



**CALIFORNIA STATE SCIENCE FAIR  
2011 PROJECT SUMMARY**

<b>Name(s)</b> <b>Emily P. Imfeld</b>	<b>Project Number</b> <b>J0411</b>
<b>Project Title</b> <b>Investigating if Different Classroom Temperatures Affect Student Test Scores</b>	
<b>Objectives/Goals</b> I hypothesize that the temperature of 67°F will result in having the highest test score because it is the most comfortable temperature. I also think that when the classroom temperature is 87°F, will negatively affect the students the most because it is hard to cool yourself off when it is hot and students may get sleepy.	
<b>Abstract</b>	
<b>Methods/Materials</b>	
<b>Method</b> Test One 67° 1. Get classroom to desired temperature. 2. 15 minutes into class, teacher hands out essay test. 3. Students are given 25 minutes to read the essay and answer 10 questions. 4. Collects tests. 5. Analyze results. Repeat Tests for temperatures at 77° and 87°	
<b>Materials</b> 1. 80 students between the age of 11-14. 2. Edusoft computer program to analyze test results. 3. Three different 800 word essay tests of equal difficulty. 4. Three sets of test papers for multiple choice answers—one for each essay. 5. Pencils, #2 Lead. 6. Temperature controlled classroom with thermostat. 7. Teacher.	
<b>Results</b> After completing my investigation, I found that my hypothesis was partially incorrect. My hypothesis stated that the temperature of 67°F, would have the highest test score because it is the most comfortable temperature. I also thought that when the classroom temperature was 87°F, it would result in the worst test scores, because it would be hardest for the students to cool themselves off in such heat.	
<b>Conclusions/Discussion</b> If the classroom is too hot, it can cause students to be uncomfortable and cause poor test results. After looking over my results, I think the weather outside the classroom played a role in determining the results. On the day when I conducted the test with the classroom temperature of 77°, the temperature outside was 56°, the hottest of all of the days on which I conducted the test. There was only a difference of 9 degrees from outside to inside. The day I conducted the test with the classroom temperature of 67°, the outside temperature was 49° and a difference of 18 degrees from inside to outside. The day I conducted the test of 87°, the temperature outside was 47°. A difference of 40 degrees from outside to inside. The temperature in the classroom, on both the days of the 67° test and 87° test, might have been what the students needed to warm themselves up due to the cold weather outside.	
<b>Summary Statement</b> If the temperature in a classroom affects student test scores.	
<b>Help Received</b> Mother helped my type report, Teacher helped me administer test, Teacher helped me compile and analyze data	