

Biology A Level Year 13

Throughout the course students will develop important skills including critical thinking, data analysis, problem-solving, and practical investigation. They will build confidence in applying Biology to real-world issues such as health, the environment, and new evolving technologies, as well as gaining skills that support further study and a wide range of careers.

A good A Level Biology student is keen to understand living things at a molecular and cellular level through to whole organisms and ecosystems. They pay attention to detail and are committed to accurately using scientific vocabulary to explain theories, concepts and ideas clearly.

They are confident at using their knowledge to answer new and unfamiliar questions and enjoy problem solving. They think critically about evidence, recognising patterns, evaluating experimental methods, and drawing reasoned conclusions based on data. They are comfortable working with quantitative information, including graphs, ratios, and statistical tests, and can use mathematics to support biological conclusions.

A good Biology student takes an active role in practical work, following instructions carefully while thinking about why each step matters. They can analyse results, draw conclusions from evidence, and consider how reliable their findings are.

They are organised and motivated and are keen to make links between different topics and across subjects. They are willing to practise extended written answers and develop clear, logical explanations. Most importantly, they are prepared to ask questions, think independently, and engage fully with the subject.

Summary of course content

The examining board for A level Biology is AQA.

In year 13 there are 4 large units (units 1 to 4 were covered in year 12):

Unit 5: Energy transfers in and between organisms

Unit 6: Organisms respond to changes in their environment

Unit 7: Genetics, populations, evolution and ecosystems

Unit 8: The control of gene expression

You can find the AQA specification here:

<https://www.aqa.org.uk/subjects/biology/a-level/biology-7402/specification/specification-at-a-glance>

Below is an overview of tasks / activities you should be completing outside of lessons:

Weekly:	• Completion of tasks and activities that are set as homelearning by both of your teachers (homelearning is set weekly)
Fortnightly:	In addition to the tasks and activities outlined above you should be using your time outside of lessons to: • Review recent lessons • Learning (off by heart) key terminology – remember to use the powerpoints (key words and definitions are in purple), your own notes and exam markschemes • Revising the content covered so far – this should be evidenced by producing and showing the revision resources you have used and created such as revision cards, mind maps, completed and marked practice exam questions • Completion of additional reading when set – this will be posted on teams and how you can produce evidence of this will be explained for each of these reading tasks
Half termly:	• Revision: this should be evidenced by producing and showing the revision resources you have used and created such as revision cards, mind maps, completed and marked practice exam questions

In addition to the resources provided by your teacher, other useful resources include:

On TEAMS are resources including:

- Lesson / topic list
- Textbook (one is on teams)
- Lesson powerpoints and resources
- Videos (stated on powerpoints)
- Required practical powerpoints, booklets and exam questions
- Homelearning tasks
- Past paper questions for each topic
- End of topic tests and markschemes
- Essay question – powerpoint and instructions on how to structure your essay, past essay questions and essay questions templates

Useful websites:

Miss Estruch: <https://www.youtube.com/@MissEstruchBiology>

Free science lessons: <https://www.freesciencelessons.co.uk/a-level-revision-videos/a-level-biology/>

PMT (physics and maths tutor): <https://www.physicsandmathstutor.com/biology-revision/a-level-aqa/>

Amoeba sisters: <https://www.youtube.com/user/AmoebaSisters>

Independent Learning Schedule – two hours directed by each of your teachers (subject to change) – this is in addition to your homelearning tasks :

Week beginning	Teacher 1 (minimum 1 hour per week) Unit 3.5 Energy transfer: - Photosynthesis - Energy and Ecosystems - Nutrient cycles Unit 3.6 Organisms respond to changes in their internal and external environments: - Stimuli are detected and lead to a response - Nervous co-ordination Unit 3.8 The control of gene expression: - Regulation of transcription & translation - Genome projects - Gene technologies	Teacher 2 (minimum 1 hour per week) Unit 3.7: - Genetics - Populations - Evolution - Ecosystems Unit 3.5 Energy transfer: - Respiration Unit 3.8 The control of gene expression: - Mutations - Stem cells Unit 3.6 Organisms respond to changes in their internal and external environments: - Skeletal Muscles - Homeostasis
7 th September Enrolment week	Photosynthesis GCSE recap task	Genetics GCSE recap task
14	Textbook pages 268 to 274 – - Answer all summary questions - Answer questions in the green box page 274	Textbook pages 418 to 423 – Answer summary questions Watch video on powerpoint (Free Science Lessons & Miss Estruch)
21	Textbook pages 275 to 280 – - Answer all summary questions - Answer questions in the green box page 267 to 278 - Answer questions in the purple box on page 279 to 280	Textbook pages 424 to 428 – Answer summary questions + Questions in purple box page 428
28	Required practical 7 and 8 - Pre-read method - Watch RPA videos (on powerpoint) Practice questions p281 to 282	Textbook pages 429 to 432 – Answer summary questions + Questions in green box page 432 Watch video on powerpoint (Free Science Lessons & Miss Estruch)
5 th October	Revision for photosynthesis assessment – evidence required	Textbook pages 433 to 436 – Answer summary questions + Questions in green box page 436 Watch video on powerpoint (Free Science Lessons & Miss Estruch)
12	Post assessment task	Textbook pages 437 to 442 – Answer summary questions + Questions in green box page 439 Watch video on powerpoint (Free Science Lessons & Miss Estruch)
19	Textbook pages 298 to 304 – - Answer all summary questions - Answer questions in the green box page 302 to 304 - Answer questions in the purple box on page 305	Textbook pages 443 to 445 – Answer summary questions REMEMBER you do NOT need to be able to calculate chi-squared in your exam Answer Practice Questions p446 to 447
26	Half term	

2 nd November	Textbook pages 306 to 310 – - Answer all summary questions Watch video on powerpoint (Free Science Lessons & Miss Estruch)	Create key words and definitions for the inheritance topic (covered above) – this can either be a spreadsheet, revision cards, or you can make them on quizlet, or write them by hand in a table REMEMBER to use the powerpoints and markschemes from the exam questions to write definitions that will gain marks in an exam
9	Textbook pages 311 to 314– - Answer all summary questions - Answer questions in green box p312 and 314 Answer practice questions p315 to 317 Revision for assessment – provide evidence	Textbook pages 283 to 295 – - Answer all summary questions - Answer questions in the green box page 288 + 292 - Answer questions in the purple box on page 295
16	Post assessment task	Revision for Respiration assessment – provide evidence
23	Practice questions pages 320 to 324	Post assessment task
30	Pre-read task + watch videos : - Pacinian corpuscle - Retina (rods and cones)	Textbook pages 448 to 459– - Answer all summary questions - Answer questions in the green box page 450 - Answer questions in the purple box on page 455
7th December	Identify 4 topics that could be used in an essay on 'Importance of Nitrogen in biological systems' -	Textbook pages 461 to 463 – - Answer all summary questions Answer practice questions on pages 464 to 465
14	Essay: Write 2 'topics' – 1. Importance of ATP in biological systems 2. Importance of Enzymes in biological systems	Textbook pages 466 to 489 – - Answer all summary questions - Answer questions in the green box page 477, 479, 480 - Answer questions in the purple on page 471, 472 to 473
21	Christmas holidays	Revision for assessment on populations
28	Christmas holidays	
4 th January	Act on feedback given on the essay 2 topics and create a new improved version based on this feedback	Post assessment task
11	Essay: Write 2 'topics' for: - Importance of membranes in biological systems	Textbook pages 500 to 509 – - Answer all summary questions - Answer questions in the purple box pages 503, 508 to 509 - Answer questions in the green box on page 507
18	Essay: Act on feedback given and create a new improved version based on this feedback	Textbook: Practice questions (Chapter 17): p446 to 447 - chapter 17 Practice question (Chapter 18): p464 to 465
25	Essay: Create draft following the template: - 4 topics chosen - Key words to be used in each topic	Revision for skeletal muscle assessment – evidence required

	- How each paragraph will be linked back to the title Order of topics and how link each paragraph together	
1 st February	Essay: Act on feedback given and hand in new improved version	Textbook: Pages 367 to 375 - Answer all summary questions Practice questions (chapter 15): p376 to 377
8	Mock exams: Revision – provide evidence	Mock exams: Revision – provide evidence
15	Half term	
22	Mock exams	Mock exams
1 st March	Post mock exams tasks	Post mock exams tasks
8	Essay: Create draft following the template: - 4 topics chosen - Key words to be used in each topic - How each paragraph will be linked back to the title Order of topics and how link each paragraph together	Textbook pages 378 to 393 – - Answer all summary questions - Answer questions in the purple box pages 380 – 382 - Answer questions in the green box on page 385, 393
15	Essay: Act on feedback given and create a new improved version based on this feedback	Textbook pages 394 to 404 – - Answer all summary questions - Answer questions in the purple box page 398 - Answer questions in the green box on page 398
22	Practice questions in textbook: - Response to stimuli - Page 344 - Nervous co-ordination – page 376 Answer all summary questions and green box and purple box questions: - Pages 510 to 512 - Pages 513 to 518	Textbook pages 404 to 406 – - Answer all summary questions - Answer questions in the purple box page 406 Answer the practice questions on pages 407 to 409
29	Easter holiday	
5 th April	Easter holidays	
12	Past paper: Paper 1 - Complete, self-mark and correct	Past paper: Paper 1 - Complete, self-mark and correct
19	Past paper: Paper 2 - Complete, self-mark and correct	Past paper: Paper 1 - Complete, self-mark and correct
26	Essay: Plan, create (following template)	Past paper: Paper 2 - Complete, self-mark and correct
3 rd May	Essay: Plan, create (following template)	Past paper: Paper 2 - Complete, self-mark and correct
10	Past paper: Paper 3 - Complete, self-mark and correct	Past paper: Paper 3 - Complete, self-mark and correct
17	Exam season starts	Exam season starts
24	Exams	Exams
31	Half term	