



**CALIFORNIA SCIENCE & ENGINEERING FAIR
2018 PROJECT SUMMARY**

Name(s) Kayla H. Brewer	Project Number J0706
Project Title The Effects of Visual Distraction on Recall	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals I visited the Museum of Science in Boston and came across an experiment that focused on attention span. I was inspired by this exhibit to design a project to test visual distractions and their effects on the ability to retain information. The purpose of this project was to discover whether distractions impair the ability to comprehend and memorize information. Based upon on my research, I believed that distractions, even small ones, might impair the ability to comprehend and memorize information.</p> <p>Methods/Materials 124 test subjects participated in grades 5 through 8. I came up with a list of 15 words for test subjects to attempt to memorize and recollect. I also created animations such as a ball bouncing, a pinwheel spinning, and a line oscillating as my "distractions." I created a video with the list of words and the distractions beside them to test half of the subjects. In each grade, I tested one class with the list of words alone and the other class with the video, which showed the word list and the distractions. The subjects were given time to memorize the words silently, wait silently afterwards, then write the words they could recall on response forms I created. I collected and analyzed the data.</p> <p>Results The mean number of words remembered by participants who were shown the video was significantly fewer than the number of words remembered by participants just shown the word list alone. Participants shown the word list alone scored an average of 23.6% higher in fifth grade, 38.0% higher in sixth grade, 17.8% higher in seventh and 16.9% higher in eighth grade than those shown the video. The number of words remembered ranged from none to all 15 words remembered!</p> <p>Conclusions/Discussion Overall, the findings supported my hypothesis. The distractions in the video seemed to have a large impact on the brain's focus. At every grade level there were significantly more words recalled by those who viewed the word list without distraction. According to my results, the impacts of a visual distraction appeared to be even greater with younger students (the fifth and sixth graders) than with seventh and eighth graders, but even the seventh and eighth graders were still greatly affected.</p>	
Summary Statement My project is about testing the effects of visual distractions on the ability to memorize and recall information.	
Help Received My science teacher assisted me in testing the classes. I graded and recorded all tests myself.	