

Working Safely with Electric Circuits

Goal • Read this information and answer the questions that follow.

Working Safely with Electric Circuits

Electricity can be dangerous. Without special equipment, it is not always possible to tell when there is a current in a wire. Never conduct experiments using electric circuits without the supervision of an adult who is trained to work safely with electricity.

Always follow these guidelines when you work with electric circuits:

- Inspect your equipment before you begin. Watch out for and replace damaged wires, leaky batteries, broken bulbs, or damaged clips.
- Make sure your work area is clean, dry, and uncluttered.
- Remove metal jewellery that could conduct electricity.
- Handle wires by holding the plastic (insulated) coating or clips.
- When connecting a circuit, *connect the wires to the load first*, before connecting them to the battery.
- When disconnecting a circuit, *disconnect the wires from the battery first*, before disconnecting them from the load.
- Check to make sure that the battery is not too powerful for your circuit. If you connect a 6 V battery to a 1.5 V light, you may “blow” the bulb.

1. What precautions must you take before you work on electric circuits?
2. When connecting a circuit, at what stage do you connect the battery?
3. When disconnecting a circuit, at what stage do you disconnect the battery?