



**CALIFORNIA STATE SCIENCE FAIR
2014 PROJECT SUMMARY**

Name(s) Sebastian L. Roeder-Hensley	Project Number J0731
Project Title Quick or Slow? Testing Human Reaction Times to Sight and Sound	
Objectives/Goals To figure out if people react faster to sight or sound.	
Abstract	
Methods/Materials Materials: 1) Computer program written by Sebastian Roeder-Hensley, testing reaction times to sight and sound; 2) Computer with Mouse; 3) Headphones; 4) Quiet room; 5) Chair; 6) Table; 7) 7 Human test subjects Methods: 1) Have the test subject do the following: a) Sit down in quiet room with computer open to Scratch computer program b) Put on the headphones c) Click the start button on the computer screen d) Click the mouse as soon as a red square appears on the screen or a beeping noise is heard 2) Record each reaction time that the computer program automatically displays (in thousandths of a second) after the mouse is clicked. 3) Repeat the testing process 5 times with 7 subjects.	
Results The time averages were always faster for visual reactions. This disproved my hypothesis that people would react faster to sound. Each test subject clicked the computer mouse faster after seeing a red square appear, compared to hearing a beeping noise; this consistency proved that the results were not random, or based on the person taking the test. While some people were slower overall than others, the slower they were with visual reactions, the slower they were with sound reactions. Also, the visual reaction time of 0.276 showed up once with test subject 2, three times with test subject 3, two times with test subject 4, once with test subject 6, and once with test subject 7; no other specific time appeared this much.	
Conclusions/Discussion My original hypothesis was that people would react faster to sound because the noise would startle them more. Based upon my results, the overall sound reaction time average for all test subjects was 0.43, and the overall sight average was 0.33. I now know that people react faster to sight than sound. Based on my averages for each person, I know that I can trust my results because no test subject's reaction time for visual was greater than his or her reaction time for sound. If I were to dig deeper into this subject, I would investigate whether or not people who cannot hear have a faster visual reaction time than people who can hear, and whether people who cannot see have a faster hearing reaction time than people who can see.	
Summary Statement Do people react faster to seeing an object appear visually or to hearing a noise?	
Help Received Dad helped fix one bug in Scratch computer program after it was created.	