

# A-Level Biology Elevate

## Task 1 - GCSE to A-level

There is lots of overlap between GCSE to A-Level and so it is really important that you know the whole course. Choose one (or all) topic that was not assessed at GCSE to learn and make notes on. Come up with 5 questions to ask your class in September.

- Development of drugs
- Aerobic and Anaerobic respiration
- Development of genetics
- Evolution

**Task 2 - Choose a science related TED talk to listen to on [www.TED.com](http://www.TED.com) or a podcast from <https://www.thenakedscientists.com/>**

**Answer the following questions**

- Q1) What made you choose this TED talk?  
Q2) Explain it in 50 words.  
Q3) What did you find the most interesting?  
Q4) Does it relate to the A-Level Biology specification in any way and how?

## Task 3 - Maths Skills:

Maths skills are really important for A-level Biology. 10% of marks in Biology will be from maths skill. To prepare for this make sure you are confident with your GCSE maths skills. E.g. algebraic equations, graphing, mean, mode, median, significant figures, ratios, fractions and percentages, units of measurement, standard form, calculating measurements of different shapes. We will also be looking at Standard deviation, Logarithms, exponents, % error and statistics throughout the course.

## Task 4: Research Essay

In Paper 3, you will need to write an essay bringing together lots of topics under one idea. To help with your summer learning you will need to research and write an essay.

The title of the essay is “Describe the importance of shape in biology”. Your essay will be 3 paragraphs long. Use the resources to help you with your content knowledge.

For each paragraph - State how shape relates to this content. Why is shape important? How does it work? What would happen if these shapes did not work?

Paragraph 1 – The importance of shape in relation to ENZYMES

Useful resources to look at:

<https://www.youtube.com/watch?v=O-3IaxNSPog>

Paragraph 2 – The importance of shape in relation to ANTIBODIES

Useful resources to look at:

<https://www.youtube.com/watch?v=mPv19IO-iR0>

Paragraph 3 – The importance of shape in relation to PROTEIN STRUCTURE

Useful resources to look at:

<https://www.youtube.com/watch?v=8d2Edz46UF4>

You can use other resources to help you but these MUST be referenced at the end using the Harvard referencing style. Research what this includes and use this website to help you: <https://www.citethisforme.com/>

## Task 5: Required practicals

Over the course you will complete practicals testing your skills. If you pass, you will be awarded a required practical endorsement certificate that universities will need if you are applying for a science related course.

Complete your initial training and print the certificate and keep it in your folder ready for the first lesson.

Follow the link below (centre code: 13337)

<https://analytics.clickdimensions.com/aqaorguk-acja4/pages/i3ijwyt2eeibtahg25egq.html>

**Task 6: Enrichment - With a friend, visit the animals at Hainault Forest or visit the Wellcome Collection Museum in London.**

- Take some photos
- What did you enjoy?