

Electronics (Circuits)

Definition: any device using circuits to control the flow of electrons.

Synonyms: DC motors, circuit boards, generators, sensors, etc.

Activity 1:

Materials: energy ball (<https://www.teachersource.com/product/energy-ball>)

In small groups, create a simple series circuit using the energy ball by forming a circle and holding hands. Two people in the circle unclasp hands and each touch with finger each of the two metal strip of energy ball while others continue to hold hands. Then, small group is to create a parallel circuit. Try keeping the energy ball lit by opening (i.e., breaking) the closed circuit.

What is a circuit?

What is the difference between a series circuit and a parallel circuit?

Activity 2:

Materials: energy ball, soda can, paper, plastic, wood, rubber, copper wire, water

In small groups, recreate the simple series circuit using the energy ball. Two people not touching the energy ball will release their hands and hold each of the below items between them. Which of the following are conductors? Which are insulators?

Soda can = _____

Wood = _____

Paper = _____

Rubber = _____

Plastics = _____

Copper = _____

Human Body = _____

Water = _____

What is an electric current?

What is resistance?

What is voltage?