In this lab we will be looking at how resistance effects lightbulb filament, which will give us an idea of how different materials are affected by electricity. Voltage is passed through the lightbulb filament which heats up, and causes the filament to glow an orange white, and energy is lost. Even though energy is lost it keeps a constant voltage due to the resistance of the lightbulb filament even when changing temperature. We are analyzing the formula for resistance where R is for resistance of the material being tested, V is the voltage applied and I is the current flowing through the material. There is also another relationship for the Voltage and Resistance, IR. This shows that the current flowing through an object with the amount of resistance can change the total voltage. When the current increases the lightbulb, filament heats up and provides light. The lightbulb also loses energy as it heats up and the resistance increases.