**A Level Biology Study Period Guide – Autumn Term 2022**

**Year 12**

**This guide is designed to help students with their independent revision for Year 12 Biology in their study periods this term.**

**Which topics will you be studying?**

|  |  |  |
| --- | --- | --- |
| **Module** | **2 Foundations in Biology**  **1 Development of practical skills** | **3 Exchange and Transport** |
| **Topics** | **Chapter 3**  **Biological Molecules** | **Chapter 7: Exchange surfaces and breathing**  **Chapter 8: Transport in animals**  **Chapter 9: Transport in plants** |
|  | * **Biological elements** * **Water** * **Carbohydrates** * **Testing for carbohydrates** * **Lipids** * **Structure of proteins** * **Types of proteins** * **Nucleic acids** * **DNA replication and the genetic code** * **Protein synthesis** * **ATP** | * **Specialised exchange surfaces** * **Mammalian gaseous exchange system** * **Measuring the process** * **Ventilation and gas exchange in other organisms** |
| * **Qualitative food testing;** * **Lipids** * **Proteins** * **Reducing and Non-reducing sugars** | * **Transport systems in multicellular animals** * **The blood vessels** * **Blood, Tissue fluid and lymph** * **Transport of oxygen and carbon dioxide in the blood** * **The heart** |
|  | * **Transport systems in dicotyledonous plants** * **Water transport in multicellular plants** * **Transpiration** * **Translocation** * **Plant adaptations to water availability** |

**Which exam board?**

In Biology, we follow the **OCR** exam board. For a detailed look at the specification click the below link:-

<https://www.ocr.org.uk/Images/171736-specification-accredited-a-level-gce-biology-a-h420.pdf>

**What useful revision activities should I be doing?**

* Make sure you read through your class notes from previous lesson/s before your attending your next lesson. Ensure you have clear and detailed notes to incorporate examples.
* Complete the summary questions from the textbook. These can be found at the end of each double page spread.
* Produce a glossary of key words.
* Produce flash cards for the topic.
* Construct a summary sheet (A3) for each topic - some content you may wish to include:-
  + Definitions for key words and relationships.
  + Pictures of the various diagrams, and graphs you might use.
  + Worked solutions of typical questions
* Concept maps linking your ideas together. Here include both images and text.
* Use some of the links below to access and solve as many exam type questions as you can to build up your exam style practise and problem solving skills.

**Useful Resources:**

|  |  |
| --- | --- |
| Practice questions and going over previous papers and mark schemes is one of the key and best revision techniques for Biology. | <https://www.ocr.org.uk/qualifications/as-and-a-level/biology-a-h020-h420-from-2015/assessment/> |
| Watch the video by BioRach (OCR A). These are excellent to support your learning and understanding. | <https://www.youtube.com/c/BioRach> |
| The importance of reading around the subject: | <http://intobiology.org.uk/how-to-read-around-the-subject/> |
| Topic themed exam questions and whole papers. | <https://www.physicsandmathstutor.com/biology-revision/a-level-ocr-a/> |
| Mindmaps, flash card questions and summary notes | <https://www.physicsandmathstutor.com/biology-revision/a-level-ocr-a/> |
| Other useful links: | * [**http://s-cool.co.uk/a-level/biology**](http://s-cool.co.uk/a-level/biology) * [**http://www.biology-innovation.co.uk/**](http://www.biology-innovation.co.uk/) * [**http://www.cellsalive.com**](http://www.cellsalive.com) * [**http://highered.mcgraw-hill.com**](http://highered.mcgraw-hill.com/sites/dl/free/0072437316/120060/ravenanimation.html) |

**Other Resources available**

* **Exercise book:** You will be given an exercise book from school for class notes.
* **Lever arch folder:** You will need to have a **folder** for your own notes, which you will have made from a combination of classwork and the textbook. This folder should also have all of the worksheets and exam questions.
* **OCR A Textbook and Kerboodle online support**
* **CGP Revision guides**: These are a good resource for extra reading and consolidating your learning.

**A Level Biology Study Period Guide – Autumn Term 2022**

**Year 13**

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Which topics will you be studying?

|  |  |  |
| --- | --- | --- |
| **Module** | **5 Communication, homeostasis, and energy**  **1 Development of practical skills** | |
| **Topics** | **Chapter 13 Neuronal Communication** | **Chapter 17: Energy for biological processes (17.1 and 17.2)**  **Chapter 18: Respiration** |
|  | * **Coordination** * **Neurones** * **Sensory receptors** * **Nervous transmission** * **Synapses** * **Organisation of the nervous system** * **Structure and function of the brain** * **Reflexes** * **Voluntary and involuntary muscles** * **Sliding filament model** | * **Energy Cycles** * **ATP synthesis** |
| * **Glycolysis** * **Linking glycolysis and the Krebs cycle** * **The Krebs cycle** * **Oxidative phosphorylation** * **Anaerobic respiration** * **Respiratory substrates** |
|  | * **Practical: Investigate the rate of respiration in yeast.** |

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