



**CALIFORNIA STATE SCIENCE FAIR  
2002 PROJECT SUMMARY**

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<b>Project Title</b> How Cool Is Your Computer?	
<b>Objectives/Goals</b> Heat has a negative effect on a computers performance and life. The objective of my testing was to find the most effective cooling system, thus increasing the performance and life of the computer. <b>Abstract</b> Heat has a negative effect on a computers performance and life. The objective of my testing was to find the most effective cooling system, thus increasing the performance and life of the computer. <b>Methods/Materials</b> The computer I used was a Dell GX1 Pentium III. I ran 3DMARK PRO, a benchmark test that stresses the computer by doing #looping# tests, the effect of these tests work the computer components and increase the temperature. Using a digital thermometer I took the temperature at four different component locations in the computer: 1. The Hard Drive 2. CPU chip 3. Video Card 4. The air temperature inside the PC case. The different cooling systems I used are: 1. 2COOLPC (a product that redirects air inside the case) 2. System Blower(blow outside air into case) 3. Cool Master ( a heatsink/fan for the cpu) 4. Hard Drive Cooler (for the hard drive). 5. Original Components. 6. Original Components without the air shroud. 7. Combination of all the cooling systems. After each test I let the computer return to the normal room temperature (70-73'). I repeated the test 3 times to insure accuracy. <b>Results</b> The results were pretty definite. The product, 2CoolPC, was the overall individual winner. It had the lowest temperatures recorded for 3 of the 4 components. It was beaten only by the 'hard drive cooler' product at lowering the temperature of the hard drive, and then by only .2 degrees. The combination of using all the cooling products 2CoolPC, Hard drive cooler, and system blower lowered temperatures marginally better than using the 2CoolPC product alone. <b>Conclusions/Discussion</b> My results showed that the single best cooling system was the 2COOLPC-cooling product. The ideal temperature inside your PC is roughly 5 degrees higher than the ambient room temperature. If the	
<b>Summary Statement</b> I tested different cooling systems to see which one would have the greatest effect on a computers' temperature	
<b>Help Received</b> Dad helped get fans and software on internet.	