



**CALIFORNIA STATE SCIENCE FAIR
2014 PROJECT SUMMARY**

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Project Title How Fast Is Your Computer? The Benchmarking Process	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals Our objective is to test and explore how our benchmarking software, SiSoftware Sandra, tests the software and hardware of our 6 PCs.</p> <p>HYPOTHESIS: We predict that the desktop with the greatest processing power, energy input, and fan size will perform the best in our benchmarking procedure. That desktop would be the HP Touchsmart. We do not think a laptop will "win" the test.</p> <p>Methods/Materials LAPTOPS: HP Pavilion g6 Notebook PC, Dell Latitude E6430, HP ENVY Slimbook 6 1100 PC, Acer Aspire E1-572 DESKTOPS: HP TouchSmart 520 PC Compaq Presario Desktop PC Model: Model: 520-1145t CQ5700F OTHER: SiSoftware Sandra (One copy for each Computer must be downloaded) Google Docs and/or notebook for recording and sharing results, making graphs.</p> <p>EXPERIMENT: Run all benchmarks on all computers, wait for 1-2 hours each device for process to finish. Read and record data, compare, simplify, graph, present.</p> <p>Results We did test how our benchmarking software, SiSoftware Sandra, handles and uses the hardware and software of the device to find its actual performance, but, our beginning hypothesis was incorrect. We had thought that one of the desktops would perform a lot better than the rest, but in fact a laptop did and a desktop performed the worst.</p> <p>Conclusions/Discussion Through our experiment we had reached our objective, but, the results disproved our hypothesis and our results were actually the complete opposite of what we had initially thought. We now know that the benchmarking process can find the efficiencies of these computers, and we know they do this by running one and/or multiple parts of the device to see how they perform jobs together and alone.</p>	
Summary Statement This project uses the benchmarking process to explore the speed, power, and capacity of 6 different models of PC.	
Help Received Father looked over writing for grammatical/spelling errors; Mother provided board construction materials; Willing volunteers provided 6 computers to test; Dr. Whitaker aided in finding correct benchmarking software.	