























# Year 11

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

 <p><b>Complete</b> this course in which you will learn the physical processes behind climate variation around the world to better understand the causes of climate change.</p> <p><a href="#">Causes of Climate Change</a> <i>University of Bergen and Bjerknes Centre for Climate Research</i></p>	 <p><b>Listen</b> to this radio programme in which BBC security correspondent Gordon Corera goes inside Britain's secret listening station.</p> <p><a href="#">GCHQ Cracking the Code</a> <i>BBC Sounds</i></p>	 <p><b>Read</b> this article in which evolutionary biologist Barbara Natterson-Horowitz and writer Kathryn Bowers make the case for why parents — animal <i>and</i> human — should remain involved in the lives of their full-grown offspring.</p> <p><a href="#">Humans aren't the only ones that help out their adult kids</a> <i>Ideas TED</i></p>	 <p><b>Watch</b> 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?</p> <p><a href="#">The biology of our best and worst selves</a> <i>TED Talks – Robert Sapolsky</i></p>	 <p><b>Complete</b> this course, which aims to demystify the ageing process, and learn how our everyday behaviours are likely to affect our long-term musculoskeletal health.</p> <p><a href="#">The science of staying active in old age</a> <i>The Universities of Leeds, Sheffield and Newcastle</i></p>
 <p><b>Listen</b> to this radio programme which explores why NASA's third bid to land on the moon was flawed from the start.</p> <p><a href="#">13 Minutes to the Moon</a> <i>BBC Sounds</i></p>	 <p><b>Read</b> this article from a clinical psychologist which provides practical ways to overcome whatever life throws your way.</p> <p><a href="#">8 tips to help you become more resilient</a> <i>Ideas TED</i></p>	 <p><b>Listen</b> to this radio programme in which Brian Cox meets some celebrity physics enthusiasts, including Alan Alda and Eddie Izzard.</p> <p><a href="#">Physics Rocks</a> <i>BBC Sounds</i></p>	 <p><b>Complete</b> this course which explores the organic chemistry behind everyday things such as perfume, medicine and sport.</p> <p><a href="#">Exploring Everyday Chemistry</a> <i>University of York (starts 29<sup>th</sup> June)</i></p>	 <p><b>Watch</b> this TED talk which explores the science behind making cookies. Once you have watched this, why not try and make your own?</p> <p><a href="#">The chemistry of Cookies</a> <i>TED Talks – Stephanie Warren</i></p>
 <p><b>Complete</b> this course which is an entertaining and illuminating exploration into the impact dentistry has on our lives.</p> <p><a href="#">Discover Dentistry</a> <i>The University of Sheffield Available now or 15<sup>th</sup> June 2020</i></p>	 <p><b>Watch</b> this TED talk which explains why surfers are masters of complicated physics.</p> <p><a href="#">The Physics of surfing</a> <i>TED Talk – Nick Pizzo</i></p>	 <p><b>Listen</b> to this radio programme in which Susan Marling asks why the UK has the lowest proportion of female engineers in Europe.</p> <p><a href="#">Britain's Hidden Talent: Women Engineers</a> <i>BBC Sounds</i></p>	 <p><b>Listen</b> to this radio programme which explores all sorts of science-related topics (including the Coronavirus).</p> <p><a href="#">BBC Inside Science</a> <i>BBC Sounds</i></p>	 <p><b>Watch</b> this TED talk in which George Zaidan describes the physics behind this frustrating phenomenon.</p> <p><a href="#">Why is ketchup so hard to pour</a> <i>TED Talk – George Zaidan</i></p>

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 <p><b>Read this article</b> 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).</p> <p><a href="#">Oddballs with high-level intelligence: a Q &amp; A with Roger Hanlon about the amazing octopus</a></p>	 <p><b>Complete this course</b> which will teach you how to solve encrypted maths puzzles, in which numbers are replaced by letters or symbols.</p> <p><a href="#">Maths Puzzles: Cryptarithms, Symbologies and Secret Codes</a> Weizmann Institute of Science (starts on 15<sup>th</sup> June)</p>	 <p><b>Watch this TED talk</b> in which Angelina Arora shares how a lasting combination of curiosity and strategically applied science could help solve the world's problems.</p> <p><a href="#">What creating a toxin-free plastic taught me about problem-solving</a> TED Talk – Angelina Arora</p>	 <p><b>Complete this course</b> and explore the diverse skills and knowledge required to be a nurse and find out where a career in nursing could take you.</p> <p><a href="#">Introduction to Nursing: Bioscience, Psychology, and Sociology</a> University of Leeds Starts 29<sup>th</sup> June 2020</p>	 <p><b>Listen to this radio programme</b> 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?</p> <p><a href="#">BBC Live Wires</a> <a href="#">How can we make UK engineering more diverse?</a> BBC Sounds</p>
	 <p><b>Watch this TED talk</b> which examines the pharmaceutical industry and its impact on doctors and the wider medical world.</p> <p><a href="#">What doctors don't know about the drugs they prescribe</a> TED Talk – Ben Goldacre</p>	 <p><b>Complete this course</b> 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 to refuse.</p> <p><a href="#">Understand the key principles of medicine administration</a> University of East Anglia</p>		