

2 June 2020 Unit 4 Sources of energy Please follow the instructions

1. Read and study the lesson related information
2. Answer the questions (The answers are in the lesson related information provided)
3. Mark the questions with the provided memo.

Topic: Energy around us

Unit 4 Sources of energy

In Unit 3 you learnt about energy that is all around us. You learnt about movement energy, heat energy, light energy and sound energy. You also learnt that energy is transferred from the source of energy to where it is needed.

An example of a source of energy is food. Living things need food for energy. The food that we eat has energy stored in it. When we eat it, this energy is released in our bodies for us to use to run, walk, learn, breathe, smile and do other everyday things.

Some other sources of energy that you may know about are wood and coal. Think about a wood fire (heat and light energy). The fire gets its energy from the stored energy that is in the wood.

Other sources of energy

Energy used by everyday machines comes from different sources of energy, called fuels. Here are three examples of fuels:

1. Coal

South Africa is lucky to have huge amounts of coal under the surface of the ground. This is used to generate our electricity. Most of our coal is found on the Highveld and in the Limpopo and Mpumalanga areas. Almost all of the electrical energy used in South Africa comes from coal.

Most of the coal that is mined is sent directly to power stations where it is burnt to generate electricity. Some coal is sent to Sasol, which is a South African company that makes liquid fuel from coal. Some of this fuel is used in cars.



Wood has stored energy, which can be used for heat and light energy.

Scanned with CamScanner

South Africa is the sixth largest coal producer in the world.

Scanned with CamScanner

2. Oil products

Oil is mainly drilled out from under the sea. Crude oil is a thick, sticky and **toxic** liquid.

Crude oil is used to make many products. Some examples are:

- petrol and diesel, which is used in cars, motorbikes and other machines (such as petrol-driven lawnmowers)
- paraffin, which is used for heat and light energy in paraffin lamps
- jet fuel, which is used for aeroplanes
- candle wax.

South Africa is not rich in crude oil deposits, so we have to import oil and petrol from other countries.

3. Natural gas

Natural gas is also drilled out of the ground and usually found near oil deposits. Most of the natural gas that humans use is for heating and cooking with gas stoves and cookers.

CS Scanned with CamScanner

2 June 2020 Unit 4 Sources of energy Please follow the instructions

1. Read and study the lesson related information
2. Answer the questions (The answers are in the lesson related information provided)
3. Mark the questions with the provided memo.

Questions

Question 1

1. Name the four main types of energy

2. Is energy transferred from its source to where it is needed?

3. Is the food humans eat an example of a source of energy needed by humans?

4. Do all living things need food for energy?

5. Does the food we eat have energy stored in it?

6. Name 5 products which can be made by crude oil?

Question 2

True and False

1. Wood has stored energy in it that can be used for heat and light energy.....
2. Coal is used to generate electricity.....
3. Coal which is mined is sent directly to the power stations/power plants where it is burned to generate electricity.....

4. Coal cannot be used to make liquid fuel like petrol.....
5. South Africa is rich in crude oil deposits and exports most of its oil and petrol.....
6. Natural gas is drilled out of the ground and found near gold deposits.....
7. Most of the natural gas that humans use is used for heating and cooking with gas stoves and cookers.....

The Memo is on the next page.

2 June 2020 Unit 4 Sources of energy

Answers

Question 1

1. Name the four main types of energy

Movement energy

Heat energy

Sound energy

Light energy

2. Is energy transferred from its source to where it is needed?

Yes

3. Is the food humans eat an example of a source of energy needed by humans?

Yes

4. Do all living things need food for energy?

Yes

5. Does the food we eat have energy stored in it?

Yes

6. Name 5 products which can be made by crude oil?

• Petrol

• Diesel

• Paraffin

• Jet fuel

• Candle wax

Question 2

True and False

1. Wood has stored energy in it that can be used for heat and light energy...True.....

2. Coal is used to generate electricity...True.....

3. Coal which is mined is sent directly to the power stations/power plants where it is burned to generate electricity...True.....
4. Coal cannot be used to make liquid fuel like petrol...False.....
5. South Africa is rich in crude oil deposits and exports most of its oil and petrol...False.....
6. Natural gas is drilled out of the ground and found near gold deposits
False.....
7. Most of the natural gas that humans use is used for heating and cooking with gas stoves and cookers...False.....