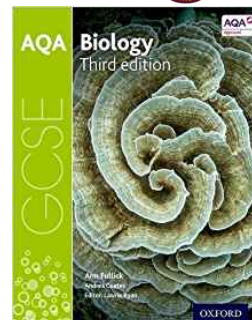




# Biology Overview

**Term:** Autumn  
**Year:** 10  
**Teacher:** Mr Alamgir Islam  
**Textbook title:** AQA GCSE Biology Oxford



## What will we be covering this term?

### 1<sup>st</sup> Half Term:

**Organisation and digestive system (part II)** - By the end of this chapter, students should be familiar with enzyme action and understand that enzymes are proteins with a specific shape including the active site. Students will study the effect of high temperature and extremes of pH on enzymes in changing the active site, which denatures the enzyme. They should be aware of how each part of the digestive system is adapted to provide an optimum pH for each enzyme, including the role of bile in the small intestine.

### 2<sup>nd</sup> Half Term:

**Communicable diseases:** In this chapter, students will see how the concept of health (as a state of physical and mental well-being) is affected by communicable (infectious) diseases. They will look at the different pathogens that can cause communicable disease, including bacteria, viruses, and protists, and how these can be spread between organisms - both animals and plants. As part of this, they will look at the development of simple hygiene methods to prevent the spread of pathogens as well as the isolation of individuals who are infected, the destruction of or control of vectors, and the use of vaccination. Students should be able describe the different pathogens, the symptoms and treatments of a range of different animal and plant diseases, and the different defense mechanisms of the human body and plants.

## 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;

**1<sup>st</sup> Assessment:** Organisation and digestive system

**2<sup>nd</sup> Assessment:** Communicable diseases

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/](http://www.bbc.co.uk/schools/gcsebitesize/science/add_aqa/)
- Revision GCSE Biology: <http://www.gcse-science.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

[alamgir.islam@alkhairschool.org.uk](mailto:alamgir.islam@alkhairschool.org.uk).



# Biology Overview

**Term:** Spring  
**Year:** 10  
**Teacher:** Mr Alamgir Islam  
**Textbook title:** AQA GCSE Chemistry Oxford



## What will we be covering this term?

### 1<sup>st</sup> Half Term:

**Preventing and treating disease:** In this chapter, students will study the prevention of disease by vaccination. They should know how the immune system works and what is meant by an antigen. They should appreciate that the shapes of antigens and antibodies are complementary. They should understand what a vaccine contains and how it works, giving examples, and the concept of herd immunity.

Students will study the treatment of disease by drugs including painkillers and antibiotics. They should understand that painkillers such as aspirin and paracetamol treat the symptoms and not the cause of disease. They should be aware that antibiotics are drugs used to cure bacterial infections.

### 2<sup>nd</sup> 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. They will analyse the impact of disease at several different levels.

Students should be aware of the risks of diseases from smoking, linked to work on the heart and blood vessels in B4 *Organising animals and plants*.

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.

## Teacher's Marking Key:

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D	You need to add more detail.
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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;

**1<sup>st</sup> Assessment:** Preventing and treating disease

**2<sup>nd</sup> Assessment:** Non-communicable disease

At the end of the term there will be a 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>
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### Resources

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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>
- 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?**

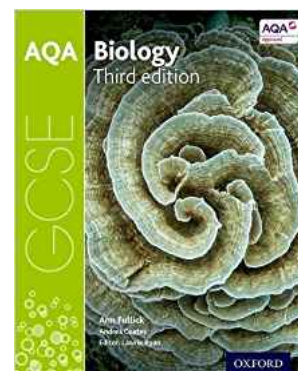
Please feel free to contact us at the school from 9.00-15:00 if you have any questions or concerns or contact me by email

[alamgir.islam@alkhairschool.org.uk](mailto:alamgir.islam@alkhairschool.org.uk).



# Biology Overview

**Term:** Summer  
**Year:** 10  
**Teacher:** Mr Alamgir Islam  
**Textbook title:** AQA GCSE Chemistry Oxford:



## What will we be covering this term?

### 1<sup>st</sup> 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.

Finally students will consider the use of greenhouses and study how the conditions can be monitored and manipulated to achieve the highest rate of photosynthesis.

### 2<sup>nd</sup> Half Term:

**Respiration:** In this chapter students will study respiration, and 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. They should link this with work on the heart and blood vessels in B4 *Organising animals and plants*.

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.

## Teacher's Marking Key:

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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;

**1<sup>st</sup> Assessment:** Photosynthesis

**2<sup>nd</sup> Assessment:** Respiration

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>
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