

Answer Key to Checking Your Understanding Questions:

Section 10.1 (p. 305) #1, 2, 4, 5, 6, 7

1. Describe the major difference between static electricity and current electricity.

Both describe the movement of electrons. However, in static electricity, the electrical discharge is sudden, uncontrolled, and happens all at once. In current electricity, the charge flows in a controlled way through a circuit.

2. List the three parts of a circuit. Explain the function of each part and provide an example.

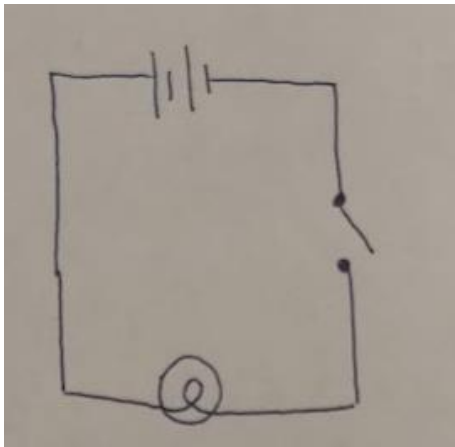
Energy source: provides electrical energy for circuits in the form of free electrons with electrical potential energy. E.g. battery converts chemical energy into electrical energy

Load: device that converts electrical energy into another form of energy. E.g. light bulb

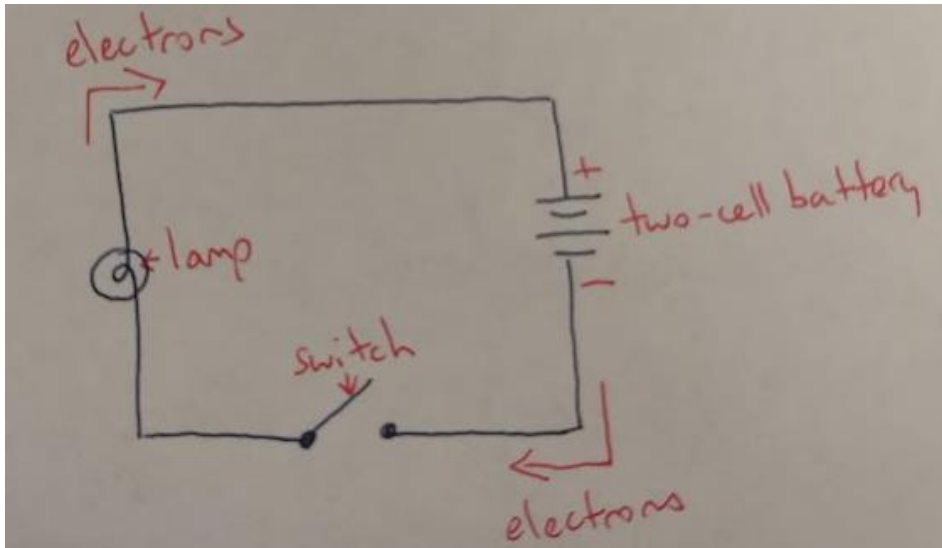
Pathway: good conductors that allow flow of electrons. E.g. copper wire

(Note: air is a very poor conductor of electricity. Thus, if you cut a wire and the pieces of metal are no longer attached, the circuit will be broken because there will be no easy path for the electrons to follow.)

- 4.

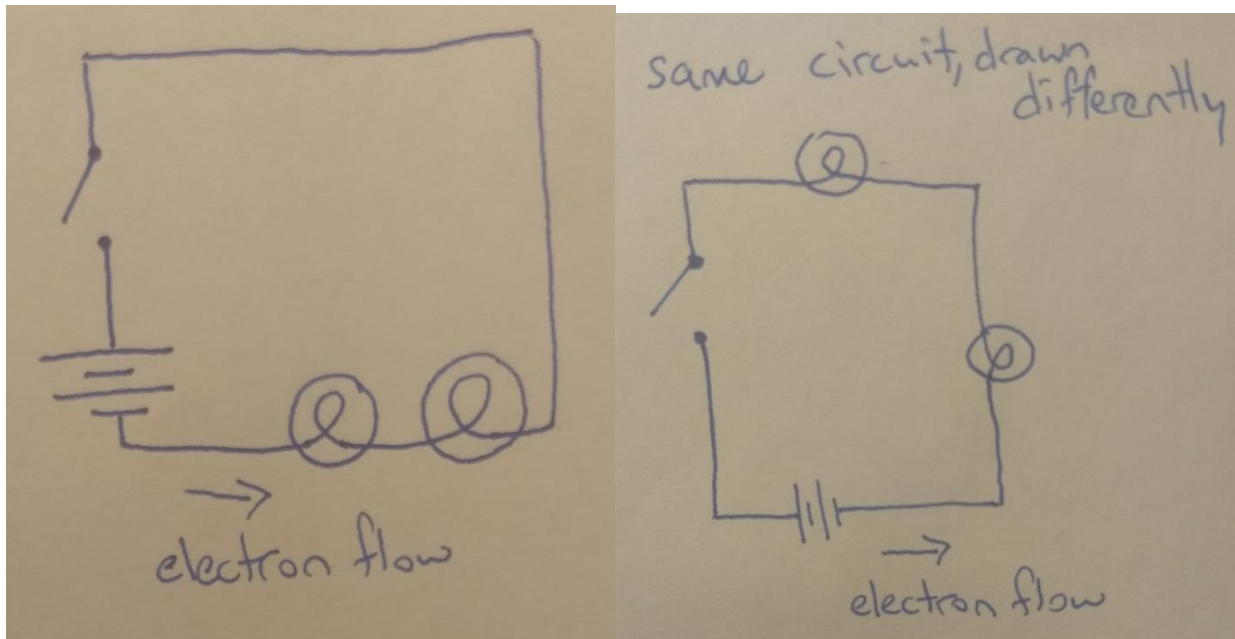


5.



6.

a. Draw a circuit diagram of the circuit shown in Figure 6.



(*Note: The same circuit can be drawn many different ways. As long as the various components are connected with wire, and that you have all the same symbols and in the same order, that is what matters.)

b. Explain the direction that the electrons flow in this circuit.

See figure.

7. Draw a circuit diagram of the circuit shown in Figure 7.

