



Energy Education

Intermediate Phase (Grade 5) (CAPS)

Learner activity sheets and resources

Natural Science & Technology



Energy Education



Dear Learner,

The demand for electricity is growing. Building new power stations to increase the supply of electricity is costly, time consuming and is only one of the solutions.

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: Energy and electricity – Mains electricity

Cells and batteries

- Energy can be stored in torch cells and batteries and in energy sources.
- A circuit is a system that transfers electrical energy to where it is needed.

Mains electricity

- Electricity from the power station is transferred in a circuit to our homes.
- A power station needs a source of energy.
- The source of energy in a power station can be a fuel such as coal.

1. The diagram shows how electricity gets from a coal fired power station to the home.

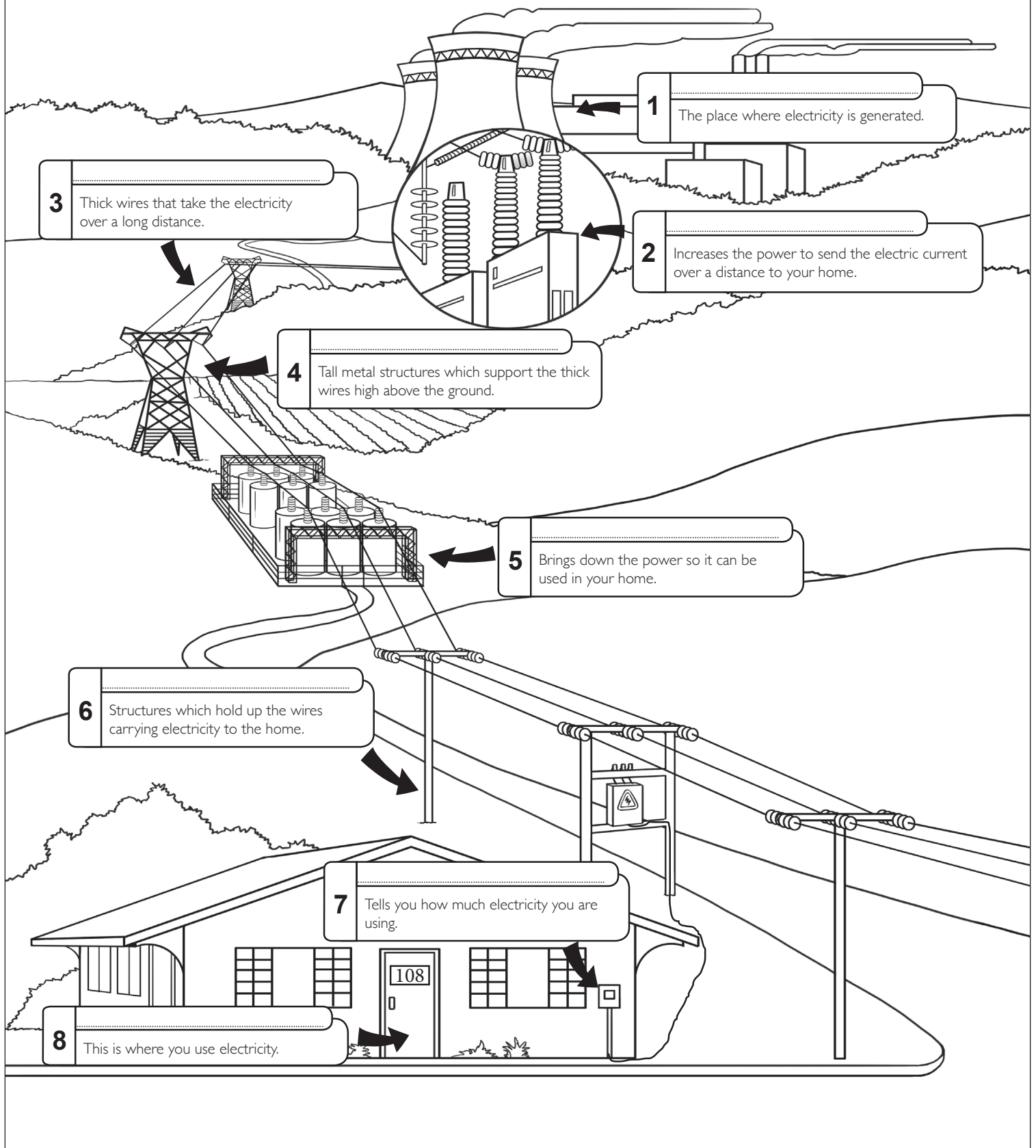
1.1 Fill in the labels in the diagram.

1.2 Why is coal the “fuel”?

1.3 Explain why the following statement is incorrect: “Electricity comes from coal itself.”

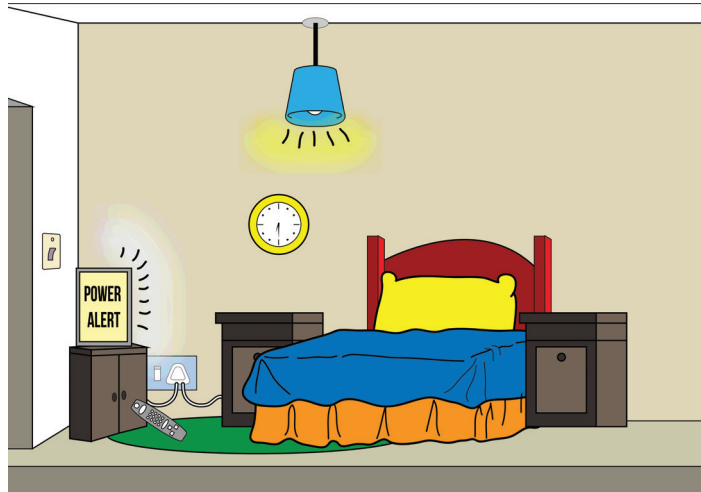
1.4 Using an example of an appliance at home (like the TV) draw a simple diagram to show what happens to the electricity at number 8 on the diagram.

How does electricity get to you?



Activity 1: Energy and electricity – Mains electricity

2. Here is a simple example of how electricity is used in the home.



- 2.1 Explain why the person who lives in this house is wasting electricity.

- 2,2 Using your knowledge of how electricity goes from the plugs to appliances (or lights) explain how one can save electricity?

- 2.2 Why do you think one should not leave remote controlled appliances like the TV or DVD machine on standby mode (or even the microwave oven on) especially when no one is at home?

- 2.3 What is the correct way to switch off remote control appliances like the TV to save electricity?

Activity 2: Energy and electricity – Mains electricity and safety

Safety with electricity:



Safety precautions should always be taken when using electricity, working with electricity or being around areas supplying electricity.

- List ways on how one can use electricity in a safe way.
- Draw diagrams or stick in pictures to show safety with electricity.
- You can also stick in pictures which show the dangerous use of electricity but put a big cross (X) over them.
- Compare notes with your friends to add to your list.
- You can demonstrate your safety tips to the class.