

The Primary Stage of Grades (4-5)  
School Year 2022 - 2023

Name: \_\_\_\_\_

Subject: Science  
Lab report #1: Electrical Circuits

Date: / /

Class: Grade Five National (A/B)

Objective/s

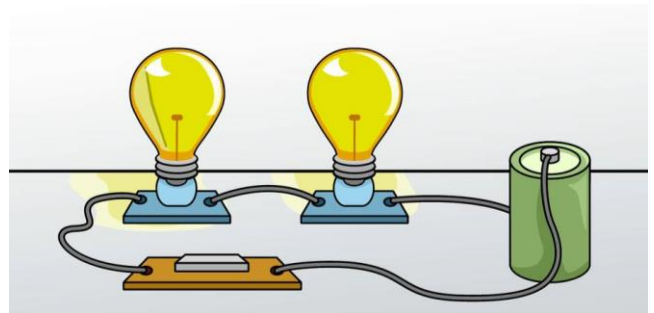
- Differentiate between electrical conductors and insulators.
- Test materials in the laboratory to decide whether they are electrical conductors or insulators.

Materials required:

| Different Objects: |        |        |          |
|--------------------|--------|--------|----------|
| Plastic            | copper | rubber | iron     |
| Glass              | wood   | steel  | aluminum |
| A bulb             |        | Cells  |          |
| Wires              |        | Switch |          |
| A bulb holder      |        |        |          |

Procedure:

1. Construct a simple electric circuit.
2. Add each object to the circuit.
3. Observe what happens, record your observation in the table.



**Write your prediction before doing the test.**

| Material | Prediction<br>Will the circuit work? | Observation<br>Does the circuit work? | Electrical Conductor/<br>Insulator |
|----------|--------------------------------------|---------------------------------------|------------------------------------|
| Copper   |                                      | Yes                                   | Electrical conductor               |
| Plastic  |                                      | No                                    | Electrical insulator               |
| Rubber   |                                      | No                                    | Electrical insulator               |
| Iron     |                                      | Yes                                   | Electrical conductor               |
| Steel    |                                      | Yes                                   | Electrical conductor               |
| Glass    |                                      | No                                    | Electrical insulator               |
| Wood     |                                      | No                                    | Electrical insulator               |
| Aluminum |                                      | Yes                                   | Electrical conductor               |

**Conclusion:**

**Electrical conductors are:**

**Materials that allow electricity to pass through.**

Examples: **All metals like steel, iron, copper.**

**Electrical insulators are:**

**Materials that do not allow electricity to pass through.**

Examples: **Wood, plastic, rubber.**