**Simple Circuit Lab 1**

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Activity 1

2. Hypothesis: The electrical current should flow from the “positive” end to the negative end of a battery. A lightbulb needs to be connected on both sides to make a continuous stream of current for a series circuit.

3. For each arrangement predict whether or not the bulb will light up.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Configuration | Prediction Comments | Observation Comments | Configuration | Prediction Comments | Observation Comments |
|  | Yes  | Yes  |  | Yes | Yes |
|  | Yes  |  Yes  |  | No  | No |
|  | No | No |  | No | No |
|  | No | No |  | No  | Yes |
|  | No  | No |  | No  | No |

4. Conclusion: Connections need to be made where electrical current can pass through a conductive surface. No more than two objects can be connected at each electric ‘joint’ in a series circuit.

Activity 2

2. Hypothesis: I believe a insulator is needed to be a filament in lightbulbs to restrict the movement of electrons to preserve the life span of a battery. By slowing down the transfer of electrons, the battery life is extended.

3. For each of the substances in the table below, predict if it is a conductor or an insulator.

|  |  |  |  |
| --- | --- | --- | --- |
| Material | PredictionConductor or Insulator | Does Bulb Light | ObservationConductor or Insulator |
| Penny | X Conductor [ ]  Insulator | X Yes [ ] No | X Conductor [ ] Insulator |
| Paper Clip | X Conductor [ ]  Insulator | X Yes [ ] No | X Conductor [ ] Insulator |
| Dollar Bill | [ ]  Conductor X Insulator | [ ]  Yes X No | [ ] Conductor X Insulator |
| Pencil | [ ]  Conductor X Insulator | [ ]  Yes X No | [ ] Conductor X Insulator |
| Hand | [ ]  Conductor X Insulator | [ ]  Yes X No | [ ] Conductor X Insulator |
| Dog | [ ]  Conductor X Insulator | [ ]  Yes X No | [ ] Conductor X Insulator |
| Eraser | [ ] Conductor X Insulator | [ ]  Yes X No | [ ]  Conductor X Insulator |