



BIODIVERSITY

HPC Inspire

We're Hinkley Point C's Education Programme in Somerset and the wider South West region. And we're here to help young people at school or college learn about the huge opportunities the construction and operation of Hinkley Point C has to offer them.

www.edfenergy.com/hpcinspire

Subjects

This activity supports curriculum learning at Key Stages 3 and 4:

- ▶ Geography
- ▶ Biology
- ▶ Combined Sciences

Part 1: Biodiversity at Hinkley Point C

Watch **this film** on the team responsible for biodiversity at Hinkley Point C. Then answer these questions.

Q. What is Ben's job title?

A. _____

Q. What are the environmental team at Hinkley Point C responsible for?

A. _____

Q. Give an example of an animal species found at HPC that's protected by law – and how the environmental team have protected it.

A. _____



Ben says: “ Our team is made up of roughly 50% specialists (e.g. Ecologists) and 50% generalists. As a generalist, I dispense advice every day to contractors and construction teams on a range of environmental topics. If a question comes in that’s too technical, I approach the specialists for advice. ”

Q. What will the area be like after the power station is built?

A. _____

Q. What subjects should you study to have a career like Ben’s?

A. _____

Q. What was Ben’s route into his current job after university – and why does he recommend it?

A. _____

Q. What motivates Ben?

A. _____



Q2. Hinkley Point C is based in Somerset, on the coast of the Bristol Estuary. Can you think what types of ecosystems might exist here?

A. _____

Follow-up activities

Q1. Ben mentioned a few key terms in this film clip. Can you supply definitions of these?

Biodiversity: _____

Ecosystem: _____

Habitat: _____

Pollution: _____



Ben says: “ Everything I learnt at school is relevant to what I do. For example, when we’re looking at drainage designs for water management on site, we’ll need to produce calculations and draw on physics knowledge. There’s also biological sampling and chemistry sampling to undertake. ”

Part 2: Jobs in biodiversity

Take a look at these two jobs in biodiversity and then fill in the fact files below.

Environmental professional fact file:

<https://careers.startprofile.com/page/occupation?SOC=2142>

Job description	
Typical annual pay	
Entry requirements	
List 3 possible tasks/ responsibilities in this job	
Give three skills/behaviours that are useful for this role	
Give three subjects you might want to pursue for a career in this area	

Ben says:



“ I studied Geography, Maths, Physics and Chemistry at A Level, then went onto university to study Environmental Science. ”

Environmental Engineer fact file:

<https://www.prospects.ac.uk/job-profiles/environmental-engineer>

<p>Job description</p>	
<p>Typical annual pay (for an experienced Environmental Engineer)</p>	
<p>Entry requirements</p>	
<p>List 3 possible tasks/ responsibilities in this job</p>	

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<p>Give three skills/behaviours that are useful for this role</p>	
<p>Give three subjects you might want to pursue for a career in this area</p>	



Ben says:

“ Communication is a huge part of my role. So even though I never studied English at A Level, I use the skills I developed in English at school to communicate my message in the most appropriate way to different groups of people. ”

Further reading:

Young People’s Trust for the Environment: There’s a nice explanation of what happened when wolves were reintroduced to Yellowstone National Park: <http://ypte.org.uk/factsheets/biodiversity/>

BBC Bitesize on biodiversity (KS3): <https://www.bbc.co.uk/bitesize/clips/z9pd2hv>

United Nations: Biodiversity is one of the UN’s Sustainable Development goals: <https://www.un.org/sustainabledevelopment/biodiversity/>

Rewilding Britain: Have you heard about rewilding? Learn more at <https://www.rewildingbritain.org.uk/explore-rewilding>

Next steps:

More films on jobs and apprenticeships at Hinkley Point C: https://www.youtube.com/playlist?list=PLXeIrBe86r_Kg8-XGXzarZelevl3TyCGi

Young HPC – our skills development programme for 16-21 year olds: www.edfenergy.com/younghpc

Young HPC toolbox – careers advice and tools: <https://www.edfenergy.com/energy/nuclear-new-build-projects/hinkley-point-c/education-and-skills/young-hpc/tool-box>

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- ▶ Geography
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Part 1: Biodiversity at Hinkley Point C

Watch **this film** on the team responsible for biodiversity at Hinkley Point C. Then answer these questions.

Q. What is Ben's job title?

A. Site Environmental Engineer.

Q. What are the environmental team at Hinkley Point C responsible for?

A. They're responsible for minimising our impact on the environment: monitoring everything from noise pollution to water discharges, the impact on ecosystems and biodiversity in general.

Q. Give an example of an animal species found at HPC that's protected by law – and how the environmental team have protected it.

A. Badgers – they protected them by relocating their habitats.

Ben says:


“ Our team is made up of roughly 50% specialists (e.g. Ecologists) and 50% generalists. As a generalist, I dispense advice every day to contractors and construction teams on a range of environmental topics. If a question comes in that’s too technical, I approach the specialists for advice. ”

Q. What will the area be like after the power station is built?

A. A lot of the land will be restored to a better quality than previously. The ecosystems will be better, the biodiversity should be greater and the build will have had a positive impact on the environment.

Q. What subjects should you study to have a career like Ben’s?

A. Chemistry, Biology and Geography.

Q. What was Ben’s route into his current job after university – and why does he recommend it?

A. He joined EDF on the graduate scheme. It gave him a good opportunity to see various parts of the business from operation to maintenance. It was also when he started work at Hinkley Point C.

Q. What motivates Ben?

A. Climate change – he sees it as a really big threat to humans and biodiversity. Projects, like Hinkley Point C, which generate low-carbon electricity, are a way of helping the UK meet its net-zero targets.

Follow-up activities

Q1. Ben mentioned a few key terms in this film clip. Can you supply definitions of these?

Biodiversity: The range of species – animals and plants – that exist around us.

Ecosystem: The animals and plants that live and interact within an environment.

Habitat: The place where an animal or plant lives.

Pollution: Anything that contaminates or causes harm to the air, land or water.


Q2. Hinkley Point C is based in Somerset, on the coast of the Bristol Estuary. Can you think what types of ecosystems might exist here?

A. Ben says: “A lot of the land around Hinkley Point is farmland – or what we call ‘unimproved grassland’. This means it’s relatively poor for growing crops, so it tends to be used for livestock grazing. Near to the site is Whitmore, which is a floodplain and has very different habitats. And finally, there are the mudflats in the Bristol Estuary, which are a very important type of ecosystem.”

Ben says:


“ Everything I learnt at school is relevant to what I do. For example, when we’re looking at drainage designs for water management on site, we need to produce calculations and draw on physics knowledge. There’s also biological sampling and chemistry sampling to undertake. ”

Part 2: Jobs in biodiversity

Take a look at these two jobs in biodiversity and then fill in the fact files below.

Environmental professional fact file:

<https://careers.startprofile.com/page/occupation?SOC=2142>

Job description	Environment professionals investigate, address, and advise on a variety of environment and resource management issues. These include the development and implementation of environmental policies and remedies that address the impacts of human activities and industrial processes on the environment.	
Typical annual pay	£38,480	
Entry requirements	A good degree in a relevant subject is normally a minimum entry qualification, and some employers will require a postgraduate qualification.	
List 3 possible tasks/ responsibilities in this job	<ul style="list-style-type: none"> ▶ Identify contamination of land, air or water and assess any adverse impact on the environment; ▶ Advise on and provide solutions for mitigating the effects of such contamination; ▶ Implement remediation works; ▶ Carry out environment-related desk-based research and fieldwork to collect, analyse and interpret data to determine their validity, quality and significance; ▶ Carry out environmental audits and environmental impact assessments; ▶ Communicate scientific and technical information to relevant audiences in an appropriate form, via reports, workshops, educational events, public hearings; ▶ Assist organisations to conduct their activities in an environmentally appropriate manner; ▶ Implement, review and advise on regulatory and legislative standards, guidelines and policies; ▶ Provide professional guidance to clients, government agencies, regulators and other relevant bodies, having regard for sustainable approaches and solutions. 	
Give three skills/behaviours that are useful for this role	<ul style="list-style-type: none"> ▶ Reading and comprehension ▶ Listening ▶ Speaking ▶ Working with numbers ▶ Coordination 	<ul style="list-style-type: none"> ▶ Teaching ▶ Concentration ▶ Analysing ▶ Memory ▶ Multi-tasking
Give three subjects you might want to pursue for a career in this area	<ul style="list-style-type: none"> ▶ Maths ▶ Economics/accounting ▶ Engineering and technology ▶ Design ▶ English 	<ul style="list-style-type: none"> ▶ Chemistry ▶ Geography ▶ Physics ▶ Biology

Ben says:



“ I studied Geography, Maths, Physics and Chemistry at A Level, then went onto university to study Environmental Science. ”

Environmental Engineer fact file:
<https://www.prospects.ac.uk/job-profiles/environmental-engineer>

<p>Job description</p>	<p>Environmental Engineers are involved in managing and reducing waste and minimising pollution in order to protect, restore and preserve the planet.</p>
<p>Typical annual pay (for an experienced Environmental Engineer)</p>	<p>Experienced engineers can earn between £28,000 and £45,000.</p>
<p>Entry requirements</p>	<p>Engineering degrees are highly relevant for this area of work. However, it may also be possible to move into environmental engineering from other related occupations, such as environmental consultancy or sustainability. Although you don't usually need a postgraduate qualification, a Masters in areas such as environmental monitoring, contaminated land or environmental engineering may make you more attractive to an employer.</p>
<p>List 3 possible tasks/responsibilities in this job</p>	<ul style="list-style-type: none"> ▶ Gather data from a range of sources through site assessments, environmental monitoring and third party reports; ▶ Evaluate the environmental impact of the project, hazard or commercial operation; ▶ Write up and present findings, costings, health and safety plans and recommendations on the containment, clean-up process, remediation, recycling and waste disposal, in order to fix environmental issues; ▶ Create plans to protect and restore the environment by removing contaminants from water, air and land; ▶ Develop site-specific health and safety protocols such as spill contingency plans or methods for loading and transporting raw materials; ▶ Provide advice about preventing future difficulties; ▶ Implement, manage and supervise the day-to-day tasks of construction and remediation schemes; ▶ Communicate with sensitive stakeholders such as local residents in order to minimise the impacts of projects on the community; ▶ Liaise with clients and local authorities relating to planning aspects of projects; ▶ Provide advice to and work alongside other professionals, such as environmental scientists, planners, construction workers, lawyers and landowners to address environmental problems and promote environmental sustainability; ▶ Be familiar with current environmental regulations and guidance.

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<p>Give three skills/behaviours that are useful for this role</p>	<ul style="list-style-type: none"> ▶ Good at collecting, analysing and manipulating scientific data; ▶ Strong at report writing and interpreting reports written by other people; ▶ A good communicator, for discussing problems with other professionals; ▶ Able to meet strict project deadlines and work under pressure; ▶ A great organiser, to manage all the different phases of a project; ▶ Able to work with people from a range of disciplines and to collaborate towards a common goal; ▶ Technically inquisitive, with imaginative problem-solving skills; ▶ Confident to ask questions and challenge the norm.
<p>Give three subjects you might want to pursue for a career in this area</p>	<ul style="list-style-type: none"> ▶ Chemistry ▶ Environmental science ▶ Geology ▶ Geoscience ▶ Geotechnical engineering ▶ Maths ▶ Physics



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United Nations: Biodiversity is one of the UN’s Sustainable Development goals: <https://www.un.org/sustainabledevelopment/biodiversity/>

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