

Further Reading

Mathematics is a diverse subject with many strands available for further study. As you study Mathematics after GCSE it is worth investigating the many sides of Mathematics to see which areas interest you e.g. did you know that internet security relies on prime numbers, some of the greatest mathematics helped win WWII or zero did not exist for many centuries. Have you ever wondered what infinity looks like?

Here is a list of books that will help you discover some of the amazing influences of Mathematics. We hope that these books will inspire you to discover your own reading list.

The books are listed loosely in topics and there are links to reading lists from other institutions. Most books are available in the public or school libraries.

Chaos

Does God Play Dice by Ian Stewart
Chaos by James Gleick

Cryptography

The Codebook by Simon Singh
The Mathematics of Ciphers by S.C. Coutinho
In Code by Sara Flannery

History of Mathematics

A History of Mathematics by Carl B. Boyer
Infinity: The Quest to Think the Unthinkable by Brian Clegg
E, the Story of a Number by Eli Maor

Biographies

The Man Who Loved Only Numbers by Paul Hoffman
My Brain is Open: The Mathematical Journeys of Paul Erdos by Bruce Schechter
The Man who knew Infinity by Robert Kanigel
Abel's Proof: An Essay on the Sources and Meaning of Mathematical Unsolvability by Peter Pesic

Mathematical Physics

A Brief History of Time by Stephen Hawking
The Elegant Universe by Brian Greene
The Fabric of the Cosmos by Brian Greene

Mathematical Philosophy

Introduction to Mathematical Philosophy by Bertrand Russell
A Mathematician's Apology by G. H. Hardy
Thinking About Mathematics by Stewart Shapiro

Mathematical Problems

Fermat's Last Theorem by Simon Singh
The Millenium Problems by Keith Devlin
Journey Through Genius: The Great Theorems of Mathematics by William Dunham
The Equation That Couldn't Be Solved by Mario Livio
Kepler's Conjecture by George Szpiro
Poincaré's Prize by George Szpiro
The Music of the Primes by Marcus du Sautoy
Four Colors Suffice by Robin Wilson

Logic

Godel, Escher, Bach by Douglas Hofstadter

Readable Textbooks

Concepts in Modern Mathematics by Ian Stewart
Geometry for Dummies by Mark Ryan
Concise Introduction to Pure Mathematics by Martin Liebeck
Mathematical Methods for Science Students by G Stephenson

Other

The Emperor's New Mind by Roger Penrose
The Mathematical Universe by William Dunham
The Wonders of Numbers by Clifford Pickover
From Here to Infinity by Ian Stewart
The Art of the Infinite: Our Lost Language of Numbers by Robert Kaplan
What is Mathematics? by Richard Courant, Herbert Robbins and Ian Stewart
Flatterland by Ian Stewart
The Number Devil: A Mathematical Adventure by Hans Magnus Enzensberger
Art of the Infinite by Kaplan
Imagining Numbers: Particularly the Square Root of Minus Fifteen by Barry Mazur
A Very Short Introduction to Mathematics by Timothy Gowers

Other Sources of recommended books

MEI – General interest Mathematical books
<http://www.mei.org.uk/index.php?section=re-sources&page=books2>
University of Cambridge – Recommended reading for Sixth Formers planning to study Maths
<http://www.maths.cam.ac.uk/undergrad/admissions/readinglist.pdf>
University of Oxford – Texts aimed at bridging the gap between A-Level and Degree Page 10-11
<https://www.maths.ox.ac.uk/system/files/attachments/introbook12.pdf>