**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**
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| * **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**
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|  | * **Transport systems in dicotyledonous plants**
* **Water transport in multicellular plants**
* **Transpiration**
* **Translocation**
* **Plant adaptations to water availability**
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**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)
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* [**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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