

The value of our electricity

Intermediate Phase (Grade 4)

Learner activity sheet

Natural Science and Technology





Energy Education



Dear Learner,

Electricity is produced from fuel such as coal, water, diesel and uranium which are limited resources. Building new power stations to increase the supply of electricity is costly, time consuming and is only one of the possible solutions towards producing more electricity. Increased use of electricity means we use up our limited natural resources and means we pollute more.

An immediate solution is to change the way in which we use electricity – that is using electricity wisely without wasting.

Eskom kindly asks you, the learner, to please put into practice different ways of using electricity wisely. You are going to learn a lot in energy education. Some of the things you will learn are:

- the changes in technology (use energy-saving lights instead of the traditional old lights),
- how to use technology more wisely (using the switch to switch off remote controlled appliances instead of the remote),
- other energy-wise saving tips,
- and how using energy wisely helps to care for our environment – our earth.

Do not worry, the energy education will be part of your school work. Be alert and become an example of how to use energy wisely. Share all that you learn with your friends, family and community. Remember to be energy-wise wherever you are – at home, at school and in other places.

Thank you for taking care of our earth.

Activity 1: Comparing lights

1. Study the pictures of the lights and the information in the table and then answer the questions.

A 	B 
The compact fluorescent light (energy-saving)	Traditional incandescent bulb (old light bulb)
• Has mercury vapour (gas) • Does not heat up as much • Saves energy	• Has a tungsten wire inside which conducts electricity • The wire has to heat up to 2000°C before heat energy is converted to light energy • Wastes energy

- 1.1 Which is the energy-saving light, A or B? Give a reason for your answer.

- 1.2 Which is the old light bulb, A or B? Give a reason for your answer.



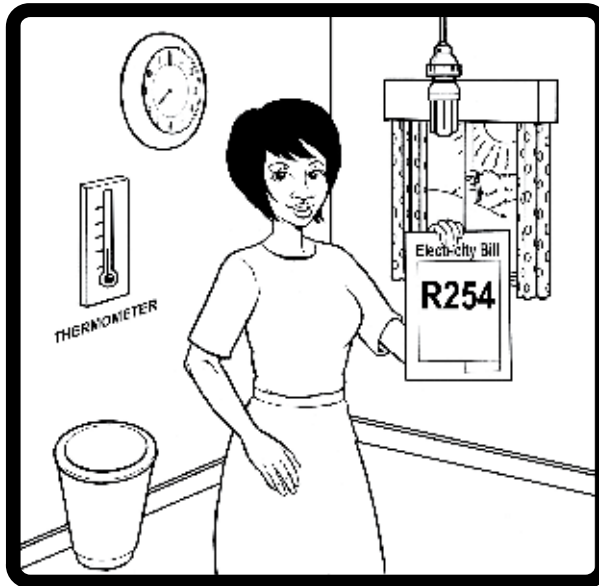
- 1.3 Why do you think mercury vapour (gas) was used instead of the wire in the energy-saving light?

- 1.4 Why do you think plastic was not used to replace the wire inside the traditional incandescent bulb?

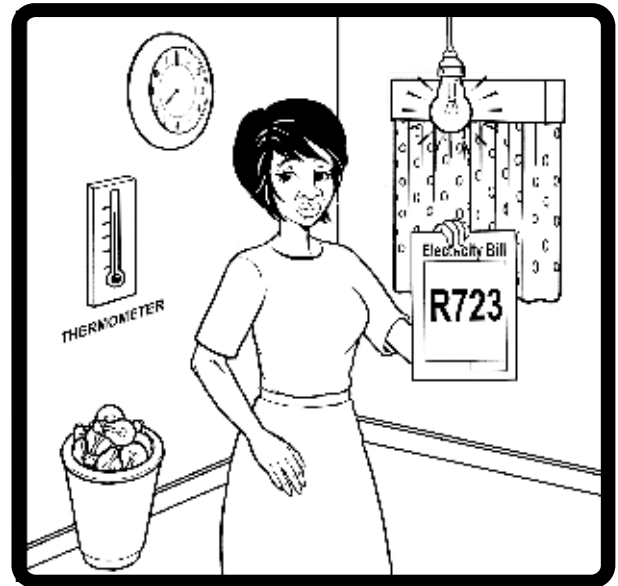
- 1.5 Which light must we use at home to save electricity?

Activity 1: Comparing lights

2. Study the TWO light bulbs and answer the following questions



Picture A



Picture B

2.1 Which light is used in picture A?

2.2 Which light is used in picture B?

2.3 Why is glass used to cover both lights?

2.4 Which lights do you think last longer? Give a reason for your answer.

2.5 From the two pictures above, what shows you that the old light bulb gives off a lot of heat?

2.6 How does using the right kind of material to manufacture (make) lights help the environment and people?

This image shows a full page of blank, lined paper. It features approximately 28 horizontal blue or grey lines spaced evenly apart, typical of notebook paper. The lines extend across the entire width of the page, leaving small margins at the top and bottom. There are no vertical lines, text, or other markings on the page.

This image shows a full page of blank, lined paper. It features approximately 28 evenly spaced horizontal grey lines across its entire width, providing a guide for handwriting or typing. The paper itself is a clean, off-white color. There are no margins, text, or other markings present on the page.

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