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# Activity 7 – Conductivity and Breadboards

### Conductivity: how easily electric charge can move in a material

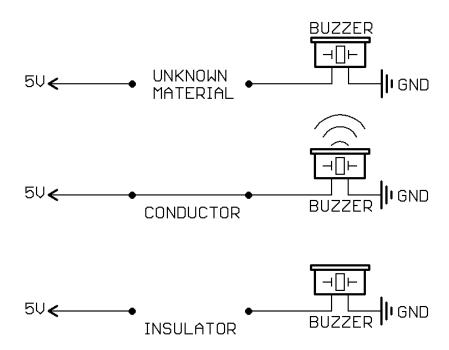
#### Conductor

#### Insulator

Electric charge moves easily.

Electric charge does not move

## **Testing the Conductivity of Different Materials**



We can use this buzzer circuit to test the conductivity of different materials. If the material is a conductor, current will flow through it and the buzzer to sound. If it is an insulator, no current will flow and the buzzer will not sound. **Test** different materials around the room, and **fill in this table** with your observations.

| Material          | Conductor | Insulator |
|-------------------|-----------|-----------|
| Metal wire        | <b>✓</b>  |           |
| White-board       |           | <b>/</b>  |
| Pencil (wood)     |           |           |
| Pencil (graphite) |           |           |
| Crayon            |           |           |
| Coin              |           |           |
| Paper clip        |           |           |

| Material                  | Conductor | Inculator |
|---------------------------|-----------|-----------|
| iviateriai                | Conductor | Insulator |
| Fill with other materials |           |           |
|                           |           |           |
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# Mapping Conductivity on a Breadboard

| + - abcde fghij 00 100000 000001 00 200000 000002 00 300000 000003 00 400000 000004 00 50000 00005 | 9 9 | Test which of the holes are connected and conduct electricity together. Draw lines across the holes to show which ones are connected. |
|--|-----|---|
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# Ideas, Questions, Notes