

Geology

A Level

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Exam Board: WJEC



What is the course about?

Geology is the branch of science concerned with the structure, evolution and dynamics of the Earth and with the exploitation of its mineral and energy resources in a sustainable way.

The questions you will look at include:

- How do we know that the earth is 4,600 million years old (when no-one was around to see)?
- How do we know that the centre of the earth is solid metal (when no-one has been down to have a look)?
- Vesuvius is an active volcano in Italy. It is a major threat to the nearby city of Naples. How are geologists able to be confident in predicting when it will next erupt so that the citizens of Naples will be able to evacuate in safety?
- Why is it so difficult to predict earthquakes? Could we put ourselves in a position to be able to do this?
- How can we draw conclusions about the rocks underneath us and how they were formed (when there is so little evidence on the surface of the earth itself and the rocks were formed so long ago)?

Taking A level Geology gives you a taste of what the subject is about and students who have taken it have often gone on to study it at university level. As well as learning about the knowledge scientists have built up about the Earth's structure and history, the subject involves practical "detective work", as geologists have to draw conclusions from the limited amount of evidence available on the surface of the Earth about what there is underneath. There are significant career opportunities in the subject and a considerable number of students who first studied the subject at Esher College have gone on to pursue these.

For the AS level you will study:

In the AS level you will be introduced to all aspects of the study of the subject at a foundation level. You will also look at the relevance of Geology in everyday life in connection with geological hazards such as earthquakes, volcanoes and tsunamis, as well as looking at the work of the geologist in areas such as civil engineering. In addition, you will undertake fieldwork and complete coursework centered on this.

For the A2 level you will study:

In the A2 you will build on the topics covered at AS and will carry out a more detailed study of plate tectonics and natural resources. Further fieldwork will be undertaken in connection with the coursework component of the course.

How is the course assessed?

Overall the course is assessed 70% by examination and 30% by coursework.

What skills will I need and develop in this course?

Geology is a science and so a scientific method and approach to study is adopted. It is essentially a practical, "hands on" subject and a proportion of your time will be devoted to practical work. The real geological laboratory is the field and fieldwork is a compulsory part of the course. Fieldwork and practical work are assessed by means of coursework projects, which will represent 30% of the qualification. The major requirement to do Geology is a determination to take on a new subject with its new way of thinking and its new terminology.

What courses would combine well with this subject?

Geology is studied by students with very different academic backgrounds and many subject combinations exist. It combines particularly well with other sciences and with Geography. To be able to study Geology at university you will need to have taken science A levels more broadly. You cannot take Geology as your only science A level if you want to be able to do this.

What can the course lead to in terms of higher education and future careers?

Geology is useful for any science/geography related degree course. Professional geologists often search for exploitable earth resources or are involved in the management of geological hazards. Geology also provides a good background for careers such as civil engineering, cartography and town and country planning.

What are the formal entry requirements for this course?

Aside from the general criteria which the College requires, you will also need a grade C in GCSE a Science subject (and preferably in GCSE Additional Science too) or in at least one of GCSE Biology / GCSE Chemistry / GCSE Physics. Grade C in GCSE Maths is also required.

What extra support / enrichment activities are on offer?

Fieldwork is an essential part of the course and we do day trips to Dorset and a one week residential trip to Italy at the end of the first year. This residential trip allows us to study Vesuvius and its destruction of Pompeii and Herculaneum in AD79.



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