

Practical 5: Electrical circuits (4 hours)

Learning Outcomes: To determine the advantages and disadvantages of series and parallel circuits.

Materials: Battery holder, battery, several insulated wires, ammeter, voltmeter and light bulbs.

Activity 1: Building a simple series and parallel circuits.

Procedure:

1. Build the circuit given below using conductors using ordinary wires. In building, ensure conductors are not insulated for each step.



Circuit A



Circuit B

2. All wires are connected and the light bulbs are covered.
3. The ammeter and voltmeter is connected with the above circuit. It makes sure a circuit is formed around the readings.
4. One bulb from each circuit is removed. The readings taken are observed and the readings of both the ammeter and voltmeter through circuit are recorded down.
5. Another bulb is connected in series to circuit A, the following table is observed and the readings of both the ammeter and voltmeter is recorded down.
6. Another bulb is connected in parallel to circuit B. The readings taken are observed and the readings of both the ammeter and voltmeter is recorded down.