

DAY 8**TOPIC: CARBON AND FUELS.****Sources of Energy**

Aim :

- List fuels and other sources of energy in common use.

Activity 1:

- Read page 5 below and in your exercise books, answer Q 1-5 on pages 5 & 6.

MEETING THE DEMAND FOR ENERGY

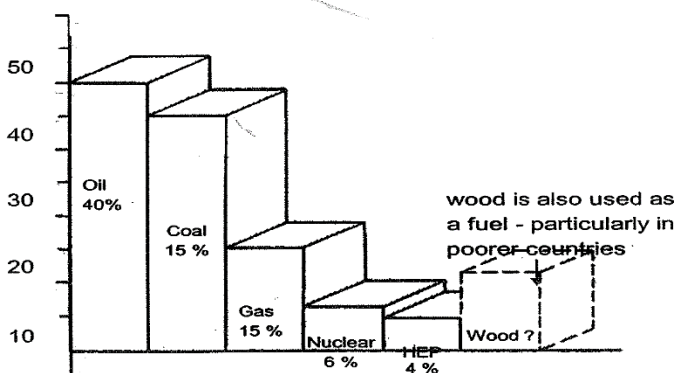
All living things need energy. Our bodies need energy to move, to keep warm and to run all the complicated chemical processes that keep us alive and well. We obtain this energy by respiration, using the food we eat as fuel. We also need sources of energy outside ourselves to live our normal life styles. Energy cooks our food, gives us light, dries our copra, runs our trucks, drives our ships and plays our radios. Energy needs are different all over the world. In a cold climate, we might need energy for keeping people warm but, in Vanuatu, refrigeration for keeping our food cool and fresh is far more important.

Q1. List some energy needs (demands) of:

- your school
- your village
- Port Vila
- a hospital.

Most of the energy which people use all over the world comes from burning fuels such as coal, oil, gas and wood. A few countries also use nuclear energy. You will learn about it later in your course. We can also use the potential energy of water stored in a lake or reservoir to give us hydro-electric power (HEP). The graph below shows how these different energy sources are used worldwide.

Energy sources used in the world



Q2. List the fuels used in your school and village. Describe how each is used.

*Q3. a. Which fuel is used the most?
b. Which fuel is used the least?*

Q4. Find the cost of as many of these fuels as you can.

Q5. Coal, oil and gas are often called "fossil fuels". Try to find out why.

RENEWABLE AND NON-RENEWABLE SOURCES OF ENERGY

How long will the world's energy sources last? We can only make rough estimates. However we do know that the world's coal, oil and gas (the "fossil fuels") took millions of years to form. Now we are using them up much faster than that. These fuels and uranium, which is the source of nuclear energy, will eventually be exhausted. They are called **non-renewable** energy sources. The graph shows when we think these fuels may run out.

Q6. Which energy source will run out first?

Q7. How many years are left until all our oil will have run out?

Q8. Which energy source will last the longest?

Q9. After each of these resources has run out, how long will it take for it to renew itself?

Q10. Write down ways we can make these energy sources last longer.