

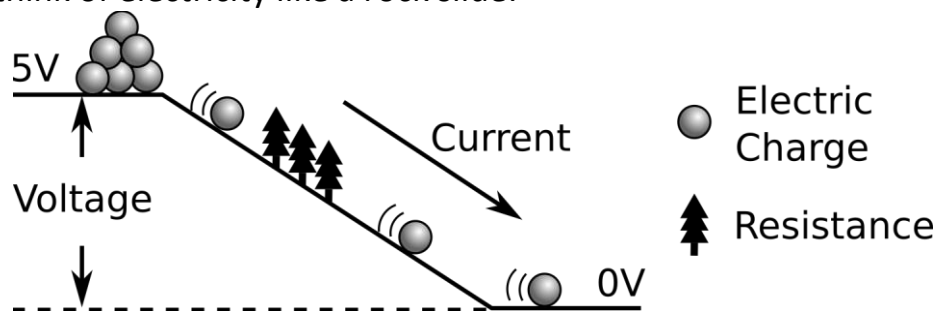
# HIMALAYAN MAKERS GUILD

## Foundation Activity 1

### Conductivity and Breadboards

#### ELECTRICITY

We can think of electricity like a rock slide:



#### CONDUCTIVITY: HOW EASILY ELECTRIC CHARGE CAN MOVE IN A MATERIAL

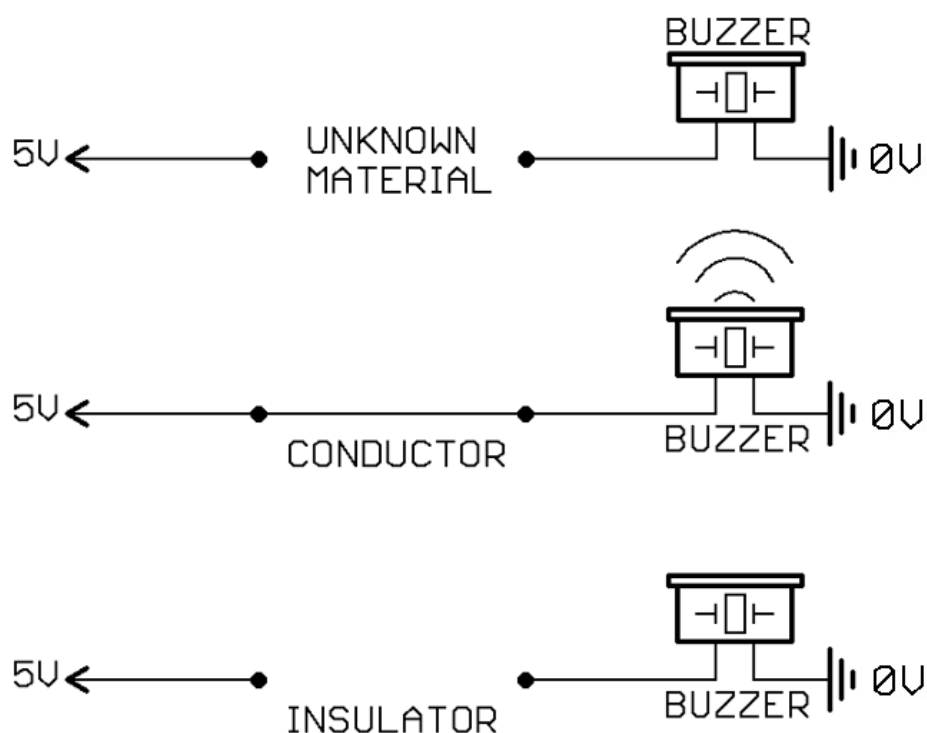
##### Conductor

Electric charge moves easily.

##### Insulator

Electric charge does not move.

#### TESTING THE CONDUCTIVITY OF DIFFERENT MATERIALS

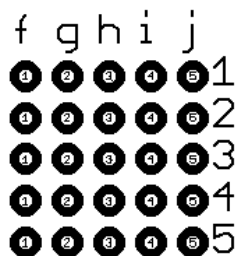
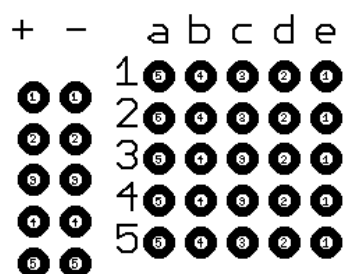


We can use this buzzer circuit to test the conductivity of different materials. If the material is a conductor, current will flow through it and the buzzer will sound. If it is an insulator, no current will flow and the buzzer will not sound.

**Test** different materials around the room, and **fill in this table** with your observations.

Material	Conductor	Insulator
Metal wire	✓	
White-board		✓
Pencil (wood)		
Pencil (graphite)		
Crayon		
Coin		
Paper clip		
<i>Fill with other materials...</i>		

### MAPPING CONDUCTIVITY ON A BREADBOARD



Test which of the holes are connected and conduct electricity together. Draw lines across the holes to show which ones are connected.

When multiple points are electrically connected, we call them a **node**.