



My World of Work LIVE!

LEGO® renewables 2.0

Overview

Using LEGO, explore different forms of renewable energy. Experience what it's like to work as an Engineer in the renewable energy industry by designing a wind turbine.

STEM links: Engineering, Mathematics

Objectives

By simulating being energy engineers and learning about renewable energy, pupils will be able to

- design and build a functional wind turbine using LEGO
- understand what a generator is and how energy is produced from mechanical motion
- read a xy plot displaying voltage produced by the turbine

Suitable for

10 -13 year olds

Activities

- Introduction to fossil fuels and renewables
- Learn about the basic components of a wind turbine
- Build a wind turbine
- Test your wind turbine to measure the amount of energy it produces
- Analyze the data from the class on a xy plot and identify the best performing turbine
- Discussion about related skills and careers

Pre / post-activity

- Pre-activity - at the time of booking, teachers are encouraged to visit My World of Work and use the [Strengths tool](#) with pupils
- Post-activity - teachers are encouraged to explore the related job profiles and industries on My World of Work with pupils and to use the resources in the [partner area](#)

Experiences and outcomes

SCN 2-04b Through exploring non renewable energy sources, I can describe how they are used in Scotland today and express an informed view on the implications for their future use.

SCN 3-04b By investigating renewable energy sources and taking part in practical activities to harness them, I can discuss their benefits and potential problems

SCN 4-04a By contributing to an investigation on different ways of meeting society's energy needs, I can express an informed view on the risks and benefits of different energy sources, including those produced from plants.

SCN 4-04b Through investigation, I can explain the formation and use of fossil fuels and contribute to discussions on the responsible use and conservation of finite resources.

Career Management Skills

Supports the development of the career management skills young people need to plan and pursue, life, learning and work opportunities.

Career Education Standard

Second level I can discuss the relevance of skills to the wider world and make connections between skills and the world of work.

BGE I can demonstrate and apply the skills I have learnt across the curriculum in relation to the world of work.

Skills Investment Plans

Energy, Engineering, Highlands and Islands

My World of Work links

Job profiles – [Energy Engineer](#), [Software Developer](#), [Mechanical Engineer](#), [Engineering Maintenance Technician](#), [Design Engineer](#), [Environmental consultant](#), [Land Surveyor](#)

Modern Apprenticeships – [Engineering](#), [Wind Turbine Operation and Maintenance](#), [IT and Communications](#)

Industries – [Engineering](#), [Energy](#), [ICT and Digital Technologies](#)



INNOVATION STUDIO