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A Revolting Experiment!

This project tested to see if acid affects the conductivity of electricity through water. The research confirmed that acid concentration (measured in pH) does affect the conductivity of electricity through pure water. A circuit board and test cell was constructed. It consisted of a voltmeter, ammeter, nine volt battery, copper wiring, copper electrodes, and a test cell. To test the pH level of the water/acid solution, a pH meter was used to ensure accuracy. All of the equipment that came in contact with the water/acid solution was cleaned with pure water between tests. A measured amount of water and hydrochloric acid was placed into the test cell (nitrile gloves were worn to ensure the acid did not come in contact with skin). Temperature and pH readings were recorded. Finally, the battery was connected to the terminals and the voltage and ampere readings were recorded. It was found that by increasing acidity, a greater amount of electricity was conducted. Overall, this was a very fun learning experience. It was gratifying that the test cell performed well.