

Energy

1.1 What is energy?

1. Use the words from the box to complete the sentences below. Use each word once, more than once, or not at all.

joules energy 0.001 fuels food newtons 1000

The energy that we need every day comes from the food that we eat.

Your body needs energy to keep warm, and to keep your body working. food

and fuels are stores of energy. Energy is measured in joules or kilojoules.

One kilojoule is 1000 joules.

2. Here is the energy content of 1 g of some different fuels.

Fuel	Energy (kJ)
coal	20
oil	45
gas	40
wood	15

- a. Name the fuel that stores the most energy.

Oil

- b. Name the fuel that stores the least energy.

Wood

- c. Calculate the energy in *joules* in 1 g of coal.

20000 joules

- d. Calculate the mass of wood that has the same energy as 1 g of oil.

3 g

3. a. Explain why your body needs energy even when you are not moving.

To keep process like breathing , digestion and keeping your body warm going even when you are not moving.

- b. Cycling uses 25 kJ each minute. Calculate the number of minutes you would need to cycle for to use 100 kJ.

4 minutes

- c. Explain why children need more energy than they use for the activities that they do each day.

To grow bigger bones , muscles and brains .