Mathematical books

50 Mathematical ideas you really need to know by Tony Crilly – Who invented zero? Why 60 seconds in a minute? How big is infinity? Where do parallel lines meet? And can a butterfly's wings really cause a storm on the far side of the world?

The colossal book of mathematics by Martin Gardner – A selection of his best mathematical puzzles.

Birth of a Theorem by Cedric Villani – This is like no other book about maths. It follows the journey of a mathematician dedicated to conquering a major result.

The Improbability Principle by David Hand – Fascinating insight into probabilities.

Fermat's last theorem by Simon Singh – 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.

The Joy of X: A guided tour of mathematics from one to infinity by Steven Strogatz – A fun guide to the great ideas of maths.

More joy of mathematics by Theoni Pappas – Links mathematical concepts to our everyday lives.

The music of the primes by Marcus du Sautoy – Prime numbers are the very atoms of arithmetic. They also embody one of the most tantalising enigmas in the pursuit of human knowledge. How can one predict when the next prime number will occur?

Innumeracy by John Allen Paulos – Shows how simple mathematical concepts can be related to real life problems.

Mathematics from the birth of numbers by Jan Gullberg – for the benefit of those who never studied the subject, those who think they have forgotten what they once learned, or those with a sincere desire for more knowledge.

Solving mathematical problems: A personal perspective by Terence Tao – Looking at tactics involved in solving mathematical problems at the Mathematical Olympiad level.

Mathematics *MINUS Fear* by Lawrence Potter – Shedding light on the dark mysteries of maths while offering fascinating connections with the world we encounter on a daily basis.

Alan Turing: The Enigma by Andrew Hodges – This book is heavy going but worth the read and fascinating. Lots of mathematics, as well as the story of Alan Turing's life itself.

Alex's Adventures in Numberland by Alex Bellos - The world of maths can seem mind-boggling, irrelevant and, let's face it, boring. This groundbreaking book reclaims maths from the geeks.

Mathematical websites

The Internet is a vast and informative thing. Use your imagination and search for something you might find interesting. Failing that here are a few to get you started:

http://www-history.mcs.st-and.ac.uk/Indexes/Hist_Topics_alph.html

http://www-history.mcs.st-and.ac.uk/HistTopics/History_overview.html

http://www.theguardian.com/science/sifting-the-evidence/2013/oct/15/medical-research-health

www.brilliant.org

TED talks:

Web cartoonist Randall Munroe answers simple what-if questions ("what if you hit a baseball moving at the speed of light?") using math, physics, logic and deadpan humor
https://www.ted.com/talks/randall_munroe_comics_that_ask_what_if

Mathematician Eduardo Sáenz de Cabezón answers a question that's wracked the brains of bored students the world over: What is math for?
https://www.ted.com/talks/eduardo_saenz_de_cabezon_math_is_forever

Stuff to do if you're bored

The Science Museum: Exhibition Road, South Kensington, London, SW7 2DD
    Nearest station: South Kensington
    *Look out for the mathematics gallery on the 2nd floor, the Charles Babbage's
    Difference Machine and the Codebreaker Alan Turing exhibition.*

The British Museum: Great Russell Street, London, WC1B 3DG
    Nearest station: Holborn, Russell Street or Goodge street

    *Look out for Babylonion numbers, Egyptian hieroglyphics and problem solving,
    Mayan numbers and calendars, and Arabic astrolabes.*

The British Library: 96 Euston Road, London NW1 2BD
    Nearest station: King's Cross/St. Pancras or Euston

Go to a university open day and visit the mathematics department