



**CALIFORNIA STATE SCIENCE FAIR
2005 PROJECT SUMMARY**

Name(s) Wendy V. Puquirre	Project Number J1021
Project Title The Effect of Ingested Fluid Temperature on Basal Body Temperature in Humans	
Abstract Objectives/Goals I wanted to know if the temperature of ingested fluids affects orally measured body temperature in humans. I believed it would affect basal body temperature because when people feel hot or cold, they often drink fluids of the opposite temperature. Methods/Materials First I took the temperatures of 32 people, in degrees Fahrenheit, using a digital thermometer and a new cover slip. Then I asked them to drink one of three liquids, which were all at different temperatures. Ten minutes after they were done, I used a new cover slip and retook their temperatures. Each of my volunteers had to drink all three liquids, but only one liquid per day. When I was done collecting all of my data, I created a scatter plot for each liquid, and compared the before and after temperatures with a Y- X line. Results Most of the people who drank the hot liquid, 64%, had a temperature increase. Most of the people who drank cold liquid, 81%, had a temperature decrease. Most of the control group, 94%, experienced some temperature change. Conclusions/Discussion The reason some of my data shows that some body temperatures responded differently than I expected may be because I made an error in measuring their temperatures. For example, I did not expect that a body temperature would rise if a person drank cold liquid. Also, many of my participants were moving during the ten minutes between their two temperature measurements, which probably caused their temperatures to change. I think testing more people would allow me to draw better conclusions from my data, and using an ear thermometer may work as a more accurate measurement of temperature.	
Summary Statement The purpose of my project was to find out if the temperature of ingested fluids affects orally measured body temperature in humans.	
Help Received Mr. Simonsen, my science teacher, helped me by teaching me how to display my results and edit my project. My mom also helped me decorate my display board.	