## Year 11

# Resources to help you prepare for Science, Maths and Engineering A Level – 20 points per box







**Complete** this course in which you will learn the physical processes behind climate

variation around the world to better understand the causes of climate change.

#### Causes of Climate Change

University of Bergen and Bjerknes Centre for Climate Research



**Listen** to this radio programme which explores why NASA's

third bid to land on the moon was flawed from the start.

#### 13 Minutes to the Moon

BBC Sounds



**Complete** this course

which is an entertaining and illuminating

exploration into the impact dentistry has on our lives.

#### **Discover Dentistry**

The University of Sheffield Available now or 15<sup>th</sup> June 2020



**Listen** to this radio programme in which BBC security

correspondent Gordon Corera goes inside Britain's secret listening station.

### GCHQ Cracking the Code

BBC Sounds



**Read** this article from a clinical psychologist which provides practical ways to

overcome whatever life throws your way.

# 8 tips to help you become more resilient

Ideas TED



**Watch** this TED talk which explains why surfers are

masters of complicated physics.

### The Physics of surfing

TED Talk - Nick Pizzo



**Read** this article in which evolutionary biologist Barbara Natterson-Horowitz

and writer Kathryn Bowers make the case for why parents — animal *and* human — should remain involved in the lives of their full-grown offspring.

## <u>Humans aren't the only ones that help</u> <u>out their adult kids</u>

Ideas TED



**Listen** to this radio programme in which Brian Cox meets some

celebrity physics enthusiasts, including Alan Alda and Eddie Izzard.

## **Physics Rocks**

BBC Sounds



**Listen** to this radio programme in which Susan Marling asks why the UK has the

lowest proportion of female engineers in Europe.

### <u>Britain's Hidden Talent: Women</u> <u>Engineers</u>

BBC Sounds



Watch this TED talk in

which neuroscientist Robert Sapolsky asks the question:

How can humans be so compassionate and altruistic -- and also so brutal and violent?

# The biology of our best and worst selves

TED Talks - Robert Sapolsky



**Complete** this course which explores the organic chemistry behind everyday things such as perfume, medicine and sport.

## Exploring Everyday Chemistry

University of York (starts 29<sup>th</sup> June)



**Listen** to this radio programme which explores all sorts of science-related topics

(including the Coronavirus).

# BBC Inside Science BBC Sounds



Complete this course,

which aims to demystify the ageing process, and learn how

our everyday behaviours are likely to affect our long-term musculoskeletal health.

#### The science of staying active in old age

The Universities of Leeds, Sheffield and Newcastle



**Watch** this TED talk which explores the science behind making cookies. Once you

have watched this, why not try and make your own?

#### The chemistry of Cookies

TED Talks – Stephanie Warren



Watch this TED talk in

which George Zaidan describes the physics

behind this frustrating phenomenon.

Why is ketchup so hard to pour

TED Talk - George Zaidan

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Read this article from marine scientist Roger Hanlon. In it he explores how the heck

colour-blind cephalopods — octopus. squid and others — achieve such a good colour match when they camouflage (in short: amazing, distributed brains).

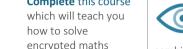
Oddballs with high-level intelligence: a Q & A with Roger Hanlon about the amazing octopus



**Complete** this course

puzzles, in which numbers are replaced by letters or symbols.

Maths Puzzles: Cryptarithms, Symbologies and Secret Codes Weizmann Institute of Science (starts on 15<sup>th</sup> June)



What creating a toxin-free plastic taught me about problem-solving

TED Talk – Angelina Arora



Watch this TED talk in which Angelina Arora

combination of curiosity and strategically applied science could help solve the world's problems.

shares how a lasting



Complete this course and explore the diverse skills and

knowledge required

to be a nurse and find out where a career in nursing could take you.

Introduction to Nursing: Bioscience, Psychology, and Sociology

University of Leeds Starts 29<sup>th</sup> June 2020

**Complete** this course which is ideal for anyone considering

working in residential care homes or nursing. You will also learn

about the 6 'Rs' of medicine administration: right patient, right

medicine, right route, right dose, right time and resident's right



**Listen** to this radio programme

which tackles the big issue of lack of

diversity in engineering. In the UK. 91% of jobs in the engineering industry are filled by men and 92% of jobs are filled by white people. So what can we do about it?

**BBC Live Wires** How can we make UK engineering more diverse? BBC Sounds



Watch this TED talk

which examines the pharmaceutical industry

and its impact on doctors and the wider medical world.

What doctors don't know about the drugs they prescribe TED Talk – Ben Goldacre



to refuse.

