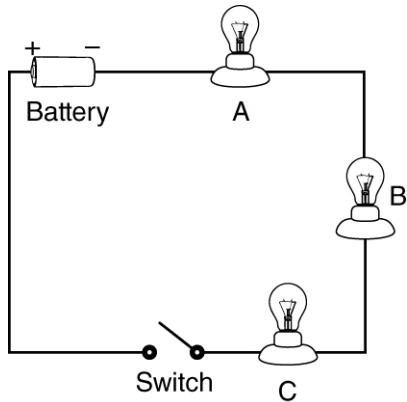


What Are Electric Circuits, Conductors, and Insulators?

1 The electric circuit below consists of a battery, a switch, and three light bulbs.



What type of circuit is shown in the diagram?

- (A) closed circuit
- (B) series circuit
- (C) magnetic circuit
- (D) parallel circuit

2 The plastic coating was stripped off the end of the piece of wire shown below.



Why must the plastic be removed before this wire is used in an electric circuit?

- (F) so the wire can be bent and fit into the circuit
- (G) to prevent the circuit from becoming overloaded
- (H) because the plastic makes the wire too thick to use in a circuit
- (I) so that electric current can pass between the copper wire and other parts of the circuit

3 Erica looked at a group of objects and classified them as electrical conductors or insulators. She made the table below to show her results.

Object	Classification
glass bead	insulator
plastic plate	insulator
aluminum foil	conductor
silver bracelet	conductor
wooden craft stick	conductor

How many objects are not classified correctly?

- (A) 0
- (B) 1
- (C) 2
- (D) 4

4 Some materials do not conduct electric current. Which of these materials is an electrical insulator?

- (F) CD case
- (G) paper clip
- (H) penny
- (I) staple

5 Ariel wants to build an electric circuit with a device that can be turned on and off. Which list contains all of the materials she needs for her circuit?

- (A) wire, ruler, switch, battery
- (B) string, buzzer, battery, switch
- (C) buzzer, wire, switch, light bulb
- (D) battery, wire, light bulb, switch