

Control and transformation of energy

Complete this concept review handout and keep it as a record of what you have learned.

Definitions

- A closed circuit is a circuit in which electric current flows in a loop.
- An open circuit is a circuit in which electric current cannot flow in a loop.
- Control is the electrical function performed by any component that can open and close a circuit.
- The transformation of energy is the electrical function performed by any component that can convert electrical energy into another form of energy.

EST Different types of switches

Switch	Number of contacts that are opened or closed at a time	Number of possible paths for the electrons	Diagram
<i>Single-pole, single-throw</i>	1	1	
<i>Single-pole, double-throw</i>	1	2	
<i>Double-pole, single-throw</i>	2	1	
<i>Double-pole, double-throw</i>	2	2	

EST Different types of switches

- Rocker switch
- Toggle switch
- Push-button switch
- Magnetic contact switch

Electrical components used to transform energy

Component	Form of energy obtained
• <u>Incandescent light bulbs</u>	• <u>Luminous energy</u>
• <u>Heating elements</u>	• <u>Thermal energy</u>
• <u>Piezoelectric crystals</u>	• <u>Mechanical energy or sound energy</u> <u>(vibrations)</u>
• <u>Electromagnets</u>	• <u>Magnetic energy</u>