The idea with this bridging is work is that you will begin to explore some of the topics that we will study at A Level. Each task requires you to complete some research into a key topic and then complete an associated task. You should be aiming for approx. 45mins – 1hr of research per task before completing the work set. Remember to use your research to understand any topics you are unsure of. You may find some information at GCSE level too from text books etc. Your teachers have provided some useful links to help support your research into each topic.

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| Subject Name | A Level Biology | |
| Task Title | Task Description | Estimated Time |
| Cell organelles Retrieval questions and numbers and units | At AS level you will look in much closer detail at the inner workings of cells. You need to understand how the different organelles work .  TASK-  1.You should be able to add at least 10 labels on the diagram.  2. Draw out a table for 10 cell organelles and summarise their main functions  3. In the GCSE to A level transition booklet complete retrieval questions and section 1 (numbers and units). The retrieval questions are the expected understanding of a student before they start A level Biology so well worth securing that knowledge now. | 2 hours |
| Microscopy  Working with formulae and Magnification | At AS level you will learn about the different types of microscope and how they work. The main types of microscopes we will be looking at are ; Light microscope, Scanning electron microscope and Transmission electron microscope  **TASK:**  Find out more information about the different types of microscopes, their properties, advantages and disadvantages. Compare the advantages and disadvantages of all the three  In the GCSE to A level transition book complete the section 3 and 4 | 2 hours |
| Specialised cells | At AS level you will need to compare the different types of cells. It is important you know the structure of bacterial cell and also the different types of specialised cells in animals and plants.  **TASK**  Draw and fully label a diagram of a typical bacterial cell. (At least 5 labels) Describe how this is different and similar from a animal and plant cell.  Describe 3 specialised cells that you have studied each in plants and in animals. Draw their structure and describe how the cell structure is adapted to the function of these cells. | 2 hours |
| Movement in and out of cells | There are a number of ways that substances may move into and out of living cells. Some of these are passive (require no energy) and others are active (require energy).  Describe each of these types of cell transport; Diffusion ,Facilitated diffusion , Osmosis , Active transport , and give an example of each one in a living cell: | 2 hours |
| Percentages and uncertainty &Scatter graphs and lines of best fit | Maths forms a very crucial part of A-level Biology. Within A Level Biology, 10% of the marks available within the written examinations is assesses for Mathematics.  In the GCSE to A level transition booklet complete section 5 and 6 to brush up some of the common concepts. | 2 hours. |
| Useful resources | <https://www.cellsalive.com/cells/cell_model.htm>  <http://www.biologymad.com/cells/microscopy.htm>  [tps://www.youtube.com/watch?v=XQgvsXQ6AyE](https://www.youtube.com/watch?v=XQgvsXQ6AyE)  <https://www.youtube.com/watch?v=knv4fNNoEG8> | |
| How to submit | Please email your work to: [Kavitha.ravindran@verulam.herts.sch.uk](mailto:Kavitha.ravindran@verulam.herts.sch.uk)  Or  Upload to the Google Drive which can be found here | |