



### Context:

As you embark upon your study of A Level Biology (7402) through the AQA exam board, you will begin in September to explore **3.1 Biological Molecules** and **3.2 Cells**. The A Level Biology specification can be found at:

<https://filestore.aqa.org.uk/resources/biology/specifications/AQA-7401-7402-SP-2015.PDF>

As well as developing skills, knowledge and understanding in Biology and the necessary literacy skills to communicate your ideas, you will also need to demonstrate competence in applying practical and mathematical skills, as well as the ability to apply your understanding to unfamiliar contexts. Such knowledge and skills will all be assessed through a variety of means including short answer, comprehension and extended response questions within the three exam papers that you will sit at the end of Year 13.

### Assessments

Paper 1	+	Paper 2	+	Paper 3
<b>What's assessed</b> <ul style="list-style-type: none"><li>Any content from topics 1–4, including relevant practical skills</li></ul>		<b>What's assessed</b> <ul style="list-style-type: none"><li>Any content from topics 5–8, including relevant practical skills</li></ul>		<b>What's assessed</b> <ul style="list-style-type: none"><li>Any content from topics 1–8, including relevant practical skills</li></ul>
<b>Assessed</b> <ul style="list-style-type: none"><li>written exam: 2 hours</li><li>91 marks</li><li>35% of A-level</li></ul>		<b>Assessed</b> <ul style="list-style-type: none"><li>written exam: 2 hours</li><li>91 marks</li><li>35% of A-level</li></ul>		<b>Assessed</b> <ul style="list-style-type: none"><li>written exam: 2 hours</li><li>78 marks</li><li>30% of A-level</li></ul>
<b>Questions</b> <ul style="list-style-type: none"><li>76 marks: a mixture of short and long answer questions</li><li>15 marks: extended response questions</li></ul>		<b>Questions</b> <ul style="list-style-type: none"><li>76 marks: a mixture of short and long answer questions</li><li>15 marks: comprehension question</li></ul>		<b>Questions</b> <ul style="list-style-type: none"><li>38 marks: structured questions, including practical techniques</li><li>15 marks: critical analysis of given experimental data</li><li>25 marks: one essay from a choice of two titles</li></ul>

In addition, to reach the highest grades, you must engage in wider reading around the subject to develop your understanding beyond the specification and be driven by a genuine interest. It is our hope that we can inspire you to pursue a future career within Science and particularly within the many different areas of Biology.

If you have any questions, please contact me at [jmillatt@lrgs.org.uk](mailto:jmillatt@lrgs.org.uk)

**Mr J Millatt**  
**Head of Biology**  
**Lancaster Royal Grammar School**

<b>Bridging Work</b>	<b>Task</b>
1. GCSE Unit 7 - Ecology	<p>To ensure completion of the GCSE course, you can use the following resources, as well as your revision guide, to complete Unit 7 – Ecology from wherever you got up to prior to your assessments:  <a href="https://filestore.aqa.org.uk/resources/biology/specifications/AQA-8461-SP-2016.PDF">https://filestore.aqa.org.uk/resources/biology/specifications/AQA-8461-SP-2016.PDF</a></p> <p><b>Oak Academy:</b> <a href="https://classroom.thenational.academy/units/ecology-a6da">https://classroom.thenational.academy/units/ecology-a6da</a>  <b>BBC Bitesize:</b> <a href="https://www.bbc.co.uk/bitesize/topics/zxfd3k7">https://www.bbc.co.uk/bitesize/topics/zxfd3k7</a></p> <p><b>Unit 7 notes:</b>  <a href="https://pmt.physicsandmathstutor.com/download/Biology/GCSE/Notes/AQA/7-Ecology/Detailed%20Notes.pdf">https://pmt.physicsandmathstutor.com/download/Biology/GCSE/Notes/AQA/7-Ecology/Detailed%20Notes.pdf</a></p>
2. Khan Academy	<p>To be linked to our "Course Mastery Goal", add yourself via this link:  <a href="https://www.khanacademy.org/join/VXMAMWKN">https://www.khanacademy.org/join/VXMAMWKN</a></p> <p>This 'High School Biology' course will enable you to progress from GCSE to A Level Biology material. Every time you complete a topic or unit you get 'mastery points' and these add up until you have done them all. The aim of this course is to achieve completion by the end of Aug. Slow and steady progress is advisable between May and August.</p> <p><b>Mr Wilkinson will summarise your attainment for your A Level teacher in September.</b></p>
3. Reading List	<p>Independent learning is key to being a successful A Level student. Reading is a crucial part of any school subject and the same is true within A Level Biology. The following is a reading list that is applicable to all A Level Biologists.</p> <p><b>Required reading list before September:</b></p> <ul style="list-style-type: none"> <li>- <i>The Selfish Gene</i> by Richard Dawkins</li> </ul> <p><b>Optional reading list:</b></p> <ul style="list-style-type: none"> <li>- <i>Sapiens: A brief History of Humankind</i> by Yuval Noah Harari</li> <li>- <i>A Short History of Nearly Everything</i> by Bill Bryson.</li> <li>- <i>Bad Science</i> by Ben Goldacre</li> <li>- <i>This is Going to Hurt</i> by Adam Kay</li> <li>- <i>Where there is no Doctor: a Village Healthcare Handbook</i> by David Werner</li> <li>- <i>Do No Harm</i> by Henry Marsh</li> <li>- <i>When Breath becomes Air</i> by Paul Kalanithi</li> <li>- <i>The House of God</i> by Samuel Shem</li> <li>- <i>Being Mortal</i> by Atul Gawande</li> <li>- <i>Better</i> by Atul Gawande</li> <li>- <i>How we do harm</i> by Otis Brawley</li> <li>- <i>The man who mistook his wife for a hat</i> by Oliver Sacks</li> <li>- <i>Mortality</i> by Christopher Hitchens</li> <li>- <i>Medical Ethics: A Very Short Introduction</i> – Simon Blackburn</li> <li>- <i>The Greatest Show on Earth</i> by Richard Dawkins.</li> <li>- <i>The Origin of Species</i> by Charles Darwin</li> <li>- <i>Why Evolution is True</i> by Jerry Coyne</li> <li>- <i>River out of Eden</i> by Richard Dawkins</li> <li>- <i>Genome</i> by Matt Ridley</li> <li>- <i>Life</i> by Richard Fortey</li> <li>- <i>Mapping the Deep</i> by Robert Kunzig</li> <li>- <i>Silent Spring</i> by Rachel Carson</li> <li>- <i>Almost Like A Whale</i> by Steve Jones</li> </ul>

4. Book Review(s)	<p>Review 'The Selfish Gene' by Richard Dawkins. Briefly summarize the book's content. Keep your summary concise, touching only on the main points. Try to limit this summary to one side of A4 only.</p> <p>Feel free to write more than one book review if you have time.</p> <p><b>A written book review(s) submitted in September will impress your teacher and generate evidence towards your first ATL grade.</b></p>
5. Essay writing	<p>In preparation for your A Level Biology course, please write the following essay:</p> <p><b><i>'How true is it to say that once an organism has reproduced, it has fulfilled its biological role?' (20 marks)</i></b></p> <p>This essay is linked to your reading of the book '<b>A Selfish Gene</b>' by Richard Dawkins. This is an A Level essay and hence it should be written with A Level detail where possible. Can you make the jump? Make sure you include relevant examples from your research into the biological world to support your arguments.</p> <p><b>You will be asked to submit this essay in your first biology lesson in September.</b></p>
6. Future Learn	<p>Future Learn is a free resource. You do not need to pay!  <a href="https://www.futurelearn.com/subjects/science-engineering-and-maths-courses/biology-and-biotechnology">https://www.futurelearn.com/subjects/science-engineering-and-maths-courses/biology-and-biotechnology</a></p> <p>Please explore the biology and biotechnology courses and <b>complete one course</b> (or more if you want to) which interests you.</p> <p><b>Screen shots of proof of completion will impress your teacher in September and generate evidence towards your first ATL grade.</b></p>
7. In the news ...	<p>The following websites (although not exhaustive) are very useful sources of interesting biology 'in the news':</p> <p><a href="https://www.nationalgeographic.com/">https://www.nationalgeographic.com/</a>  <a href="https://www.newscientist.com/">https://www.newscientist.com/</a>  <a href="https://www.nature.com/">https://www.nature.com/</a>  <a href="https://www.bbc.co.uk/news/science_and_environment">https://www.bbc.co.uk/news/science_and_environment</a>  <a href="https://thebiologist.rsb.org.uk/biologist">https://thebiologist.rsb.org.uk/biologist</a></p> <p>You should <b>develop good habits</b> to keep abreast of what is going on in the biological world around you.</p>
8. TED Talks	<p>There are many fascinating talks by accomplished scientists and researchers at: <a href="https://www.ted.com/">https://www.ted.com/</a></p> <p>There are also some educational podcasts on a variety of science/biology topics at: <a href="https://ed.ted.com">https://ed.ted.com</a></p> <p><b>Stay curious</b> by using these talks/podcasts to broaden your knowledge and interest in the biological world around you.</p>

