**Transition Work Subject: A Level Biology**

WMSF takes students from a wide range of schools, who have studied a variety of GCSE syllabuses. We want to ensure that everybody is equally able to access the content of the AS Level and so the following tasks give you a chance to ensure you are fully prepared. At WMSF we have used the AQA Science A syllabus at GCSE. This is accessible from the exam board website, but you should not feel you need to look at it in detail.

There is an excellent booklet worth buying and working through before you start AS Biology. See details here: <https://www.cgpbooks.co.uk/School/books_a_level_biology_aqa.book_BBR71>

To ensure you are ready to fully access the AS BIOLOGY Syllabus you should:

You should know from GCSE that genes on DNA code for proteins. So it is really important that you understand something of the importance of this. Modern Biology uses this understanding to explain how cells work, explain how inherited conditions are the result of changes to proteins, how gene technology works, etc. so knowing about what proteins are, is crucial. Read the BIG PICTURE booklet attached to this task about PROTEINS and look through the poster on proteins as molecular machines and explore about proteins following links on this website:

<http://learn.genetics.utah.edu/content/molecules> .

Your task is to research and produce an A3 poster (or double sided A4) that links a protein of your choice to its gene (there are hundreds of proteins to choose from e.g. Lysozyme, myoglobin, salivary amylase, lipase, actin, myosin, etc as you will see from looking through the resources provided).

**It is to be handed in to your new teacher on the first week back**. You will be expected to be an **expert** on your chosen proteins and its’ gene, so expect to talk confidently about it using terms you can explain). Your poster needs to include the following;

* a picture (use google images) of the protein molecule you are investigating,
* a description of its shape, its location and use/ function and
* details of its gene and which chromosome (pictures can be found) it is found on.
* Resources downloadable from [www.ahammondbiology.weebly.com](http://www.ahammondbiology.weebly.com) BIG PICTURE PROTEINS and Proteins as molecular machines poster (you will find it in OCR Biology 2015 - module 1)

Useful Links

* Useful website about proteins and DNA: <http://learn.genetics.utah.edu/content/molecules/> Useful website about proteins: <http://www.rcsb.org/pdb/home/home.do>

Useful website for finding gene locations: <https://ghr.nlm.nih.gov/gene>

To get more into what this subject is about at a higher level: This website has a wide range of relevant and helpful information about Chromosomes, DNA, Inherited Diseases etc. <http://www.yourgenome.org/> worth a look and save for future reference. If you fancy listening to a TED talk (<http://www.ted.com/talks> ) – search for Richard Resnick – “Welcome to the genomic revolution”