WGS6 A Level Options
Geology FAQ Information Sheet

Which exam board and courses are studied at A Level?

Eduqas (the English brand of "WJEC"). You can find the specification on their website.

What skills will studying Geology equip me with?

You will study a range of topics concerning Planet Earth, including the structure of the Earth, how the Earth's plates move and how these movements cause hazards for us. You will learn about the clues contained in igneous, sedimentary and metamorphic rocks that allow us to work out how they formed. In addition, you will study fossils which reveal the development of life on Earth, how the Earth has provided geological resources essential for us to live, and evidence for previous times of climate change on Earth.

Geology is above all a problem-solving science subject. You will develop practical skills, in both the classroom and outdoors, that will help you to gather information about processes that have formed the Earth. The ability to think in 3D is an important skill that you will acquire in the study of geological maps and the drawing of geological cross-sections. You will develop investigative skills such as analysing and interpreting the evidence that is contained in the rocks and fossils. You will become able to evaluate evidence, to decide which of several possible ideas or theories to explain something might be more likely. You will also develop mathematical and writing skills, both important aspects that are used in the study of our Earth.

Do I need a specific grade at GCSE to access A level?

As a science A level, it would help to start your journey in Geology with confidence in your scientific and mathematical understanding from GCSE (grade 6 minimum).

Some students will have taken GCSE Geology prior to starting their A level, which helps them appreciate the fundamental ideas, but this is certainly not a requirement. The A level course is designed to be taught to complete beginners with no prior knowledge (beyond basic concepts covered in GCSE sciences).

How is the course structured and how will it be taught?

The course is split into modules ("F" - fundamentals, "G" - advanced geological concepts, and "T" - themes) which each tackle particular "Key Ideas" laid out in the Eduqas A level specification. Each module is studied with the aid of a booklet and ends with an assessment, used to inform your grade throughout the course.

The core aspects of A level Geology are:

- F1 - elements, minerals and rocks
- F2 - surface and internal processes of the rock cycle

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- F3 - time and change
- F4 - Earth structure and global tectonics
- G1 - rock forming processes
- G2 - rock deformation
- G3 - past life and past climates
- G4 - Earth materials and natural resources.
- T1 - geohazards
- T2 - geological map applications
- And the module selected from a choice of "options": T5 – the lithosphere

In addition to theoretical knowledge, you will develop practical skills (see next section) and the ability to interpret real geological data, for example to draw cross-sections from maps.

Is there a coursework component?

There is no coursework in the traditional sense of tasks which count towards your final grade. However, like all science A level subjects, you will take part in a number of practical activities that will go towards you achieving a 'practical endorsement'. This will demonstrate that you are competent in a range of practical skills.

A number of these practical skills can only be developed during fieldwork, therefore being outside is an essential part of Geology. You will go on a minimum of 4 fieldtrips over the 2-year course, visiting places where rocks can be easily seen at the Earth's surface. Once you have studied Geology for a while you will be able to collect information on your fieldtrips that will allow you to work out what the Earth was like millions of years ago.

Who teaches the course?

The A Level course is taught by experienced geology specialists – so you are in safe hands!

How is the course resourced?

Students receive booklets for each module and PowerPoints are shared online. Students also receive a copy of an A level textbook for the duration of their studies. This is written for the OCR A level Geology textbook, but the content is also suitable for the Eduqas course. The Eduqas exam board also provides "Knowledge organisers", which are the equivalent of revision guides.

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How well do students achieve in Geology?

Students often gain their best A Level grade in Geology. **On average, 55% of A Level Geology students achieve an A/A* grade and 87% of students achieve a grade C or above.**

Perhaps most importantly, a large proportion of the students enjoy the subject so much that they go on to pursue a Geology or related degree at their first-choice university (around 75% of the cohort each year). Alumni have studied at destinations such as Liverpool, Durham, Leeds and St Andrews.

Will I need to do a lot of independent study?

As with all A level subjects, students you are expected to conduct study using revision resources. Homework is set on a regular basis and usually takes the form of exam-style questions, which allow you to consolidate the learning from the previous lesson.

What are typical A level subject choices alongside Geology?

As a science which specifically deals with our planet, you will explore themes in which you can apply concepts from:

- Geography – such as weathering, transportation and erosion, and the impact of hazards on human populations
- Physics – such as remote sensing with waves and fields, and the mechanical behaviour of rocks for engineering
- Biology – such as investigating ancient ecosystems and interpreting changing environmental conditions from evolution in the fossil record
- Chemistry – such as mineral structures and processes within magma chambers
- Mathematics – such as exponential decay of radioactive isotopes for dating, and statistical testing of datasets to look for patterns

This holistic approach to studying our planet helps you to build an appreciation for the "big picture" – looking at how processes interact in order to analyse a situation and find potential solutions to problems. Therefore, Geology has typically been chosen by students as a great 3rd option accompaniment to sciences, maths or geography, and quickly become their favourite subject!

Do I need to take another subject to support my study of Geology?

There is no requirement to take any particular subjects in order to succeed in Geology. All you need is an interest in our planet and its history, a willingness to explore the outdoors in typical British weather and basic maths/science skills. Though students typically take other sciences, maths or geography alongside Geology, there are those who enjoy learning about the Earth alongside their passion for unrelated subjects like Art, Music or Modern Languages.

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What subject related extracurricular opportunities are offered at A level?

In addition to fieldwork opportunities, students have taken part in a range of voluntary extra-curricular enrichments including university visits, talks from guest speakers in industry and academia, involvement in national competitions and visits to careers fairs.

How might Geology help me in my next steps / university / career planning?

Many of the most prestigious universities in the UK and internationally have a long and proud history of offering courses in Earth Sciences and its many pathways – including areas like Geology, Geophysics, Planetary Sciences, GIS, Geotechnical engineering, Environmental Science & Sustainability. Geology therefore opens up a wealth of possibility into study and employment opportunities which deal with humans and the world around us.

Studying Geology has traditionally been seen as a pathway into oil and gas sectors, but times have changed a lot and the demand for good Geologists continues to grow. As we head towards a renewable energy future, the demand for metals from mineral ores is growing at an incredible rate, much faster than the number of Geology graduates. In fact, the UK government specifically names “geophysicist, geoscientist, geologist, geochemist” on their list of “shortage occupations” for skilled workers.

We need Geologists to help us meet our energy, water and land-use needs, and to help solve geohazard and climate change related problems through geo-engineering, research and risk management. You may not know that engineering projects require Geologists to assess and model the mechanics of the ground, offering potential solutions in complex situations in order to ensure structural work will be safe and secure.

Other helpful information about studying Geology

Fieldwork inevitably incurs a cost, though efforts are taken to keep this to a minimum. The typical cost of daytrips is around £15-20 per student per year of the A Level course. Residential trips may be considered in future years (the most recent 3 day (2 night) residential had a total cost of £170 per student (including accommodation, evening meals and transport)). There is often an opportunity to visit Iceland on a combined trip with the Geography department.

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