



**CALIFORNIA STATE SCIENCE FAIR
2017 PROJECT SUMMARY**

Name(s) Samantha I. Medina	Project Number J0616
Project Title The Effect of Tempertaures on Electrolytes	
Abstract Objectives/Goals The objective of my experiment was to test if different temperatures were to effect the amount of electrolytes in sports drinks. In this case, I used the sports drink Powerade#.	
Methods/Materials Conductance sensor built with instructions from sciencebuddies.com, 5 Powerades, and thermometer. Tested electrolyte count of every Powerade, each of the five were put in different temperatures, after 45 minutes in their designated temperature using the conductance sensor in the measurement of mA (milliamps).	
Results The electrolyte count in the Powerades came out to be higher in the warmer temperatures, according to the conductance sensor. Therefore, the electrolyte count was dependent on the temperature.	
Conclusions/Discussion Several trials with different bottles of Powerades in different temperatures shows that warmer temperatures lead to a higher amount of electrolytes in those Powerades. This information can be used to benefit anyone who is physically active by them consuming a warmer sports drink rather than it being ice cold.	
Summary Statement As tested with a conductance sensor, warmer temperatures result in a larger amount of electrolytes in sports drinks.	
Help Received My father helped me understand the electrical connections when building my conductance sensor, but other than that, I completed this project on my own.	