



**CALIFORNIA STATE SCIENCE FAIR
2011 PROJECT SUMMARY**

Name(s) Dania S. Pagarkar	Project Number J0419
Project Title Augmented Reality Enhances Learning	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals My project was to determine if Augmented Reality (AR) can be used to enhance learning among various individuals.</p> <p>Methods/Materials Informed consent was obtained from 36 randomly selected middle school students. With aid of style indicator test, students were divided into following three categories; (1) kinesthetic, (2) auditory & (3) visual. Each group of student was taught a regular lesson on human anatomy, without Augmented Reality (AR), their learning was captured with simple test. Two weeks after the first test, same students were given lessons enhanced with Augmented Reality (AR), once again their learning was captured with simple test.</p> <p>Results The Kinesthetic students benefited the most from the AR aided lesson. Their grade went up by 25% with the AR lesson. Grades of the Visual students improved by about 16%. The Auditory group benefitted the least, their grade improved by only 11%. Overall 17% grade improvement was observed on 36 volunteer students</p> <p>Conclusions/Discussion The results agreed with the hypothesis. As expected kinesthetic people benefitted the most from the AR lesson. AR made the lesson interactive, creating similar stimulus produced by a hands-on activity, thus benefitting the kinesthetic people most. Although it didn't have any characteristic that could directly reach out to the auditory, the AR still brought reasonable improvement in their understanding by the virtue of the lesson delivery. Similarly visual students found it easy to understand.</p>	
Summary Statement Explore if Augmented Reality (AR) can be used to enhance learning among various individuals.	
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