



**CALIFORNIA STATE SCIENCE FAIR
2014 PROJECT SUMMARY**

Name(s) Mary C. Monaghan	Project Number 34813
Project Title Children's Drawings: A Study to Create an Illusion of Space Using Depth Cues	
Objectives/Goals This project's purpose was to determine if the exposure of visual depth cues can improve or have an impact on children's drawings. Abstract Methods/Materials One-hundred sixteen students ages six to thirteen years were tested. Students were asked to draw six drawings that exhibit an illusion of space (Trial #1). Then students were shown various types of depth cues seen in the real world. Students were then asked to draw the same six drawings again (Trial #2), remembering what was learned from the exposure of visual depth cues. The students were given no directions on how to draw. Each of the 1,392 drawings were scored using a created grading criteria. Totals were recorded for drawings in each trial. Results Results show that 89 students (77%) showed improvement in one or more of their drawings from the exposure of depth cues. In contrast, 27 of the 116 students tested (23%) did not show any improvement. Drawings were typical for their developmental stages. The specific drawing that showed the most improvement was shading squares from dark to light adding up to 48 students (41%) with this improvement. The second most common improvement was the placement and/or size of flowers to show depth adding up to 38 students (33%) with this improvement. Results show that as age progresses, the quality of drawings increases as well. Conclusions/Discussion Learning by observation and hands on experiences can help with teaching about our world. After students were exposed to depth cues, many experienced an "Ah Ha!" moment or understood that there are many ways to represent an illusion of space. If students were given more time to explore a larger variety of visual depth cues more improvement would be shown. Hands on experiences are important in schools to help students understand how to accomplish tasks. In conclusion, if children explore more with creating an illusion of space, their two-dimensional drawings will begin to show depth.	
Summary Statement My project is about depth cues and their influences to create an illusion of space in children's drawings.	
Help Received Mother supervised classes that were tested and helped with display board layout.	