



**CALIFORNIA STATE SCIENCE FAIR
2002 PROJECT SUMMARY**

Name(s) Elizabeth M. DePonte	Project Number 22195
Project Title Spatial Skills: Can They Improve with Practice?	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals The objective of this project was to discover if students could improve their spatial skills with training. The experiment also tried to determine if age would affect the amount of improvement through training for a spatial task.</p> <p>Methods/Materials One hundred students from grades five, six, seven, and eight were tested. Half of the subjects from each age group were tested with only two shapes to trace: a circle and a star, in consecutive order. This group was the "control" group. The other set of subjects were given six shapes, beginning with a circle and ending with a star. This group was labeled the "training" group. All students were timed and allowed a maximum of three minutes to trace each shape, while looking only in a mirror and being unable to look directly at their hands. All "tracing sheets" were later checked to count the number of mistakes made by each subject.</p> <p>Results The control group results for the percent of students who were able to trace the last shape within the three minute time limit were: 35% of fifth graders, 27% of sixth graders, 57% of seventh graders, and 50% of eighth graders. The percentage of training subjects who successfully completed the last shape were: 53% of fifth graders, 60% of sixth graders, and 100% of both seventh and eighth graders.</p> <p>Conclusions/Discussion With only a brief training period, the experimental ("training") groups performed significantly better than the control groups in all grade levels. Older students showed even more dramatic improvement than the younger students.</p>	
Summary Statement The purpose of this project was to discover if students could improve their spatial skills with training.	
Help Received Mrs. Hunker permitted me to use her classes for testing.	