Programme ideas: Skills in energy

What does ‘Skills in energy’ mean?
These skills ideas will give you an understanding of the energy sector and how electricity is produced, transported and dealt with in a safe, efficient manner. It will help you understand the importance of using a variety of different ways of creating electricity, and introduce you to the latest technology to support the demand for electricity and the impact on the environment. You can also use some of the ideas listed to gain an understanding of the different careers that exist for you in this sector and the skills you will need to help you get there.

Ideas/aims
Choose ideas from the sections below and develop those that are most relevant or interesting to you.

1: Generating Electricity from Power Station to Plug
- **Research the different ways in which electricity is generated**, why there is a need to generate in a variety of methods and how it gets from the power station to the plug. You could:
  - Build a model of a wind turbine.
  - Arrange a visit to a local wind farm, coal or hydro power plant.
  - Produce a podcast, blog or a presentation to share your knowledge of how energy is produced in the UK and why there is a need to generate it in a variety of ways.
  - **Explore new energy technology** in Carbon Capture & Storage to understand what this is, why it is seen as an essential technology for the future, how it works etc.

- **Understand the energy sector** by researching the UK policy on international and domestic energy production to address the long term energy challenges we face, including government strategy and targets, as well as the different ways of producing and distributing electricity. You could:
  - Present to your class/group the key policy goals including why you feel they are essential to the success of our economy.
  - Explain the process of producing electricity from three differing sources, showing how this electricity is transmitted and distributed to consumers, exploring the advantages and disadvantages of each.

2: Electrical safety
- **Undertake a review** of electrical safety information aimed at both the secondary and primary school curriculum and present an informative lesson to a small audience of young people.
- Design your own electrically safe rock concert and complete a basic general safety risk assessment considering all health and safety risks (not only electricity) posed to people attending a public event.

3: Energy Efficiency
- **Identify a number of local households**, for example, in your neighbourhood or in your family that would allow you to perform a ‘Home Energy Check’ and (subject to permission from a parent/carer) arrange appointments to discuss energy efficiency with the homeowner. Complete an assessment for each household and make recommendations on how energy efficiency improvements could be made. Compare the results between households and present your findings to your Leader.
4: Careers in Energy
- Research & review the different types of roles/training schemes that are available to you in the energy sector, and what the opportunity routes are for developing a career within the industry. Explore the opportunities and benefits available to ‘earn while you learn’. You could:
  - Create a promotional video/presentation to encourage more young people to consider a career within the utilities industry
  - Promote to 14-17 year olds the range of careers available and the routes to getting employment within ScottishPower. This could be presented to school careers advisors, local job centres, at world of work days within school etc.
  - Thinking about your skills, achievements and interests, prepare a career plan for yourself of the steps you need to take to embark on a career in this industry

Who can assess this programme?
Any individual (over 18 and pre-approved by your DofE Leader) who isn’t related to you and who has experience in this subject area can be your Assessor. You or your DofE Leader could contact local energy businesses to see if they have an individual who might mentor and assess you as part of their company’s community involvement.

Assessment
Evidence of your individual progress, understanding, sustained interest and a commitment of time should be shown over the required period. This may take the form of evidence such as appropriate books, letters, documents, written reports, videos, mp3s or other multimedia which identifies the knowledge gained. Your assessment will involve looking at your evidence and could also include oral testing. Group activities will be assessed with regards to each member’s contribution to planning, execution and completion.

Resources to help you
- Review online school safety Powerwise materials produced by ScottishPower, see www.powerwise.org.uk
- ScottishPower online Powerwise materials. Complete the Rock School element at www.powerwise.org.uk

- www.scottishpower.com/carbon_capture_storage/default.asp
- www.ccsassociation.org.uk
- Department of Energy and Climate Change www.decc.gov.uk
- Email ensafety@scottishpower.com and request a copy of the primary school PowerWise Resource Pack
- Research online materials regarding energy efficiency, see the At Home section of www.energysavingtrust.org.uk and familiarise yourself with ways to stop wasting energy. If paper copies of information is required or you have further questions call the Energy Saving Trust Helpline on 0800 512 012.
- Use the Home Energy Check available on www.energysavingtrust.org.uk to assess the households. Paper copies of the assessment can be ordered by telephoning 0800 512 012.
- www.scottishpowerjobs
- Work through the Blacklaw Project on www.powerwise.org.uk
- Times 100 case study on ScottishPower www.tinyurl.com/23kd2b7

Check out the full advice on the Skills section at www.DofE.org/skills
You can also download a handy programme planner from the website to help you get the most from this activity.