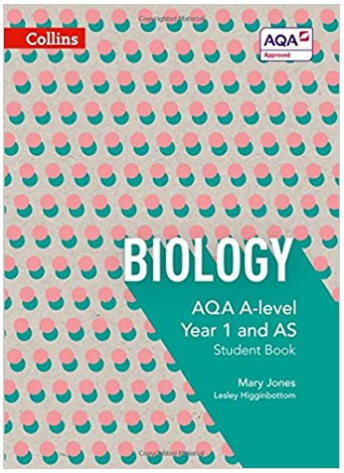
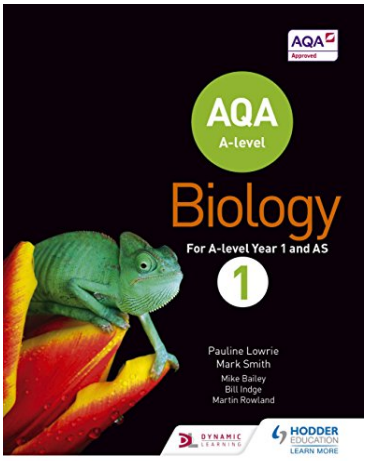
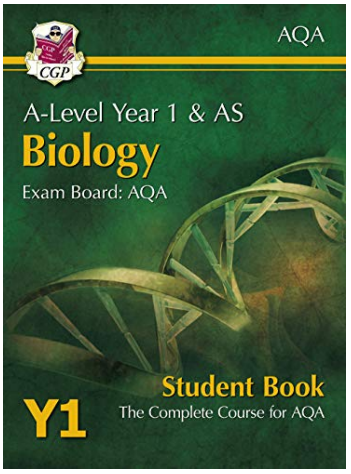
Coombe Wood School
Year 12 Bridging Work

If you have any questions about this bridging work then please contact the Head of Biology, Miss Hemming, at this email address: **nhemming@cws.foliotrust.uk**

We recommend you purchase the following textbooks for this subject area:







Knowledge based textbooks, please view the preview pages and choose the book you think best suits you: Collins AQA A Level Biology Year 1 and AS Student Book **and/or** AQA A Level Biology Student Book 1

and

A workbook, this is very good for revision and filling in gaps but not a complete text book to be used alongside the course: CGP A-Level Biology for AQA: Year 1 & AS Student Book: perfect for catch-up, assessments and exams in 2021 and 2022

Please note, text books containing both year 1 and 2 content are available.

The aim of the bridging work is to help prepare you for the A Level Biology course, and this year that is more important than ever due to the school closures and disruption to learning your year has experienced. It is your responsibility to ensure that you are familiar with the entire Biology GCSE course and have the necessary knowledge and resources to begin learning A Level Biology by the first lesson in September.

All bridging work must be completed by 16th of September 2022 and forms part of your Pupil Passport at Coombe Wood Sixth Form.

Key areas of study at GCSE level:

- Cell structure, Eukaryotes vs Prokaryotes
- Cell division, Mitosis and Meiosis
- Diffusion and osmosis
- Enzymes and limiting factors
- Genetic inheritance Inheritance
- Classification and evolution

Task: Print screen and save/print your results from the BBC Bitesize Quizzes in the topic areas below, only do this once you have achieved 100%.

BBC Bitesize GCSE Biology AQA

Cell Biology:

https://www.bbc.co.uk/bitesize/guides/z84jtv4/revision/1

Bioenergetics:

https://www.bbc.co.uk/bitesize/topics/zgws7p3

Inheritance evolution and variation:

https://www.bbc.co.uk/bitesize/topics/zpb7cj6

Amoeba sister youtube clips

Cell structure:

https://www.youtube.com/watch?v=8IlzKri08kk&t=316s

Prokaryotes vs eukaryotes:

https://www.youtube.com/watch?v=Pxujitlv8wc

Enzymes:

https://www.youtube.com/watch?v=qgVFkRn8f10

Osmosis:

https://www.youtube.com/watch?v=L-osEc07vMs

Natural Selection:

https://www.youtube.com/watch?v=7VM9YxmULuo

Below is a list of things you can read, watch or listen to to get you thinking about Biology and broaden your interest and understanding. I do not expect or recommend you to read, watch or listen to all of them. However it is important that you engage with Science beyond the curriculum and these are great so definitely pick a few things and give them a go.

Books:

- Andrea Wulf - The Invention of Nature: Alexander von Humboldt's New World
- Bill Bryson - The Body: A Guide for Occupants
- Charles Darwin - The Origin of Species
- Daniel Kahneman - Thinking, Fast and Slow
- David Attenborough - Adventures of a Young Naturalist
- David Attenborough - Journeys to the Other Side of the World
- Hana Ros - Neurocomic: A Comic About the Brain
- James D Watson - The Double Helix: A Personal Account of the Discover of the Structure of DNA
- Jane Goodall - In the Shadow of Man
- Jared Diamond - The Third Chimpanzee: The Evolution and Future of the Human Animal
- Jim Ottaviani - Primates: The Fearless Science of Jane Goodall, Dian Fossey and Birute Galdikas
- Joy Adamson - Born Free: A Lioness of Two Worlds
- Lewis Thomas - The Lives of a Cell: Notes of a Biology Watcher
- Matt Ridley - Genome: The Autobiography of a Species in 23 Chapters
- Oliver Sacks - The Man Who Mistook his Wife for a Hat
- Rachel Ignotofsky - The Wondrous Working of Planet Earth
- Rebecca Skloot - The Immortal Life of Henrietta Lacks
- Richard Dawkins - The Selfish Gene, The Blind Watchmaker, Unweaving the Rainbow, Climbing Mount Improbable
- Sarah-Jayne Blakemore - Inventing Ourselves: The Secret Life of the Teenage Brain
- Steve Jones - Almost Like a Whale: The 'Origin of Species' Updated
- Yuval Noah Harari - Sapiens: A Brief History of Humankind

Podcasts/videos:

- https://www.ted.com/talks - search Biology.
- BBC Earth Podcast - http://www.bbcearth.com/Podcast
- Best of Natural History Radio - https://www.bbc.co.uk/programmes/p02nrv7r/episodes/downloads
- Nature - https://www.nature.com/articles/d41586-018-07092-8
- New Scientist Weekly - https://www.newscientist.com/podcasts/
- Radiolab - https://www.wnycstudios.org/shows/radiolab
- Science Vs - https://www.gimletmedia.com/science-vs
- Science Weekly - https://www.theguardian.com/science/series/science
- Scienceish - https://radiowolfgang.com/s/scienceish
- The Curious Cases of Rutherford and Fry - https://www.bbc.co.uk/programmes/b07dx75g/episodes/downloads

- The Future of Everything - https://www.wsj.com/podcasts/wsj-the-future-of-everything
- The Infinite Monkey Cage - https://www.bbc.co.uk/programmes/b00snr0w/episodes/downloads
- The Life Scientific - https://www.bbc.co.uk/programmes/b015sqc7
- The Story Collider - https://www.storycollider.org/podcasts

Documentaries:

- Blackfish
- Blue Planet, Planet Earth, Frozen Planet and Our Planet – basically anything by David Attenborough
- Brain Games by National Geographic
- Cowspiracy
- Explained
- Icarus
- Life on Us: A Microscopic Safari
- Resistance
- Seaspiracy
- Super Size Me

Films:

- Creation
- Gorillas in the Mist
- Inherit the Wind
- Temple Grandin
- The Immortal Life of Henrietta Lacks
- The Story of Louis Pasteur

Places you can visit or events you can attend in and around London:

- Body Worlds
- Florence Nightingale Museum
- Grant Museum of Zoology
- Horniman Museum
- Hunterian Museum
- Imperial College London Festival
- Pint of Science
- Science Museum
- Wellcome Collection
- The Science Gallery