



**CALIFORNIA SCIENCE & ENGINEERING FAIR
2019 PROJECT SUMMARY**

Name(s) Vanessa Tieng	Project Number S0423
Project Title Traditional Paper and Pen Testing vs. Progressive Online Computer Testing	
<p style="text-align: center;">Abstract</p> <p>Objectives The purpose of this project is to find out if students perform better on written or online math tests.</p> <p>Methods I asked 40 volunteers, 20 boys and 20 girls, to participate in the experiment. Then they were split up evenly, 10 boys and 10 girls took the traditional paper and pen test and the other 10 boys and 10 girls took the online computer test. They were allowed a calculator and scratch paper</p> <p>Results The results showed that in every category the written test always had the highest average. The girls written, and boys written test had higher averages than their online counterparts. Also, the overall written average was higher than the overall online average. However, the standard error bars were shown as well to emphasize if they were statistically different or not.</p> <p>Conclusions I concluded that students score higher on the traditional paper and pen test compared to the online computer test. Thus, my hypothesis was proven correct.</p>	
Summary Statement Traditional paper and pen testing yield better results than online computer testing	
Help Received I created the written and online questionnaires myself. My biology teacher reviewed my experiment.	