

Renewable Energy

Worksheet

Learning outcomes

By doing this activity, you'll learn about renewable energy and energy sources. You'll be able to explain how a wind turbine generates electricity, design your own wind turbine and explore different careers in the energy sector.

Activity

Introduction

Renewable energy is made from resources that nature will replace, like wind, water and sunshine. Renewable energy is also called 'clean energy' or 'green power' because it doesn't pollute the air or water.

Use these two websites to learn more about energy sources:

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

<https://www.bbc.co.uk/bitesize/guides/zgqk87h/revision/1>

Activity on next page...

Renewable or Non-renewable

Renewable or Non-renewable

Think about what you have learned about renewable energy.

Using what you've already learned, put the energy source into the correct column.

If you have a printed worksheet:

- ★ Draw a line from the source of energy to the type of energy it is: renewable or non-renewable

If you made your own worksheet:

- ★ Write or draw the sources of energy from the worksheet under the correct heading: renewable or non-renewable

Renewable Energy

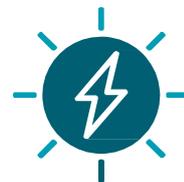
Non-renewable Energy



Fossil Fuel Oil



Geothermal Energy



Solar Energy



Coal



Wind Energy



Hydropower Energy



Biomass Energy



Natural Gas



Nuclear Energy

Activity on next page...

Build your own wind turbine

Learn how we get electricity from a wind turbine. Watch this [video](#) to find out!

Now, it's time to build your own wind turbine. Spend around 20 minutes making it.

- ★ You could use cardboard, straws and toilet rolls. Can you build it using household recycling?
- ★ Make it stable: it needs to stay upright on its own. Build a strong post to hold the blades
- ★ Make sure it works: it won't be able to turn energy into electrical energy but the 'blades' should be able to move round

Think about the skills you've used to build this. These skills are really important in the world of work.

Jobs in the energy sector

My World of Work has loads of information about jobs that you could possibly do.

- ★ Use this link (<https://www.myworldofwork.co.uk/my-career-options/job-profile-engineer>) to find about being an Energy Engineer
- ★ Find 4 skills that you would need to be an Energy Engineer.

Answer these questions

- ★ How many of the 4 skills you found, do you think you have?
Need help with this? Look back at your My World of Work profile and your career shield from activities you've done before
- ★ Are you missing any of the skills? What could you do to develop them?
- ★ What subjects would be useful to study at school?
- ★ How much can you earn as an Energy Engineer?

Activity on next page...

Follow-up

We've looked at the Energy Engineer role but there are lots of other job profiles that you could look at:

- ★ Offshore Service Technician <https://www.myworldofwork.co.uk/my-career-options/job-profile/offshore-service-technician>
- ★ Aerospace engineer <https://www.myworldofwork.co.uk/my-career-options/job-profile/aerospace-engineer>
- ★ Structural engineer <https://www.myworldofwork.co.uk/my-career-options/job-profile/structural-engineer>
- ★ Materials engineer <https://www.myworldofwork.co.uk/my-career-options/job-profile/materials-engineer>