

# St John's Curriculum Overview – Year 12

## Introduction

- Biology at St Johns is linear and therefore studied at **A-Level only**. We cover the **AQA Biology specification (7401, 7402)**
- Students work towards **three externally assessed written exams** in A-Level Biology. All papers will be **synoptic** and feature the following types of questions: multiple choice, calculations, structured, closed short answer, levelled response questions and practical skills.
- The **AQA Biology** specification has been written to inspire students, nurture a passion for Biology and lay groundwork for further study in courses like biological sciences and medicine.
- **AQA Biology** is written in a 'context free' style so teachers are free to bring the subject alive in their own way working with the strengths and weaknesses of the students.
- **Required practical's** will be assessed and tracked throughout the two years.

<b>Subject title</b>	<b>Biology</b>
Setting arrangements	Mixed prior attainment within the two classes
Time allowance each fortnight	9 hours

## Topics, Content and Assessment covered during the course

Term	Teacher 1 topics and content	Teacher 1 Assessment details	Teacher 2 topics and content	Teacher 2 Assessment details
<b>Term 1</b>	<b>3.1 Biological molecules</b> 3.1.1 Monomers and polymers 3.1.2 Carbohydrates 3.1.3 Lipids 3.1.4 Proteins: 3.1.4.1 General properties of proteins 3.1.4.2 Many proteins are enzymes	End of topic test: <b>Biological molecules:</b> 3.1.1 – 3.1.4.1 End of topic test: <b>Enzymes:</b> 3.1.4.2	<b>3.2 Cells</b> 3.2.1 Cell structure: 3.2.1.1 Structure of eukaryotic cells 3.2.1.2 Structure of prokaryotic cells and viruses 3.2.1.3 Methods of studying cells 3.2.2 All cells arise from other cells	End of topic test: <b>Cell structure:</b> 3.2.1-3.2.1.3 End of topic test: <b>Cell division:</b> 3.2.2
<b>Term 2</b>	3.1.5 Nucleic acids are important information carrying molecules: 3.1.5.1 Structure of DNA and RNA 3.1.5.2 DNA replication <b>3.3 Organisms exchange substances with their environment</b> 3.3.1 Surface area to volume ratio 3.3.2 Gas exchange	End of topic test: <b>DNA:</b> 3.1.5.1-3.1.5.2 End of topic test: <b>Gas exchange:</b> 3.3.1-3.3.2	3.2.3 Transport across cell membranes 3.2.4 Cell recognition and the immune system	End of topic test: <b>Transport:</b> 3.2.3 End of topic test: <b>Immunity:</b> 3.2.4

<b>Term 3</b>	3.3.3 Digestion and absorption 3.3.4.1 Mass transport in animals	End of topic test: <b>Digestion:</b> 3.3.3 End of topic test: <b>Mass transport in animals:</b> 3.3.4.1	<b>3.4 Genetic information, variation and relationships between organisms</b> 3.4.1 DNA, genes and chromosomes 3.4.2 DNA protein synthesis 3.4.3 Genetic diversity can arise as a result of mutations or during meiosis 3.4.4 Genetic diversity and adaptation	End of topic test: <b>genes and protein synthesis:</b> 3.4.1-3.4.2 End of topic test: <b>Genetic diversity:</b> 3.4.3-3.4.4
<b>Term 4</b>	3.3.4.2 Mass transport in plants	End of topic test: <b>Mass transport in plants:</b> 3.3.4.2	3.4.5 Species and taxonomy 3.4.6 Biodiversity within the community 3.4.7 Investigating diversity	End of topic test: <b>Taxonomy:</b> 3.4.5 End of topic test: <b>Biodiversity:</b> 3.4.6-3.4.7
<b>Term 5</b>	<b>Core practical review</b> <b>Essay writing practice</b>		<b>Comprehension question practice</b> <b>Math skills</b>	
<b>Term 6</b>	End of year 12 mocks Start year 13 content: Inheritance and Populations and ecosystems			

### **Resources Recommended for Revision and where they are available:**

- AQA Biology 2<sup>nd</sup> edition Toole and Toole Oxford press (discounts available through the school library)
- Use good **revision websites** (and suitable videos) to give an alternative wording to some explanations.

### **Extended Learning (homework):**

- Review your class notes after each lesson using the relevant textbook pages
- Complete exam questions in the **homework booklets** and mark them using the answers
- Do the **summary questions** in the textbook and check the answers
- Revise effectively for each end of topic test

### **Additional support and help for the course**

- Use the **specification checklists** to ensure you know what you do and don't know in each topic (provided at the start of the year)

- After each review test, complete **feedback homework** on your weaker areas, to get into good study habits. This enables you to build up revision material throughout the year, not just before the final exams. Get a 'study buddy'
- Once you know what areas of each topic you do not understand, do more past paper exam questions and revise those areas in your private study sessions.
- If you still do not understand these areas, then ask your teachers for help!
- Attend the **year 12 revision sessions**
- **Redo review tests** once you have improved your understanding of the weaker areas.

### **Extra Curricular:**

- Biology residential field trip to Dale fort, Pembrokeshire in July