



Renewable Energy

Lesson Plan

Aim

To help young people to learn about different forms of renewable energy, design their own wind turbine and find out about different careers in the energy sector.

Mapping

CES 'I Can' Statements	CMS Themes
<ul style="list-style-type: none"> ★ I can discuss the relevance of skills to the wider world and make connections between skills and the world of work ★ I can demonstrate and apply the skills I have learnt across the curriculum in relation to the world of work 	<ul style="list-style-type: none"> ★ Horizons

Learning Outcomes

Young people will be able to recognise:

- understand renewable energy and where it comes from
- be able to explain wind turbines and how they make energy
- know about careers in the energy sector and the skills needed for them

Development of Activity

Previous activities – Career shield and Set up a My World of Work profile

In this career education programme, the young person will have created their own career shield and set up their profile in My World of Work.

They should use their shield and profile at the end of this activity to see how their interests and strengths match those needed for careers in energy.

Activity on next page...



Introduction

The young person should know that renewable energy is made from resources that nature can replace, like wind, water and sunshine. It is also called 'clean energy' or 'green power'. This is because it doesn't pollute the air or water.

Instructions

Before you start

★ Use these websites to learn more about energy sources:

<https://www.alliantenergykids.com/RenewableEnergy/RenewableEnergyHome>

<https://www.bbc.co.uk/bitesize/guides/zggk87h/revision/1>

They will tell you which sources of energy are renewable, and which are non-renewable.

- ★ Print the 'Renewable energy' worksheet or ask someone to print it for you
- ★ If you can't print it, take a sheet of paper and draw a line down the middle. Write renewable energy on one side and non-renewable energy on the other side.

Follow-up

The activity looks at the Energy Engineer role. There are lots of related job profiles on My World of Work that the young person could find out more about:

[Offshore Service Technician \(1\)](#) [Aerospace engineer \(2\)](#) [Structural engineer \(3\)](#)
[Materials engineer \(4\)](#)

They can find about related apprenticeships on [apprenticeships.scot\(5\)](#)

Foundation Apprenticeships – [Engineering \(6\)](#)

Modern Apprenticeships – [Wind Turbine Operation and Maintenance \(7\)](#), [Engineering \(8\)](#)

Graduate Apprenticeships – [Engineering: Design and Manufacture \(9\)](#),
[Engineering: Instrumentation, Measurement and Control \(10\)](#)

Activity on next page...

Next activity – CMS Chatterbox

This activity in the career education programme has allowed the young person to think about what they've learned about themselves in previous activities and relate this to careers in renewable energy. The next activity will introduce all the Career Management Skills themes (Self, Strengths, Horizons and Networks). It will help them think about how they use what they know about themselves to make career decisions.

Reference Links

1. Offshore Service Technician <https://www.myworldofwork.co.uk/my-career-options/job-profiles/offshore-service-technician>
2. Aerospace engineer <https://www.myworldofwork.co.uk/my-career-options/job-profiles/aerospace-engineer>
3. Structural engineer <https://www.myworldofwork.co.uk/my-career-options/job-profiles/structural-engineer>
4. Materials engineer <https://www.myworldofwork.co.uk/my-career-options/job-profiles/materials-engineer>
5. Apprenticeships.scot <https://www.apprenticeships.scot/>
6. Engineering Foundation Apprenticeship <https://www.apprenticeships.scot/become-an-apprentice/foundation-apprenticeships/engineering/>
7. Wind Turbine Operation and Maintenance Modern Apprenticeship <https://www.myworldofwork.co.uk/modern-apprenticeships/wind-turbine-operation-and-maintenance>
8. Engineering Modern Apprenticeship <https://www.myworldofwork.co.uk/modern-apprenticeships/engineering>
9. Engineering: Design and Manufacture Graduate Apprenticeship <https://www.apprenticeships.scot/become-an-apprentice/graduate-apprenticeships/engineering-design-and-manufacture/>
10. Engineering: Instrumentation, Measurement and Design Graduate Apprenticeship <https://www.apprenticeships.scot/become-an-apprentice/graduate-apprenticeships/engineering-instrumentation-measurement-and-control/>