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Uses of Electrical and Electronic knowledge in daily life

Learning Objectives

- Identify and differentiate electrical and electronic technologies.
- Classify household electrical and electronic appliances.
- Observation of the latest developments in electronic technology.

Why do we study Technical Skills as a subject under the basic subject of Life Skills?

- Electricity is a source of energy for our day-to-day life activities.
- Importance of using electricity safely.
- You will get self-confidence to deal with challenges of life and this subject will help you to discover your potential.
- Technical skills is a subject that leads to new inventions.
- A special practical subject which develops our life skills and logical thinking.

What do you mean by the word Electrical Technology?

It is the technology of producing, storing, controlling transmitting and using electrical energy. Electrical technology helps the maintenance of electrical control systems, electrical machinery, equipment and household appliances.

Electrical engineers work in the fields of lighting, cooling, heating, ventilation; lift systems, power generation and distribution, renewable energy, manufacturing and construction. In electrical work, we use electricity as a form of energy.

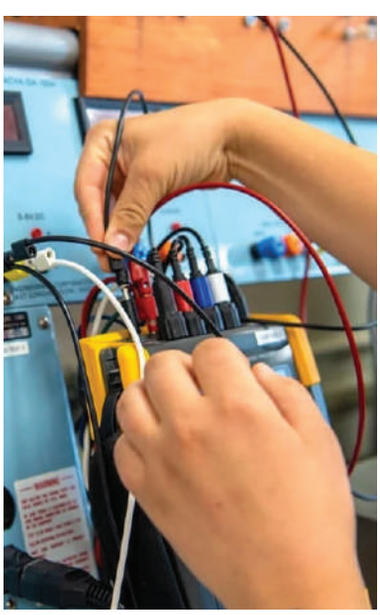

Figure 1.1

What is Electronic Technology?

Electronic Technology is the study of how to control and regulate the flow of electrons. It deals with circuits that are made with parts called components and connecting wires that control the flow of electricity and to use electrical power to perform some desired task. The circuits direct the electron flow through wires to do useful tasks by converting them into electric current and voltage signals. Direct current is used by electronic devices having a battery as the power source. It is also used to charge rechargable batteries using devices fitted with an adapter that converts AC to DC.

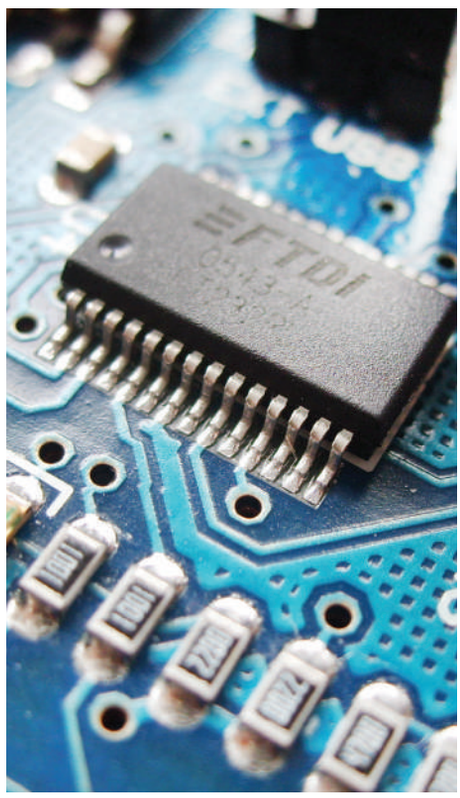

Figure 1.2

Household appliances

There are two types of household appliances.

1. Electrical appliances
2. Electronic appliances

But nowadays most electrical appliances are fitted with electronic devices for more efficiency.

Figure 1.3

SOME ELECTRICAL APPLIANCES

Electrical appliances are powered by connecting to an Alternating Current (AC) source through a live and a neutral wire.

Refrigerator

Iron

Rice Cooker

Washing Machine

Air Conditioner

Blender

Hot Water Jug

Hair Dryer

Toaster

Figure 1.4

SOME ELECTRONIC APPLIANCES

An electronic appliance is one that runs on electricity while plugged into a socket outlet. Most of the time, the AC Power which goes into the appliance is converted into DC.

Some electronic appliances use a battery as its power source.

Television

Camera

Mobile Phone

Calculator

Emergency Light

Figure 1.5

INVERTER TECHNOLOGY

An inverter is an energy saving component. It is a kind of voltage converter. An inverter is designed to be used in AC current driven appliances. This voltage converting process is used in the technology of an Inverter. Equipments with inverters can help to reduce energy costs (upto 50%). Equipments with inverters are more energy efficient than devices without inverters.

Figure 1.6