

Test 3 Study Page • Summary

Energy is everywhere. It can be defined as the capacity to produce changes in the properties of objects.

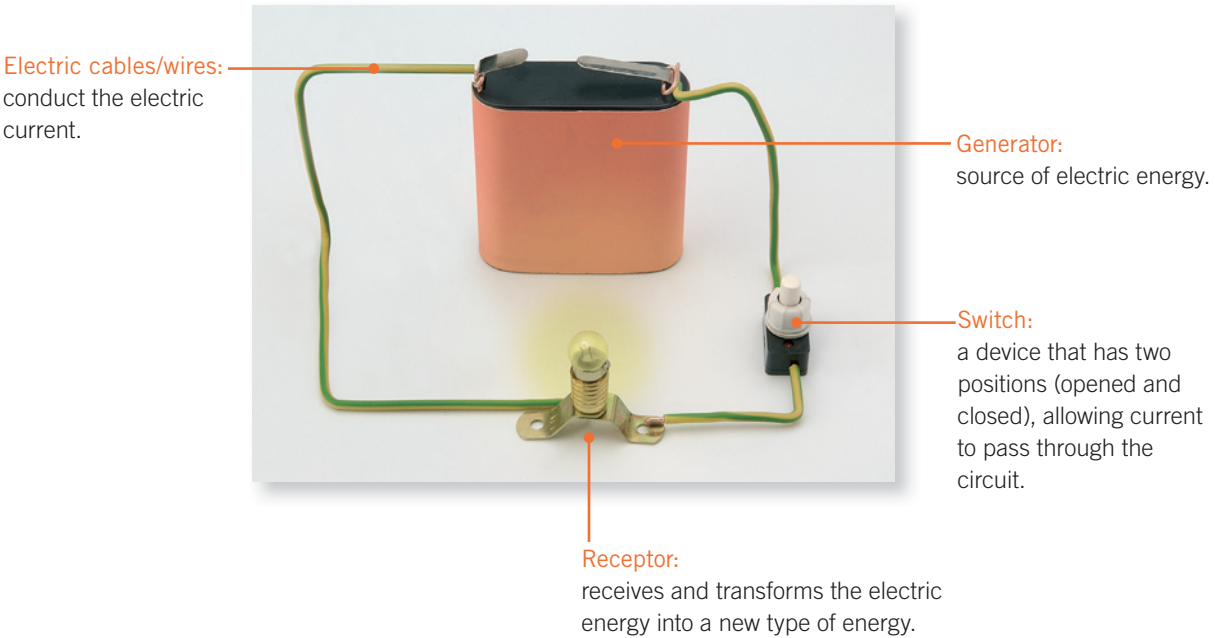
Electric energy can be generated from renewable resources in hydroelectric dams, wind farms, and geothermic or solar energy plants.

Electric energy is **transformed** into other types of energy by electric devices. Thales of Miletus, William Gilbert and Benjamin Franklin, among others, all made important contributions to the study of electric energy.



An **electric current** is the movement of negative electric charges. There are two types of currents: direct and alternating.

An **electric circuit** is a system through which a current circulates. It allows electric energy to be transformed into other types of energy. The basic parts of a circuit are:



There are two basic types of circuits: series and parallel.

Name: _____ Grade: _____

Materials can be classified as **conductors** or **insulators**, depending on their capacity to transport a current.

Conductors are generally metals: copper, aluminum, iron, silver and gold.

Insulators include plastic, wood, rubber, cloth, air and glass, among others.

The characteristics of conductors and insulators make them useful when making many things we use every day, like pliers, voltage testers and plugs/outlets.

Electricity is very important to humans. However, it can also be dangerous if people do not follow the correct **safety precautions**.

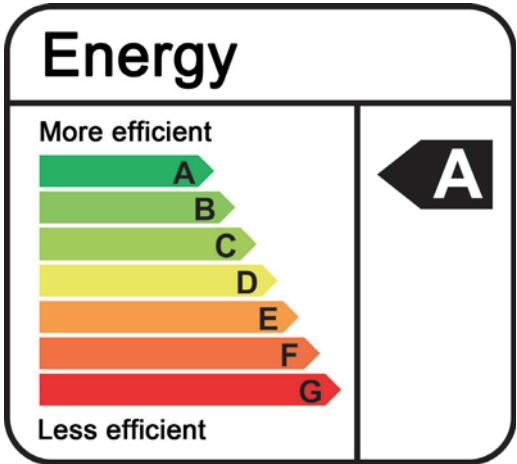
Conductors	Insulators

Electric energy is important to everyday life.

Most energy is used in electricity generation and transportation.

Lighting, refrigeration, heating and cooling consume most of the energy in households. We should try and save energy when using devices for these purposes.

Electricity should be used efficiently, without wasting it.



Test 3 Study Page • Review



Section 1

1. Look at the image. Write the type of energy the lamp needs to function in box **A** and the type of energy it creates in box **B**.



Section 2

2. Complete the sentences using the words below.

electric current

generator

receptor

electric cables

switch

The movement of negative electric charges inside a material is called _____.

A _____ is the source of energy in an electric circuit.

Wires that conduct the electric current are called _____.

A _____ opens and closes, preventing or allowing electric current to pass.

A _____ receives and transforms electric energy into another form of energy.

Section 3

3. Write the characteristics of conductors and insulators. Then give three examples of each.

Conductors	Insulators
Examples	Examples

4. Look at the following images. Mark those that show a safe way to work with electricity.

