



CALIFORNIA STATE SCIENCE FAIR 2006 PROJECT SUMMARY

Name(s) John Tan Carin	Project Number S0305
Project Title Factors Affecting Adolescents' Short-Term Memory	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals The goal is to determine the effect of visual and auditory distractions on short-term memory. Students will be asked to recall objects that were presented as words, pictures, and words plus pictures. A ringing cell phone and flashing light will be the distractions. Further more students will circle one memorization technique to determine the effects of strategies chosen according to the presentation form.</p> <p>Methods/Materials High school students were tested to see how presentation forms affect short-term memory. Further more, they were exposed to visual or auditory distractions during the 30 seconds of recall. After each test they circled one memorization technique they used. The number of objects recalled was recorded, averaged, and compared for each presentation form and distraction. The materials used during the testing process were 8 1/2 X 11 presentation forms, stop watch, and types of memorization technique survey.</p> <p>Results All three presentaion forms were affected by both visual and auditory distractions. However, visual and auditory distractions were irrelevant against memorization. Without distractions, the only notable improvement in short-term memory was for pictures compared to both: pictures were remembered better than both. Presentation form was more important when visual distraction was present: pictures were remembered notably better than words or both. Presentaion form was unable to overcome auditory distraction: all the presentation forms were drastically affected by the auditory distraction.</p> <p>Conclusions/Discussion Pictures alone were remembered better than words or both. According to the analysis, pictures are more effectively remembered. This shows that words alone or both were a less effective form by which to present information. Students have a more difficult time deciding on a memory technique for both. Presenting both words and pictures pose a distraction in itself. Visual or auditory distraction impairs high school students# short-term memory. According to the analysis, all the presentation forms were affected by both distractions. The analysis also shows that visual and auditory distractions were equally effective in impairing short-term memory. The result of the testing for memorization techniques indicated that high school students already have the basic knowledge of what type of memorization technique to choose according to the presentation form.</p>	
Summary Statement Does visual and auditory distractions affect high school students short-term memory with with different types of presentation forms (words, pictures, and pictures with correlating words) and memorization technique surveys were distributed	
Help Received The Project advisor helped proof reading my materials: A friend helped out with the project title: A friend also helped with the organization of the project board	