written introduction to mathematics written in the style of a travelogue that demonstrates how useful, universal, interesting and beautiful mathematics is.

Why Do Buses Come in Threes?: The Hidden Mathematics of Everyday Life

(Rob Eastaway & Jeremy Wyndham)

Why is it better to buy a lottery ticket on a Friday? This and other fascinating questions are answered in this entertaining and highly informative book, which is ideal for anyone wanting to remind themselves - or discover for the first time - that maths is relevant to almost everything we do.

The Cartoon Guide to Statistics (Larry Gonick & Woolcott Smith)

An illustrated easy-to-read introduction to statistical concepts, with some real applications.

Professor Stewart's Cabinet of Mathematical Curiosities

(Ian Stewart)

A book of mathematical games, puzzles and facts. Ian Stewart has collected some interesting and entertaining puzzles in logic, geometry and probability. This is a great book for occupying idle moments.

Essential Mathematics for Games and Interactive Applications: A Programmer's Guide

(James M. Van Verth & Lars M. Bishop)

This book is the place to start if you want to know more about how maths is used in graphics and video games. The book is technical but accessible and it's packed with techniques using vectors, matrices and geometry.