

## Unit 5:

### Input and Output Energy

Electrical energy is of very little use to us unless we have ways to convert it into useful forms of energy. Machines and household appliances convert electrical energy to other types of useful energy. **Electrical energy** is transformed into **heat, light, sound** or **movement** energy. Electrical energy is called **input energy**.

An electrical stove, a geyser, and a kettle will transform electrical energy into **heat energy**. This allows us to cook food or heat water. A light bulb transforms electrical energy into **light energy**. This allows us to see when it is dark. A television transforms electrical energy into **light** and **sound** energy. A drill and a fan transform electrical energy into **movement energy**.

Our lives have been made easier by the invention of these appliances which transform electrical energy into a form of energy that is useful to us. This energy is called **output energy**.

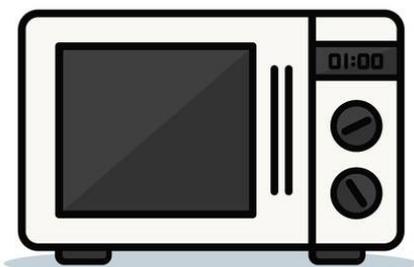


*Some examples of electrical devices that transform electrical energy into other forms of energy.*

### ACTIVITY 5:

- a) Study the objects below. They all use **electricity** as a power source. These devices transform electrical energy into some other form of energy. Electricity is the **output energy**.

Use them to answer the questions that follow.



- b) In your workbook, draw up a table with two columns. In the first column, write **electrical device** as a heading. In the second column, write **output energy** as the heading.
- c) List all the **electrical devices** (television, fan, electric guitar, drill, microwave oven, electric beater, iron, lamp) in the first column of your table.
- d) In the second column, write the **output energy** that is produced. For example a light bulb takes electrical energy and it converts it into light energy.
- e) Draw a flow diagram to show the input and output energy for an electric kettle.



- f) Look at the following picture of a coal stove and answer the questions that follow.



- g) What is the **source of energy** for this stove?
- h) The paragraph below, describes the input and output energy for this stove. Copy the paragraph below into your workbook. Fill in the missing words. Use the word box below to help you

The input energy for this stove is one bucket of \_\_\_\_\_. When the coal \_\_\_\_\_ it makes enough \_\_\_\_\_ to cook our food. It also makes the room \_\_\_\_\_. The \_\_\_\_\_ energy for the stove is \_\_\_\_\_.

**output heat burns coal**  
**heat warm**

- i) The paragraph below, describes what you need to do to make sound come from a drum. Copy the paragraph below into your workbook. Fill in the missing words. Use the word box below to help you.

Beat the drum \_\_\_\_\_ sound. Beat it gently to make a \_\_\_\_\_ sound. The energy you need to beat the drum is the \_\_\_\_\_ of energy. The sound the drum makes is the \_\_\_\_\_ of energy.

**input quieter output loud**



- i) The paragraph below, describes what you need to do to make sound come from a drum. Copy the paragraph below into your workbook. Fill in the missing words. Use the word box below to help you.

Beat the drum \_\_\_\_\_ sound. Beat it gently to make a \_\_\_\_\_ sound. The energy you need to beat the drum is the \_\_\_\_\_ of energy. The sound the drum makes is the \_\_\_\_\_ of energy.

**input quieter output loud**

