



**CALIFORNIA STATE SCIENCE FAIR
2006 PROJECT SUMMARY**

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Project Title In the Blink of an Eye	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals In this continuation project from our study on the effects of blinking on vision while reading and working on the computer, we sought to determine if the vision of soft contact lens wearers was worsened more than the vision of non-contact lens wearers while working on the computer for two and ten minute intervals.</p> <p>Methods/Materials Informed consent was obtained from 20 subjects of both genders, age 12 to 20. We performed five trials on 10 control subjects who did not wear contact lenses and 10 experimental subjects who did wear contact lenses. The procedures involved testing our subject#s near vision using the Rosenbaum Pocket Vision Screener. This vision test was done at the start of the study, after working on the computer for two minutes, and after working on the computer for ten minutes.</p> <p>Results After working on the computer the 10 experimental subjects who wore contact lenses, 5 had diminished vision in at least one eye after working on the computer for two minutes. After ten minutes, 7 of the subjects had changes in their vision. These 7 subjects who had vision changes had the changes in both eyes; Of the 10 control subjects who did not wear contact lenses, 2 subjects showed a change in vision, in only in one eye after working on the computer for two minutes. Three subjects had changes in one eye after ten minutes. All of the non-soft contact lens vision changes were in only one eye.</p> <p>Conclusions/Discussion We believe that contact lenses, even soft contact lenses, lead to Dry Eye Syndrome, and performing an activity such as working on the computer will cause the eyes to dry out even more. Since age can be another factor in the development of Dry Eye Syndrome, we sought to control that variable by testing only teenage subjects. We think this project is important since many people may not realize that working on the computer may lead to decreased vision. This is especially true among contact lens wearers. With more and more people using computers, worsening of vision is becoming a greater problem.</p>	
Summary Statement Given the increasing usage of computers and soft contact lenses, this project measures the changes in vision after working on the computer for two and ten minute intervals of soft contact lens wearers and non-contact lens wearers.	
Help Received Three eye medical professionals, an Ophthalmologist and two Optometrists, provided us with interesting information and support. Also, our parents encouraged us to continue to study this important subject.	