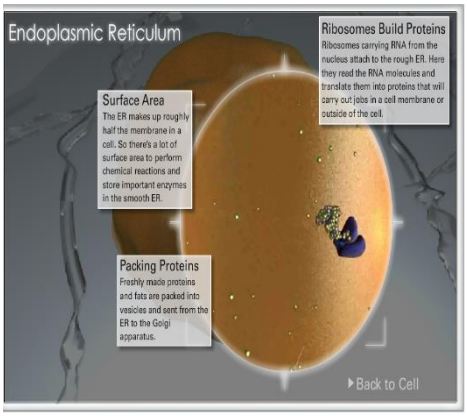
A level Biology *Culture Vulture Recommendations*

Welcome to A level Biology, get started with the building blocks of life, take this quick cell structure quiz:

https://www.bbc.co.uk/bitesize/guides/zyhrng8/test



Take an interactive tour of a cell and its organelles
https://learn.genetics.utah.edu/content/cells/insideacell/

Investigate, just how small are these organelles?
https://learn.genetics.utah.edu/content/cells/scale/

Look at cells, tissues and organs working together, enjoy a head to toe trip through the human body

http://www.madsci.org/~lynn/VH/transverse.html

Consider taking part in the Biology departments voluntary conservation trip to south Africa.

https://www.opwall.com/expeditions/school-expedition/south-africa/

We depart July 2021, spending one week in Kruger National Park and one week in Sodwana Bay

Try a virtual reality tour of different habitats to discover how organisms adapt to their environment

https://askabiologist.asu.edu/games-and-simulations/virtual-reality-tours-biology

.

Explore the different careers open to Biologists

https://www.rsb.org.uk/careers-and-cpd/careers/make-a-difference

Recommended viewing and listening

“scientists have changed our way of life more drastically than television stars, statesman and generals “ Max Perutz

From small single cells to multicellular organisms, explore the impact Biology has on the world around us

https://www.bbc.co.uk/iplayer/episode/b00ncr13/life-1-challenges-of-life

David Attenborough explores the link between animal behaviour and survival

https://www.netflix.com/gb/title/70267802

Blackfish documentary

An award winning documentary on the impact of capture and captivity had on SeaWorld’s Orca population

https://www.bbc.co.uk/iplayer/episode/p07qfrm9/people-of-science-with-professor-brian-cox-series-2-3-venki-ramakrishnan-discusses-max-perutz

Venki Ramakrishnan, the molecular biologist and president of the royal society speaks about Noble Prize winning Max Perutz who led the field in molecular biology

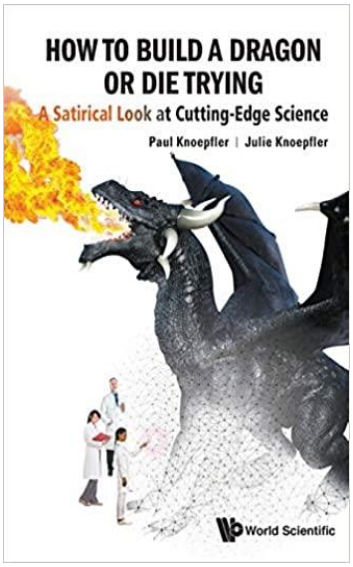
BBC SOUNDS

https://www.bbc.co.uk/sounds/play/m000g3gf

Adam Rutherford speaks with a panel of experts to discuss the coronavirus, explaining how the virus’ structure is used to infect the host, to help detect its presence and the development of a vaccine

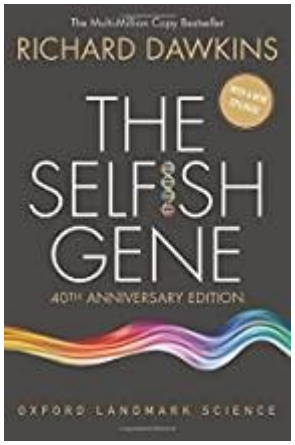
A level Biology *Culture Vulture Recommendations*

Reading: These books are all about widening your knowledge and understanding of Biological concepts and procedures



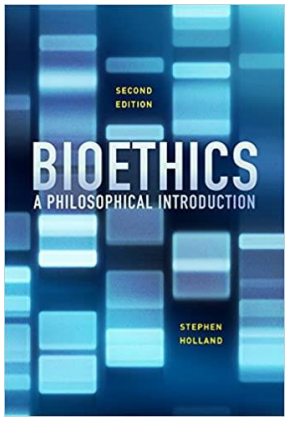
https://www.amazon.co.uk/How-Build-Dragon-Die-Trying/dp/9813275936/ref=tmm_pap_swatch_0?_encoding=UTF8&qid=1588858606&sr=1-9-spons

This new book discusses using powerful technologies such as CRISPR gene editing, stem cells, and bioengineering to make real dragons. It also goes through what useful information we can learn from animals such as Pteranodons and amazing present-day creatures in our quest to build actual dragons. The book goes on to discuss the possibility of building other mythical creatures such as unicorns and mermaids. Overall, *How to Build A Dragon* is also meant as a satirical look at cutting-edge science, and it pokes fun at science hype. Anyone who is interested in dragons or cutting-edge science will enjoy this book! It is written in a humorous, approachable way making science fun and easy to understand.



https://www.amazon.co.uk/Selfish-Gene-Anniversary-Landmark-Science/dp/0198788606/ref=sr_1_1?dchild=1&keywords=selfish+gene&qid=1588859576&s=books&sr=1-1

The Selfish Gene has become a classic exposition of evolutionary thought. Professor Dawkins articulates a gene's eye view of evolution - a view giving centre stage to these persistent units of information, and in which organisms can be seen as vehicles for their replication. This imaginative, powerful, and stylistically brilliant work not only brought the insights of Neo-Darwinism to a wide audience, but galvanized the biology community, generating much debate and stimulating whole new areas of research.



https://www.amazon.co.uk/Bioethics-Philosophical-Introduction-Stephen-Holland-ebook/dp/B01N2YGNY7/ref=tmm_kin_swatch_0?_encoding=UTF8&qid=1588859843&sr=1-2

An introduction to contemporary bioethics. It also presents provocative, philosophically informed arguments on current bioethical issues. With debates ranging from euthanasia, advance decisions to refuse treatment, and new reproductive technologies – to the philosophical implications of recent developments in genetics, including prenatal genetic therapy, genetic enhancement and human cloning.

Preparing for A level Biology

A free on-line course to prepare you for one of the first topics in A level Biology

https://app.senecalearning.com/classroom/course/c02d7745-273e-45a9-a800-2b0239c0fb6c/section/b0fcef5a-58a9-42e7-91c9-b29d68190dc3/session

MOOCS

These are Massive Open Online Courses (MOOC) is an interactive step- by- step that run for 6-8 weeks course aimed at reaching an unlimited number of participants worldwide to create a community of lifelong learners. There are many different MOOC providers that cover a huge variety of different subjects and topics. Typically, a MOOC will involve 2-3 hours of study per week for 6 weeks or so. MOOCs are free of charge. All the course materials will be provided for you online, and are also 100% free! Each course is open to anyone with internet access across the world and all you need is your wonderful brain! Here are a few Biology MOOCs you might wish to try:

The basics of molecular Biology, how the body uses DNA as a blueprint

https://www.futurelearn.com/courses/the-body-and-dna

What is the body, the structures and functions of the body

https://www.futurelearn.com/courses/what-is-the-body

A level Biology *Culture Vulture Recommendations*

Sharks! Global Biodiversity, Biology, and Conservation

https://www.classcentral.com/course/edx-shark-mooc-2020-5865

Podcasts: *We are sure if you go on BBC podcasts and type 'Biology' into the search box you will find many interesting podcasts. Here are a few of our favourites!*

BBC – The infinite monkey cage with Brian Cox and Robin Ince: This is where comedy meets science. Although many of us link Brian Cox with Physics and you will find many of these podcasts to contain discussions about space and other physics related topics. There are general science episodes such as 'The science of laughter', biology related ones such as 'are humans still evolving?' but also chemistry related ones including 'The anniversary of the periodic table'. https://www.bbc.co.uk/programmes/b00snr0w/episodes/downloads

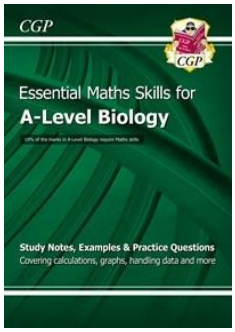
BBC – Science stories: Surprising stories from the history of science told by Naomi Alderman and Philip Ball. https://www.bbc.co.uk/programmes/m000g6d0

BBC – Costing the Earth: Climate change is a big area of study within the Chemical sciences particularly how we can measure its impact and what we can do to combat it. A weekly podcast discussing one topic a week that will definitely get you thinking. https://www.bbc.co.uk/programmes/b006r4wn/episodes/downloads,

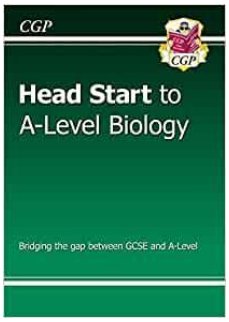
Websites:

The Naked Scientists https://www.thenakedscientists.com/
Contains podcasts, articles, latest sciences news and even a science pub quiz!

And finally…..



Like all the sciences, biology is hard so to get you off to a great start we recommend a couple of CGP books that you may want to get in preparation for your course "Head start to A level Biology" and "Essential Maths Skills for A Level Biology".



https://www.amazon.co.uk/Head-Start-level-Biology-Level/dp/1782942793/ref=pd_lpo_14_img_0/258-6671434-9346843?_encoding=UTF8&pd_rd_i=1782942793&pd_rd_r=3fbd334a-afb9-43d9-9801-fd58c43fac61&pd_rd_w=RFnOs&pd_rd_wg=hgQxq&pf_rd_p=7b8e3b03-1439-4489-abd4-4a138cf4eca6&pf_rd_r=TNYJ52X2CFQ434DM4VQ3&psc=1&refRID=TNYJ52X2CFQ434DM4VQ3

https://www.amazon.co.uk/Level-Biology-Essential-Maths-Skills/dp/1847623239