**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 | Prediction  Conductor or Insulator | Does Bulb  Light | Observation  Conductor 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 |