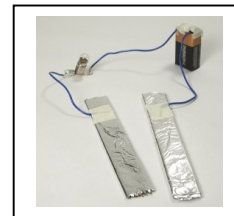
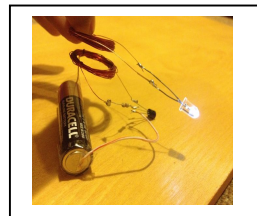
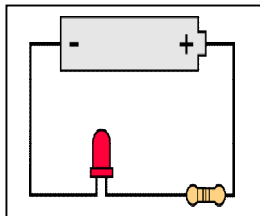
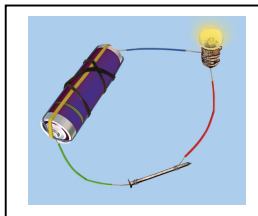


**EXPERIMENT - 1****ELECTRICAL CONDUCTIVITY OF SUBSTANCES**

**Aim** : Identifying electric conductivity of different materials (Metals and Non metals).

**Required** : Electric wires, 6V or 9V battery, 5V L.E.D. bulb, Iron string, Aluminium string, Zinc piece, Copper wire, Carbon piece, Sulphur powder, Iodine, Magnesium ribbon.

**Description** : Metals conduct electricity through them. Non metals do not conduct electricity.

**Procedure:**

1. Connect electric wires at the two ends of the battery.
2. Attach 5V L.E.D. bulb to the wire at one side.
3. Again connect a wire to the other end of the bulb.
4. Connect the free ends of the connecting wires with ends of an iron string.
5. Observe whether the bulb glows or not.
6. If the bulb glows, they are electric conductors.
7. If the bulb doesn't glow, they are not electric conductors .
8. Repeat the same procedure by using Aluminium string, Zinc piece, Copper wire, Carbon piece, Sulphur powder, Iodine, Magnesium ribbon.
9. Note down the observations in the table in each case.

**Observations:**

| Substance        | Metal or Non metal | Does the bulb glow ? (Yes / No) |
|------------------|--------------------|---------------------------------|
| Iron string      |                    |                                 |
| Aluminium string |                    |                                 |
| Zinc piece       |                    |                                 |
| Copper wire      |                    |                                 |
| Carbon piece     |                    |                                 |
| Sulphur powder   |                    |                                 |
| Iodine           |                    |                                 |
| Magnesium ribbon |                    |                                 |

..... conduct electricity.

..... do not conduct electricity.

### **Precautions :**

- If 9V battery is not available, use 1.5V battery and 1V L.E.D. bulb. Other wise attach four 1.5 V batteries.
- More care is needed while doing this experiment.
- Wash hands after touching the substances like sulphur.

**Result :** Observed the electric conductivity of different materials (Metals and Non metals).

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