



1. Renewable Energy Campaign | Student Activities

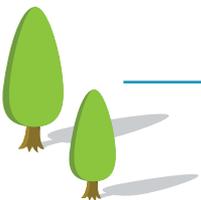
Research renewable energy sources and campaigns.

Use your creative skills to create a campaign calling for one of the following renewable energy sources to be set up in your local area:

- A wind farm
- A hydroelectric dam
- A wave power station
- Solar panels either as a farm or on rooftops
- A geothermal power station

Renewable energy sources could be used to power your school, or the local area in general. Your campaign could be in the format of a poster, website, filmed advertisement or pamphlet.

Make sure that you include the advantages of the scheme for people in your local area/school, how this energy works, and why this form of renewable energy would be right for your area/school.



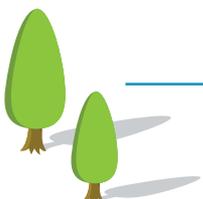


2. Supply Chain Analysis | Student Activities

Supply chain analysis is where a designer will analyse the materials and processes involved in the manufacture of a product for its environmental impact.

Here is an example supply chain analysis of a wooden clothes peg manufactured in the UK. At each stage, suggest possible environmental or social impacts. You may have to research your answers.

Supply Chain		Social or environmental impacts
Extraction or Raw Materials	Beech for the clips is grown in forests in Denmark, via the process of logging . Iron ore for the spring is mined in China as iron ore in an open cast pit .	
Transport	Both materials are transported by lorry to the processing plants in their respective countries.	
Processing of Raw Materials	The logs are processed at a sawmill into planks . The iron ore is smelted in a blast furnace powered by coal and processed into steel springs	
Transport to the UK	After being taken by lorry from the sawmill , the planks are sent to the UK by boat . The springs are driven by truck across China, and then shipped via boat from china in a shipping container . The wood and springs are then driven on trucks again to the factory.	
Manufacture & Assembly	The beech is then manufactured into shape, treated with preservative and then assembled with the spring.	
Packaging	After being asssembled, the pegs are then packaged in non-recycled plastic bags .	
Distribution	The product will be distributed by trucks to retail, where it will be sold in another plastic bag.	





Sustainable World Quiz

1. Match the renewable energy sources to where they are best suited to be used.

Windy areas - **Wind Farm**

Sunny areas - **Solar Power**

By seas or rivers - **Water Power**

Volcanically active areas - **Geothermal Power**

2. Drag and drop the words to complete the paragraph.

Non-renewable energy sources include coal, gas and oil. These fossil fuels are either drilled or mined from underground. Nuclear power is also a non renewable energy source.

The use of fossil fuels in energy production causes the release of greenhouse gases including CO₂, which are linked to climate change. Nuclear power does not produce greenhouse gases but does produce radioactive waste.

3. Select which statements are true or false.

Nuclear is a renewable energy source **FALSE**

Cars are responsible for 16% of global carbon dioxide pollution. **TRUE**

It is possible to turn plants into liquid fuel for vehicles as a renewable energy source **TRUE**

Fossil fuels will never run out **FALSE**

4. Sustainable Design is where a designer minimises the environmental, societal and economic impact of a product. Read the product descriptions and decide if it is sustainable or unsustainable.

Sustainable Design	Unsustainable Design
Products that last a very long time	Products made in unsafe factories
Products that can be recycled	Products that use toxic chemicals in their manufacturing
Products that are made locally	Products that require a lot of energy to produce
Products that require little or no energy to be produced	Products that cause a lot of waste in their use, disposal or packaging
Products that encourage less energy use	Products that use a lot of energy
	Products transported over long distances

