



The Thomas Hardy School

Summer Preparation Task

Biology A Level
AQA 7402

Purpose of task:

We follow the new AQA Biology A level specification. There is a lot to learn ready for the mock exam module in early January and this is a big step up for some students. Therefore, it is important that you see what is coming up for the Autumn term before you start, and get an overview of the course ahead.

These summer tasks will help you to get ahead of the game and ensure that you start with a solid foundation in September, so enjoy and good luck!

Recommended resources:

<http://www.aqa.org.uk/subjects/science/as-and-a-level/biology-7401-7402>

<https://www.youtube.com/watch?v=URUJD5NEXC8>

<http://www.mind-mapping.co.uk/make-mind-map.htm>

Task:

Task 1 - Getting to know the specification from the exam board (2 x 30 min)

Read the pages 9-11 of the new AQA Biology specification <http://www.aqa.org.uk/subjects/science/as-and-a-level/biology-7401-7402>

Then read through the subject content part of the spec. as follows:

- SECTION 3.1 Biological molecules (pages 12-19)
- SECTION 3.2 Cells (Pages 20-25)

Make a poster / mind map on A3 paper for each section to summarise key parts of the two topics and the study requirements. Add as much detail as you think is useful. You could tick those topics that you already know something about or topics that you cover during these summer tasks (such as cell structure).

Task 2 - Key terms (1 hour)

Biology has a language and set of key words all of its own and every year students get muddled by this. So why not get a head start? Find out **definitions** of the selection of **40 useful key words** below. Try to write definitions in your own words to ensure that you fully understand them. You will go through these words (and others!) in class. Feel free to **EXPAND** the boxes so can fit everything in properly!

Deadline for Task: First lesson in week commencing 10th September 2018

Task 3 - OPTIONAL Researching cell structure

Use the internet to research “Eukaryote cell structure” and make either a powerpoint or word document that summarises key information. Find out what a eukaryote cell is and look into plant and animal cells in detail. Select the best images to show all the main structures found in cells.

Add simple bullet notes (not huge copied chunks of text!) about structure and function e.g:

- Describe key features & facts about the organelle or structure (including size).
- What does the organelle or structure do?
- How does it do that?
- What sort of cells have it?

Key things to research include: plasma membrane, cytoplasm, nucleus, mitochondrion, chloroplast, vacuole, cellulose cell wall, endoplasmic reticulum (rough & smooth), golgi apparatus, vesicles, lysosomes, centrioles, cilium, flagellum, microvillus.

In total this should be less than 10 pages long. When printed off, this will make an excellent visual overview of the first topic, forming the starting basis for your unit 1 notes.

A Level BIOLOGY KEY WORDS

Name: _____

Key words	Definitions / details
Active site	
Active transport	
Aerobic respiration	
Alpha helix	
Arteriosclerosis	
Atheroma	
Benedict's test	
beta (pleated) sheet	
Biuret test	
Bronchioles	
Condensation reaction	
Diaphragm	
Diffusion	
Disaccharide	
Epithelium	
Eukaryote	

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Glucose	
Glycogen	
Glycosidic bond	
Hydrogen bond	
Hydrolysis reaction	
Light microscope	
Lipid	
Monosaccharide	

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Mutualism	
Organelle	
Osmosis	
Peptide	
Peptide bond	
Permeable	
Plasma membrane	
Polysaccharide	
Primary structure (protein)	
Prokaryote	
Scanning electron microscope	
Surface area to volume ratio	
Symbiosis	
Transmission electron microscope	
Transpiration	
Ventilation	

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Additional Information:

Required Stationery and Equipment for A Level Biology

Required stationary and equipment: Pens, pencils, 30 cm ruler, scientific calculator, A4 folder, A4 lined paper, A4 plain paper, plastic wallets.

Essential Resources

WORKBOOKS: AQA Biology 1, A-Level Year 1/AS - Student Workbook, Biozone - for year 12 (ISBN 978-1-927309-19-3)

AQA Biology 2, A-Level Year 2 - Student Workbook, Biozone - for year 13 (ISBN 978-1-927309-20-9)

TEXTBOOK: AQA Biology A Level Student Book, Glenn Toole, Susan Toole, Oxford University Press, for both years (ISBN: 9780198351771)

OR

TEXTBOOK: A-Level Biology for AQA: Year 1 & AS Student Book, Coordination Group Publications Ltd (CGP) – for year 12

(ISBN-13: 9781782943198)

A-level Biology for AQA Year 2 Student Book, Coordination Group Publications Ltd (CGP) – for year 13, (ISBN-13: 9781782943242).

OPTIONAL revision guide: New A-Level Biology: AQA Year 1 & 2 Complete Revision & Practice, Coordination Group Publications Ltd (CGP) – for both years (ISBN-13: 9781782942979).

OPTIONAL MATHS support booklet: Title Maths Skills for Biology a Level, James Penny, Publisher Oxford University Press, 2014

(ISBN 1408521180, 9781408521182).

All these books will be available from the science prep room at a considerable discount.

Things to Consider Throughout the Year

Learn the key words used in lessons (as per the summer task) and understand the concepts behind these words.

Keep on top of workbook assignments and written notes.

Use common assessment questions you are set by your teachers or on-line past papers to develop exam skills and confidence early on in the year.

Keep up to date with your required practical work and put all work in your practical lab book and folder (which normally stays in the lab).

Concentrate on developing maths and data analysis skills throughout the year.

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