

A-Level Environmental Science Preparation Guide



Welcome to A Level Environmental Science!

You've probably been wondering how studying A Levels will compare to your previous studies so we have put together a quick guide and some activities to help you get ready for starting in September.

Course overview

If you have a passion for the environment and the complex processes that shape it, Environmental Science is the course for you. It is a holistic subject that examines the Earth's interconnected systems and processes. A change to one process can affect many other processes over different spatial and temporal scales.

The complex issues we face demand inventive solutions, so you'll learn to connect different aspects of natural and social sciences with psychological, scientific and policymaking ideas. At Bury college, we believe that consideration of environmental issues and the conclusions reached should be based on reliable evidence-based information.

Career opportunities

Environmental Scientists understand both physical and natural sciences, and practical skills required to tackle climate change, food insecurity, management of water resources, managing air pollution and conservation of natural resources.

Your skills will be useful in education, water management, agriculture, healthcare, industry and natural resource management. Other career opportunities include environmental planning/research, environmental law, microbiology, ecology, horticulture and pollution control.

It is one of the fastest growing areas of employment.

Subject content and skills

At Bury College, we will help you develop practical skills in our world-class facilities. There is great camaraderie and team effort in the science department.

Environmental Science lends well with other A-level subjects including Geography, Chemistry, Biology and Maths. You will engage in communication, teamwork and critical thinking with other members of the faculty. There are opportunities for extensive practical experiences and fieldwork. The key thought-provoking topics include:

1. The living Environment
2. The Physical environment
3. Energy Resources
4. Pollution

5. Biological resources
6. Sustainability
7. Research methods

At the end of each subject content section, there will be details of opportunities for you to develop scientific skills within the context of that topic.

These include:

- skills related to the methodologies and sampling techniques that you will gain through first-hand experience
- skills related to research methods that can be gained through class-based and/or practical activities.
- Maths skills. Overall at least 10% of the marks in assessments for Environmental Science will require the use of mathematical skills.

Lessons

A high level of attendance and punctuality are essential for success in Environmental Science.

Equipment needed include: Black pen, scientific calculator, pencil, ruler and paper. You will need a file to store all your resources.

Learning to Learn

Environmental Science is a challenging but rewarding subject, offering insight into the world around us and how things that we take for granted work. In order to succeed in this subject, you must have the ability to learn an extensive amount of work as well as be able to apply the theory.

With this in mind, to assist your learning and enable you to perform to your potential, we would expect:

- You must review your notes by making flash-cards or other methods to assist your learning of the material.
- You not to leave all learning until the end of the year before exams, this volume of work cannot be learnt in a few days.
- Your completion of two pieces of work every week to assess your progress and understanding.
- You to use MyVLE for extra resources and questions.

Planning for Exams

The exam board is AQA, specification number 7447.

You will sit two exams both a combination of multiple choice, short answer and extended writing questions. You will be expected to draw on knowledge and understanding of the entire course of study to show a deeper understanding of the interconnections between topics.

Both papers comprise a 3 hour written exam. The areas of assessment are:

Paper 1

- The physical environment
- Energy resources
- Pollution
- Research methods

Paper 2

- The living environment
- Biological resources
- Sustainability
- Research methods

Recommended Activities

Watch Earth under water

<https://www.youtube.com/watch?v=uOMRF7t5Vn0>

Are we headed for a catastrophe? <https://www.youtube.com/watch?v=pJ1HRGA8g10>



These newspaper headlines reveal the complexity of environmental systems. What is the link between increased snow storms and climate change? What is the difference between global warming and climate change. What are the causes of global warming? What are the effects? What do climate change deniers say in opposition?

Complete a 2-page report summary.

We recommend that you complete the report because it gives you a taster of what to expect when you start your course. However, it is important to note that:

- Your task will not be considered as part of your entry requirement. It will not be marked or graded.
- You are NOT required to bring completed tasks when you start. Staff will be happy to look at what you have done and it is be lovely to share your work with us. This would be a great platform for starting your interactions with staff and fellow students.

Recommended Textbook

New textbooks have been produced that are designed with the newly structured and examined specification.



Authors: Richard Genn
Publisher: Insight & Perspective
ISBN-13: 978-1-912190-07-2
Price: £24.99
Publication date: Out now

Older AQA certified textbooks will also be suitable for most areas of the specification, but some of the topics have changed slightly and there is less of an emphasis on practical techniques in these books

Recommended Websites

Whilst the internet is full of useful scientific information, we do not advise a random search as many of these sites are not specifically designed for AQA Environmental Science. This applies to Wikipedia, as the content regularly goes far beyond the A-Level specification and covers many interesting areas that are not relevant to the course.

The most useful websites are:

<http://www.aqa.org.uk/>

The AQA website, which can be used for information relevant to the course, as well as past exam papers and exemplar questions from the new specification.

<https://www.thestudentroom.co.uk/showthread.php?t=5507846>

The student room is an informative website, explaining all of the areas of the specification in a level of detail suitable to A-Level students, designed with the AQA syllabus in mind.

<https://www.youtube.com/>

YouTube demonstrates many practical experiments that are essential to the course, as well as many that show the diversity and fun aspects of Chemistry.

Still Uncertain

If you are unsure what course you think you should choose or what career you would like to aspire towards then contact Admissions on

“People must feel that the natural world is important and valuable and beautiful and wonderful and an amazement and a pleasure.” **Richard Attenborough**