Geologist

Geologists study the origin, composition and structure of the earth. This could be to locate and help extract materials, to identify geological hazards or to assess ground conditions for development projects. Other terms used include engineering geologist, geoscientist, geophysicist and hydrogeologist.

What does the job involve?

In the field you could:

•travel to investigate rocks in their natural setting

•assess the ground for suitability on engineering projects like dam or tunnel building

•sample rocks and record information to search for energy resources and minerals, like water, gas and oil

•study volcanic and seismic activity to develop early warning systems for communities living close to earthquake zones

•supervise site teams

•advise on suitable sites for landfill or storage of nuclear waste

In the laboratory you could:

•use a microscope to study rock samples

•test for things like strength or pollution levels

•use software modelling programmes

•analyse data and write reports

Routes and choices while at school:

You will need to try to get at least two or more GCSEs at grades 9 to 4 (A* to C), or equivalent qualifications. These should include English, maths and science. Other relevant subjects Geography, engineering, IT and chemistry.

Skills You'll need:

- maths knowledge
- knowledge of geography
- analytical thinking skills
- excellent verbal communication skills
- knowledge of engineering science and technology
- knowledge of physics
- knowledge of chemistry including the safe use and disposal of chemicals
- the ability to come up with new ways of doing things
- to have a thorough understanding of computer systems and applications

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How to get into this role:
You can get into this job through:
- a university course
- an apprenticeship

University
To work as a professional geoscientist, you'll need a degree in a relevant subject. Courses often combine theory with fieldwork and practical training. Degree subjects include:
•geology
•geoscience
•geophysics
•Earth science

Apprenticeship
If you want to work in the engineering sector using geoscience, you could do a Geotechnical engineer integrated degree apprenticeship.
Employers look for graduates with a degree in subjects like:
•engineering
•science
•geoscience
•maths

Further information

Career tips
It's useful to get some work experience through an internship or year in industry placement while you are at university. Your university careers service can help you find opportunities. Organisations like Geology for Global Development also run projects and placements to help you gain skills.

Career path and progression
With experience, you could progress towards a consultant position, or move into teaching or management.
You may also be able to apply for chartered environmentalist status. You can find out more about being a chartered environmentalist from the Society for the Environment.

Rates of Pay
Starting salaries for qualified geologists in the UK tend to be in the range £20,000 to £30,000 a year. With sufficient experience, this can rise up to £50,000 a year or more, and, depending on the specialism or industry, senior geologists can earn more than £90,000 a year..