



**CALIFORNIA STATE SCIENCE FAIR
2010 PROJECT SUMMARY**

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| Name(s) Shannon Sawyer; Theo Tebbutt | Project Number J1519 |
| Project Title Fire from Water: Do Different Qualities of Water Produce Different Electrical Charges? | |
| Objectives/Goals This project uses 'Lord Kelvin's Thunderstorm'(1867) to determine whether different water qualities produce differing amounts of electrical charge. We believe that the quality of water used will affect the results because water quality affects just about everything in life. | |
| Abstract | |
| Methods/Materials Two streams of water were run through two copper conducting rings cross-connected with copper tubing to two zinc-coated aluminum buckets resting on styrofoam insulation. Each bucket was connected to a length of insulated copper wire. These were brought near enough to each other to create a spark which was measured with a digital volt meter. Six different water qualities were tested and the five highest readings per quality used to create the average. | |
| Results There was a measurable difference in the voltage generated by the quality of water used, with the highest average (spun water) carrying 3.02 times the charge of the lowest average (bottled spring water). | |
| Conclusions/Discussion The quality of the water does affect the amount of voltage generated. | |
| Summary Statement This project seeks to demonstrate that the quality of water affects the strength of its electrical charge. | |
| Help Received Parents helped run trials, took photos and helped with board organization. | |