

### Debate

Set a scenario of a planning application for a new renewable energy system, eg the Severn Barrage, or a new on-shore windfarm. Divide the pupils into groups and tell them they will represent different stakeholders. They might represent landowners who will benefit financially from the proposal, environmental groups, local residents, etc. Ask them to research the benefits and disadvantages of the proposal. Set up a mock debate where all the groups discuss their opinions. Can they reach a consensus?

### Regional Energy History

Look at old maps of the area or ask at your local museum to discover how energy used to be generated. If there is nothing visible, what was being used? Has energy been imported from elsewhere? How did people heat and light their homes in various periods of time? What has changed and what has stayed the same? Can you account for the differences?

### UK Energy Planning



Older pupils and fellow teachers may be interested to look at 'Zero Carbon Britain 2030', a renewable energy document from the Centre for Alternative Technology which sets out a blueprint for energy generation in Britain. It demonstrates how Britain could completely phase out fossil fuels and replace them with renewable energies through a process of energy reduction and efficiency, and powering up with renewable energy generation. [Available to buy as a paper document or download for free.](#)

### Data handling

Why not use the data collected from the [solar water heating experiment](#) to teach how to represent data in a variety of graphs.

### Wind history

Prepare or ask pupils to find for themselves, images and references to different types of wind

machines through the ages. You will find out about windmills used for grinding corn into flour, or pumping water from the land. Some sails were made from cloth, many were made from wood, and had different ways of adapting to different wind directions and strengths. Some wind machines are still used to pump water. These designs usually have many blades, which allow them to turn slowly for mechanical strength. Turbines used to generate electricity have fewer blades for speed. When was the first electricity generating windmill invented? Why was this not further developed at the time?

## Coal

Coal has played a significant role in the history of Wales, and there are plenty of resources to find out more. How did coal shape communities in Wales? Who worked in the coal mines under what conditions? Why were the mines closed? What is the situation now – are they being re-opened? What do various people think about this?

## Top Ten Tips

In advance of this session, ask pupils to collect examples of 'tips to be green' that are commonly found on websites or in magazines. Before the activities, see if the pupils can work out which of the tips make a big difference and which make a small difference. After the activities, ask them to re-evaluate the list to see if their opinions have changed. You could use this as an opportunity to think about taking information we are given at face value. What questions need to be asked? Ask the pupils to make their own Top Ten Tips for climate change action based on what they have learned in this lesson.

## Other resources

- [Climate Change Wales](#)