



The John Roan School Sixth Form

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Part of United Learning

Transition work for A Level Biology

Week 3 and 4



Watch the BBC documentary 'The Hidden Life of a Cell'. Consider the role of the organelles found in cells and how they are able to work together. The film looks at viral infections and the impact these have on the cells machinery.

[The Hidden Life of a Cell](#)
Time: 1 hour



Complete an instruction manual for standard form. You must include what standard form is, how to convert from ordinary numbers into standard form, how to convert from standard form into ordinary numbers and how to calculate standard form with and without a calculator. Use the BBC Bitesize link below to help you. Complete all practice questions found on the Bitesize pages and the test once you have finished your instruction manual.

[Standard Form – BBC Bitesize](#)
Time: 1.5 hours



Read the article on the development of a vaccination for coronavirus. Summarise the information you have read on no more than 1 side of A4 paper. This can take any form you like, e.g. bullet points, bubble maps, flow diagrams.

[COVID-19 Vaccination Development](#)
Time: 1 hour



Complete a report on the importance of carbon in living things. Think about where carbon is found in the environment and in cells, and explain what it is used for. Consider the different substances that contain carbon and how they move through the environment and how they are exchanged with living things. Discuss the implications on an imbalance of carbon. Try to link and include as many of the topics you studied at GCSE as you can.

Time: 1 hour



Watch the video on how to produce biological drawings. Using the internet, find a photograph of cells seen through a microscope. Then, following the video, complete your own biological drawing of the cells. Label any of the cell structures you can see.

[Producing Biological Drawings](#)
Time: 30 minutes



Complete a profile on Charles Darwin. Include information on his background, what he discovered, what evidence he gathered, and the impact his discovery had on science. Compare Darwin's theory to Lamarck's theory. What is epigenetics and how does this link Darwin and Lamarck?

Time: 1 hour



Listen to the first 15 minutes of the podcast "TB vaccination to replace culling in badgers". Write a summary paragraph including the definition of herd immunity.

[TB Vaccination and Badgers](#)
Time: 30 minutes



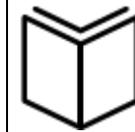
Read about some of the careers that studying biology could lead you into. You may already have an idea of careers that you may like to pursue, or this may give you a first glimpse into the huge variety of pathways available to biology students.

[Careers in Biology](#)
Time: 30 minutes



Watch the Ted talk video on stem cells. Consider the uses of stem cells and what possible ethical implications may arise due to their use.

[What are stem cells?](#)
Time: 30 minutes



Read about how the structure of DNA was discovered. What was controversial about how the discovery came about and who was given credit for it?

[DNA Structure Discovery](#)
Time: 30 minutes