

A level Biology Summer Pre-reading and Tasks

“Students who succeed in their A level courses are those who developed a routine way of working in their own time so that they were able to add to and enhance their learning. This is independent learning and it makes a real difference.”

Having decided to take the A level biology course next year there is an expectation that a certain amount of pre-reading and preparation will occur over the summer hols. This will allow a focus during lessons on application of knowledge and ironing out misconceptions instead of hour upon hour of taking notes... To this end you are expected to attempt the following tasks

1. Using an unlabelled animal cell diagram research and label each of the cell contents. Use the OCR Biology A H420 specification to find the level of detail needed to complete the task.
2. Provide a function for each organelle.
3. Find an image of a plant cell showing a similar level of complexity, label the organelles and explain the function of any additional organelles present in a plant cell that you have not already covered in task 2.

Suggested reading for A level Biology Books:

Richard Dawkins:

The Selfish Gene

The Blind Watchmaker.

Climbing Mount Improbable

The Ancestor's Tale

Steve Jones:

Y: The Descent of Men

In the Blood: God, Genes and Destiny

Almost Like a Whale: The 'Origin of Species' Updated

The Language of the genes

Matt Ridley

Genome: The Autobiography of a Species in 23 Chapters

The Language of Genes

James Watson:

DNA: The Secret of Life

The Double Helix: Personal Account of the Discovery of the Structure of DNA

Charles Darwin: The origin of species

Bill Bryson: A Short History of Nearly Everything

Oliver Sachs: The Man Who Mistook His Wife For A Hat

Nessa Carey

The epigenetics revolution

Junk DNA

Websites:

1. <http://www.ibiblio.org/virtualcell/index.htm> – An interactive cell biology site
2. <http://www.accessexcellence.org/RC/VL/GG> – A web site showing illustrations of many processes of biotechnology
3. <http://www.uq.oz.au/nanoworld> – Visit the world of electron-microscopy
4. <http://www.dnai.org/a/index.html> – Explore the genetic code
5. <http://nobelprize.org> – Details of the history of the best scientific discoveries
6. <http://nature.com> – The site of the scientific journal
7. <http://royalsociety.org> – Podcasts, news and interviews with scientists about recent scientific developments
8. <http://www.nhm.ac.uk> – The London Natural History Museum's website with lots of interesting educational material
9. <http://www.bmj.com> – The website of the British Medical Journal
10. http://www.bbc.co.uk/news/science_and_environment - The BBC news page for Science and the Environment

Enjoy your summer... See you in September.