



**CALIFORNIA STATE SCIENCE FAIR
2011 PROJECT SUMMARY**

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Project Title The Effects of Texting Distractions on Driving Performance	
Abstract Objectives/Goals This is an experiment designed to investigate the effects of texting on driving performance, as measured by the mean time necessary to complete a 2.1 mile course using the driving simulator Test Drive Unlimited with the Xbox 360 gaming console. Methods/Materials The experimental group (n=26; 16 Females and 10 Males) and the control group (n=28; 14 Females and 14 Males) consisted of a randomized opportunity sample of 17-18 year old students from two 12th grade English classes. The participants were predominantly Caucasians from a rural high school in central California. The experiment was carried out during two class periods over two weeks with each participant completing a simulated driving course on a rural stretch of highway using the Xbox 360 driving wheel and foot pedal controls. The participants in the control group were requested to complete the driving course without texting distractions. The participants in the experimental group were asked to complete the same driving course while being required to respond to received text messages, each experimental participant responded to the standardized set, with regard to order and content, of text messages received in a serial pattern. The independent variable was the text messages received and responded to and the dependent variable was the amount of time necessary to complete the course. Results A one-tailed t-test demonstrated that there was significance at the $p < .000$ level showing that the recorded times were negatively influenced by the texting distractions at the 99.9% level of confidence. Conclusions/Discussion Serendipitous findings included no significant difference among gender, video gaming experience, texting experience, and with or without a driver's license. This suggests that texting while operating a motor vehicle negatively affects a person's ability to adequately perform driving skills. Drivers should be aware of the risks associated with texting	
Summary Statement This is an experiment designed to investigate the effects of texting on driving performance, as measured by the mean time necessary to complete a 2.1 mile course using the driving simulator Test Drive Unlimited with the Xbox 360 gaming console	
Help Received N/A	