PROPOSED THEORY

Assume that what is stated below is just theory and perform experiments (as suggested in the procedure) to test its validity.

In the textbook (section 18-3) it says: "Exactly how large the current is in a wire depends not only on the voltage, but also on the resistance the wire offers to the flow of electrons ... The higher this resistance, the less the current for a given voltage." This is described by Ohm's Law

$$V = I R$$

"where R is the resistance of a wire or other device, V is the potential difference applied across the wire or device, and I is the current through it."