



STAGE 3

Activity Sheet 10

ENERGY

Energy Sources Learning Guide

What is Energy?

Every day, you and your families use energy in day-to-day activities. Every time you turn on a light, heat the water for a shower or use your electronic device you use energy. When you travel in a car, bus, train or plane it uses energy. Australia is one of the most energy hungry nations in the world – we use lots of energy! So where does all of this energy come from? How is it generated and is it safe for the environment?

There are two main types of energy sources; non-renewable energy and renewable energy. Non-renewable energy sources come in many different forms including; oil, natural gas and coal. They cannot be replaced at a sustainable rate as it can take billions of years for them to form naturally. In Australia, three quarters of domestic electricity is sourced from non-renewable energy sources.

Renewable energy sources such as wind, solar and water are able to be used again and again without depletion. In Australia, wind and solar energy are becoming more popular with many wind and solar farms being established to create a sustainable source of energy.

A History of Energy

Did you know that before coal deposits were discovered, most of the energy that was used was generated by renewable energy sources?

The biggest example of this was the use of plant material to produce light and heat. Here are some other examples of how renewable sources of energy were used:

- solar power uses direct sunlight to cook and dry food
- animal power to drive vehicles or turn millstones/turbines
- wind power in the form of windmills and boat sails
- hydropower through the construction of dams.

Once coal deposits were discovered, the way that energy was produced changed. Power plants were built to convert coal, oil and gas into electricity. Coal, oil and gas were an efficient and relatively low-cost way to produce electricity for a large population.

Scientists have since discovered that burning coal, oil and gas can produce harmful gasses including carbon dioxide that is emitted into the atmosphere. In addition to their negative impact on the environment, scientists have also discovered that these energy sources will eventually run out.



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Activity One

Write down the different types of things you use each day that need energy to operate.
