Dangers of Electricity and Appropriate Safety Measures **Name:**
Hook: Electrical Shock **Block: #\_\_\_\_**Trades Article:<https://www.elcosh.org/document/1624/888/d000543/section2.html>
Videos: What actually happens when you get electrocuted? (SciShow) <https://www.youtube.com/watch?v=bqIVwa9VFDM>

Do Volts or Amps Kill You? Voltage, Current and Resistance (2014) by RimstarOrg (5:15 min.)

<https://letstalkscience.ca/educational-resources/stem-in-context/do-amps-or-volts-kill-you>

The **danger from electrical shock depends** on ••• (in trades article)

the ***\_\_\_\_\_\_\_\_\_\_\_\_\_\_***of the shocking current through the body,
the ***\_\_\_\_\_\_\_\_\_\_\_\_\_\_***of the shocking current through the body, and
the ***\_\_\_\_\_\_\_\_\_\_\_\_\_\_*** of the shocking current through the body.
The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ must be high enough to overcome the skin resistance allowing current to enter the body.

Watch Videos and complete questions/notes that follow:
 <https://www.youtube.com/watch?v=iNpizBLXao8> [Electrical Safety 101 - YouTube](https://www.youtube.com/watch?v=_ZuFJkWT0ZA)

 **Electric Shock** occurs when a person touches a live or damaged wire, causing \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ completing the circuit.

A **Short Circuit** occurs when wires accidentally \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ forming a path of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Current always takes the path of least resistance through conducting materials**.** This results in the wire \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and no current reaching the load.

1. Sketch a diagram of the short circuit shown in the video. Show the flow of electrons through the circuit. Be sure to indicate direction of flow from source.
2. Will the lightbulb in this short circuit still work? Yes or No? Why?
3. Name **at least** two devices in a house that protect against too much current flow through the electrical wiring of your home? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. Describe **at least** three things you should avoid doing to be safer around electricity and avoid electric shock?
5. Why is it unsafe for too much current to pass through electrical wires? Give two reasons!
6. Current will not flow in a circuit without a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and if the circuit is \_\_\_\_\_\_\_\_\_\_\_\_\_.

**Elec 4 – I can explain dangers of electricity (current/voltage) and safety devices/measures**

|  |  |  |  |
| --- | --- | --- | --- |
| Emerging | Developing | Proficient | Extending |