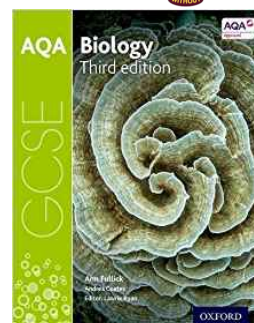




Biology Overview

Term: Autumn
Year: 9
Teacher: Ms Fatima Mamache & Mr Alamgir
Textbook title: AQA GCSE Biology Oxford



What will we be covering this term?

1st Half Term:

Cell Biology:

Cell structure – This term, we will only cover the significant overlapping contents between Key Stage 3 and Key Stage 4. Students will revise and develop their understanding about microscopy and cells. They will be able to explain how the development of microscopy techniques, particularly electron microscopy, has enabled scientists to investigate the sub-cellular structures. Students will be able to differentiate between animal and plant cells, differentiate between eukaryotic and prokaryotic cells, and identify adaptations of specialised animal and plant cells. They should be able to define a tissue, an organ, and an organ system. Students will also learn about the transport of material into and out of cells by diffusion.

2nd Half Term:

Organisation and digestive system - In this chapter, students will revise the principles of organisation. Building on their knowledge of differentiation and specialisation of cells, they should be able to define a tissue, an organ, and an organ system. They will study the human digestive system as an organ system in which several organs work together to digest and absorb food, breaking down large insoluble molecules so they can be absorbed into the bloodstream.

Students should understand the hierarchical organisation of the digestive system – for instance, the stomach is one organ, made up of muscular tissue, glandular tissue, and epithelial tissue, which digests food (especially protein).

By the end of the chapter, students should be familiar with enzyme action and understand that enzymes are proteins with a specific shape including the active site.

Organising animals and plants: Students will study breathing and gas exchange, and should recognise the main structures of the gas exchange system along with their functions. They should know that gas exchange happens in the alveoli and describe adaptations of alveoli. They should be able to describe the processes of ventilation and gas exchange and the differences in composition of inhaled and exhaled air.



Teacher's Marking Key:

Mark code	Means
SP	Spelling error
//	New paragraph needed
Work underlined	Indicate a word or phrase does not make sense
?	Not clear. Rewrite this section again to improve the expression.
FS	Write in full sentences
EX	Develop your explanation further using scientific keywords.
D	You need to add more detail.
EBI	Even better if
www	What went well
GR	Grammar error
P	Punctuation error

How will my child be assessed this term?

There will be at least 2 assessed pieces this term.

In more detail;

1st Assessment: Cell structure

2nd Assessment: Organisation and digestive system

At the end of the term there will summative exam that will test their knowledge for what they've covered during the course of the entire term.

How can I help my child in this subject?

- Ensure homework is complete; you can track students' homework assignments at <https://www.showmyhomework.co.uk>
- Encouragement, praise, ensuring that they do their homework; and checking their student planner.
- Encouraging them to read around the subject.
- Their notes must be in order; discipline is essential.

Resources

Useful Websites

For independent study the following websites are recommended:

- Maths skills in GCSE Biology: <https://www.my-gcse-science.com/maths-skills-gcse-biology/>
- AQA specification: <https://filestore.aqa.org.uk/resources/biology/specifications/AQA-8461-SP-2016.PDF>
- BBC Bitesize: http://www.bbc.co.uk/schools/gcsebitesize/science/add_aqa/
- Revision GCSE Biology: <http://www.gcsescience.com/pe.htm>
- Assessment resources: <https://www.aqa.org.uk/subjects/science/gcse/biology-8461/assessment-resources>
- GCSE exam questions organised by Topics & difficulty: <https://www.savemyexams.co.uk/gcse-biology-aqa/>



Communications

Who do I contact if I have concerns about my child's progress in this subject?

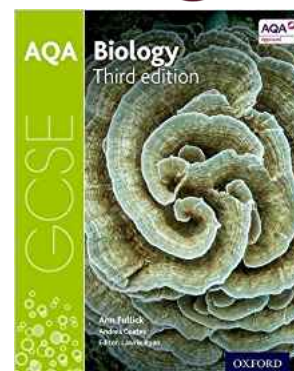
Please feel free to contact us at the school from 9.00-15:00 if you have any questions or concerns or contact me by email

fatima.mamache@alkhairschool.org.uk & Alamgir.islam@alkhairschool.org.uk



Biology Overview

Term: Spring
 Year: 9
 Teacher: Ms Fatima Mamache & Mr Alimger
 Textbook title: AQA GCSE Chemistry Oxford



What will we be covering this term?

1st Half Term:

Respiration: This is a key concept that students should be confident with. This term, we will only cover the overlapping contents between key stage 3 and key stage 4. Students should be able to recall that this is one of the most important processes in living cells. Students will study the response of humans to exercise, including changes in heart rate, breathing rate, and breakdown of glycogen, all to increase the rate of respiration in muscle cells. Students will look at mitochondria as the site of respiration, linking this with B1.2 Animal and plant cells and cell specialisation in B1.4 and B1.5. Students should be able to list examples of living processes that need the energy released from respiration.

In studying anaerobic respiration, students should be aware of this process in mammalian muscles, and be able to write the word equation. Students should be aware that anaerobic respiration occurs in yeast cells and some plant cells.

2nd Half Term:

Photosynthesis: In this chapter, students will study photosynthesis in both plants and algae. Students will study the adaptations of leaves to achieve maximum efficiency in photosynthesis. Students will study factors that affect the rate of photosynthesis. They should understand the concept of limiting factors.

Teacher's Marking Key:

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www	What went well
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How will my child be assessed this term?

There will be at least 2 assessed pieces this term.

In more detail;

1st Assessment: Respiration

2nd Assessment: Photosynthesis

At the end of the term there will summative exam that will test their knowledge for what they've covered during the course of the entire term.

How can I help my child in this subject?

- Ensure homework is complete; you can track students' homework assignments at <https://www.showmyhomework.co.uk>
- Encouragement, praise, ensuring that they do their homework; and checking their student planner.
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- Revision GCSE Biology: <http://www.gcse-science.com/pe.htm>
- Assessment resources: <https://www.aqa.org.uk/subjects/science/gcse/biology-8461/assessment-resources>
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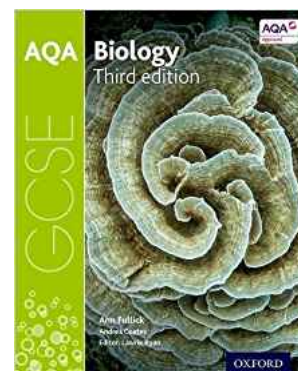
Please feel free to contact us at the school from 9.00-15:00 if you have any questions or concerns or contact me by email

fatima.mamache@alkhairschool.org.uk & Alamgir.islam@alkhairschool.org.uk



Biology Overview

Term: Summer
Year: 9
Teacher: Ms Fatima Mamache & Mr Alimger
Textbook title: AQA GCSE Chemistry Oxford:



What will we be covering this term?

1st Half Term:

Non-communicable disease: In this chapter, students will study non-communicable diseases and should understand what is meant by risk factors for a disease. Students should be aware of the risks of diseases from smoking. Students will study alcohol and health, and will understand the effect of alcohol on the brain and liver, and of drinking alcohol during pregnancy. Finally, students will learn about the carcinogenic effects of ionising radiation.

2nd Half Term:

Adaptations, interdependent, and competition: In this chapter students have studied communities, environments, adaptations, and competition. There are a number of ecological terms including community, population, habitat, ecosystem, abiotic factor, and biotic factor, and students should recall the precise meaning of each. Students should measure the distribution of organisms with quadrats and transects, and carried out a practical to investigate the population size of a common species in a habitat. They will understand how organisms are adapted to survive in many different conditions.

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How will my child be assessed this term?

There will be at least 2 assessed pieces this term.

In more detail;

1st Assessment: Non-communicable disease

2nd Assessment: Adaptations, interdependent, and competition

At the end of the term there will summative exam that will test their knowledge for what they've covered during the course of the entire term.

How can I help my child in this subject?

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