Sizewell C POWER UP

Why study? Geography

How studying GCSE Geography could lead to a job at Sizewell C

What does Geography have to do with the nuclear industry?

Nuclear power stations are large and sophisticated structures with complex requirements – you can't just build them anywhere! When you're building any new site the area needs surveying to make sure it's suitable, and to establish whether there might be challenges to building there, or whether it could cause other issues that need to be planned for.

Geologists are essential to making sure a site is suitable for nuclear power; but their involvement goes beyond the power station itself[1]. Geologists are key to the successful mining of uranium – the radioactive fuel used in nuclear reactions. They also have a growing role in geological disposal[2], where spent nuclear fuels are stored deep enough underground that no harmful radiation can reach the surface.

Careers at Sizewell C

A geography GCSE will meet the entry requirements of many jobs and apprenticeships at Sizewell C. As an example, it'll be very useful if you like the sound of becoming a **surveying technician**[3], who collects information about buildings, land and construction sites. It may also be the first step towards becoming an **archaeologist**: somebody who studies the human history of a site. Or an **ecologist**, responsible for helping understand how human activity affects ecosystems.

You might be able to apply knowledge from a geography GCSE to other roles. For example, a **landscape gardener**, where your environmental geography skills will help you understand the relationship between the built and natural environment. There are many other engineering jobs where an understanding of physical geography could be relevant. For example, as a **structural** or **civil engineer** in the nuclear industry, you might draw on your knowledge of hazards (such as storms and earthquakes) or the particular challenges of building close to the coastline. The benefit of working in the nuclear industry is that your skills can be so specialist, you'll be in big demand all over the world!

YOUNG SZC

Why study?

Geography

Career pathways using Geography

- Apprenticeships are a common route into engineering roles, or careers in landscape gardening or surveying. Find out more on the government's **Apprenticeships website** or have a look for **Sizewell C apprenticeships**.
- You may need a degree for some roles, such as a civil engineer. In other cases, having one may improve your employment prospects, or give you other options for development and progression.
- An internship or industrial placement can help you experience a role or industry. Your college or university should be able to help you find opportunities.
- EDF is working with local schools and colleges, such as **East Coast College (Lowestoft)**, **Suffolk New College** and **West Suffolk College**, so have a look at their websites for pathway courses too.

Geography skills

People who apply their geographical skills at work may find themselves working outdoors, or in remote or hazardous locations. You may need to draw on **problem-solving** skills, or be great at **staying positive** if you're working in coastal wind and rain, for instance! Work such as surveying and engineering is of critical importance to successful construction projects, so you'll need to be **aiming high** to deliver excellent results.

Useful links

icanbea... Career ideas and opportunities in Norfolk and Suffolk

Young SZC: Connecting young people to careers and apprenticeships in the region

BBC Bitesize: What GCSEs should I take?

BBC: Jobs that use geography

1. https://www.geolsoc.org.uk/Geology-Career-Pathways/Careers/Job-Sectors/Energy-Sector
2. https://www.gov.uk/guidance/geological-disposal
3. https://www.instituteforapprenticeships.org/apprenticeship-standards/surveying-technician/
4. https://www.epa.gov/ghgemissions/global-greenhouse-gas-emissions-data#:~:text=Since%201970%2C%20CO2%20emissions,been%20the%20second%2Dlargest%20contributors
5. https://world-nuclear.org/information-library/current-and-future-generation/cooling-power-plants.aspx
6. https://www.sizewellc.com/wp-content/uploads/2023/02/sizewell_c_environment_brochure.pdf

All information correct at the time of going to print in December 2023.
Some of the images come from our sister project, Hinkley Point C, in Somerset.

Geography in action

Are you an expert in your fieldwork, or do you need to go back to basalt? Take our geography quiz!

1. The majority of the UK's electricity is generated when turbines are spinning. Which of these power types doesn't rely on turbines?
a) Wind power
b) Solar power
c) Nuclear power

2. Atmospheric carbon dioxide is a major driver of climate change, with emissions having more than tripled since 1960[4]. Is nuclear power:
a) A carbon-neutral source of energy
b) A low-carbon energy source
c) A renewable energy source?

3. Nuclear power stations are designed to withstand certain events, or built where they won't experience them. Which of these natural hazards need to be anticipated? (You can choose more than one)
a) Storm surges and flooding
b) Earthquakes
c) Tsunamis (powerful waves)

4. The UK's eight nuclear power stations are all built on the coast. Why?
a) To keep their fumes away from cities
b) They need lots of sea water for cooling
c) Land is cheaper near the sea

Did you know?

Since 2015, EDF has been using low-grade land at Sizewell to create new wildlife habitats, including 150 hectares transformed into grassland and heathland. These have already been colonised, including a population of grayling butterflies[6].

Answers:
Q1. b) Q2. b) Q3. All of them Q4. b)[5]

Sizewell C

The power of **good for Britain**