

# Y11 BIOLOGY



## SCIENCE AT YARDLEYS

**INTENT:** Science helps students gain an understanding of the world around them, from the micro-level of particles and atoms to the macro-level of our expanding universe. It encourages students to question and enquire in order to learn more. We want our students to acquire the scientific knowledge and skills to meet their academic, practical and “real life” challenges of the future.

## Y11 BIOLOGY

Year 11 builds on from Cycles of life topic which was taught at the end of year 8. The focus of this topic is how organisms interact with each other and their environment and how humans can impact their environments. It links to current issues that are affecting our environment and how we can address these issues and make our environments more biodiverse and reduce pollution. This follows on with the key concepts and the central ideas in biology such as how substances are transported in and out of cells.

## YEAR 11

	Exchange and transport in Animals	Ecosystems and Material cycles	Synoptic revision and High Frequency questions	GCSE Exams
<b>SUBSTANTIVE KNOWLEDGE</b>	<ul style="list-style-type: none"> <li>The circulatory system</li> <li>Cardiovascular disease</li> <li>Treatments for cardiovascular disease</li> <li>Cellular respiration</li> </ul>	<ul style="list-style-type: none"> <li>Ecosystems</li> <li>Pollution</li> <li>Feeding relationships.</li> <li>Biodiversity</li> <li>Food security</li> <li>Cycles</li> <li></li> </ul>	<ul style="list-style-type: none"> <li>High frequency topic revision</li> <li>Experimental design revision</li> </ul>	<ul style="list-style-type: none"> <li><b>Paper 1 Biology Exam</b></li> <li><b>Paper 2 Biology Exam</b></li> </ul>
<b>DISCIPLINARY KNOWLEDGE</b>	<ul style="list-style-type: none"> <li>Use mathematical concepts</li> <li>Select appropriate equipment</li> <li>Evaluate risks</li> <li>Evaluate methods of treatment bearing in mind the benefits and risks.</li> <li>Interpret data</li> <li>Suggest improvements to scientific methods.</li> </ul>	<ul style="list-style-type: none"> <li>Identify patterns and trends and draw conclusions</li> <li>Interpreting data</li> <li>To make predictions and draw hypothesis</li> <li>Apply mathematical concepts</li> <li>Apply sampling techniques</li> </ul>	<ul style="list-style-type: none"> <li>Apply mathematical concepts</li> <li>Identify patterns and trends and draw conclusions</li> <li>Interpret data</li> <li>To make predictions and draw hypothesis</li> </ul>	