

D2: THE ENVIRONMENTAL IMPACT OF USING ENERGY

Overview

Having researched various energy sources in **STRAND A: ENERGY AND SUSTAINABILITY**, students can now be encouraged to look at the impact that building such resources has on the environment. Students are asked to carry out an environmental impact evaluation that will introduce them to the need to consider balancing costs with benefits, both financial and ethical.

Suggested approaches:

- A good way to start would be to ask students to compose a simple poster of all the information, experience and evidence they have amassed so far regarding our interaction with the environment. Encourage them to use the video links provided in the resources list below.
 - A hint could be dropped as to the possibility of using what they know already about coal and wind as a checklist for other resources.
 - Give the students the activity sheet **D2 WORKSHEET C: ENERGY – THE ENVIRONMENTAL IMPACT** and let them work in pairs to complete it.
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Resources:

- The Environmental Protection Agency (EPA) has posted [Eco Eye videos](#) looking at six key environmental topics. This might be useful to show to the class at the outset of this lesson.
- The [EPA website](#) also has a wealth of resources for further work in this area.

NOTE:

Energy in Action is an online schools resource from SEAI.

If you're reading a printout and wish to view this online to access links, visit www.seai.ie/energyinaction

D2 WORKSHEET C: ENERGY – THE ENVIRONMENTAL IMPACT

Whenever something is built it has an effect on the environment, which is the world around us. In the past, people did not worry too much about the environmental consequences of their actions. If they cut down a forest there was always another one. They believed that there would always be plenty more fish in the sea.

By now, most people have realised that we must make sure that the damage or cost of building or using something is less than the benefits of that building or use. To work out if the costs or problems are greater than the benefits, an environmental impact study is carried out.

Using the table below, you are asked to make an environmental impact study. From the two lists you have already made,

1. Decide which of these are costs and which are benefits.
2. Write each cost and benefit into the correct space.
3. When you have finished, decide which source of energy has the most benefits and the lowest environmental costs or problems.
4. You should repeat this exercise for oil, nuclear, biomass, water and geothermal sources of energy

| | BENEFITS | COSTS/PROBLEMS |
|--------------------------|----------|----------------|
| Wind farm | | |
| Coal-fired power station | | |
| Oil | | |
| Nuclear | | |
| Biomass | | |
| Water | | |
| Geothermal energy | | |