



**CALIFORNIA STATE SCIENCE FAIR
2006 PROJECT SUMMARY**

Name(s) Erika Aiza B. Carino	Project Number S0306
Project Title Effect of Driving Distractions on the Reaction Time of Students	
Abstract Objectives/Goals The objective is to determine if driving distractions, such as dialing on a cell phone or tuning a radio, have an effect on the reaction time of high school students. Furthermore, I want to determine if students with driving experience have a faster reaction time than those without driving experience. Methods/Materials 100 high school students, 50 experienced drivers and 50 inexperienced drivers, completed a computer program that measured their reaction time to the hundredth of a second. Students completed the program in four phases: practice, under no distractions, while dialing on cell phone, and while tuning a radio. Once the student hits the spacebar, a picture will pop up at a random time. That is the student's cue to press the space bar again as quickly as possible. Students are instructed to react to only 4 of the 5 pictures-the stop sign, the braking taillights of a car, the pedestrians and the stop light. When the picture of the billboard pops up, they are to NOT press the spacebar. Reaction times are recorded for every picture in the control and both experimental phases. Invalid reactions to the billboard are also recorded. Results The data obtained shows that the average reaction time of students when not distracted was .39 seconds. When dialing on a cell phone, their reaction time slowed down by an average of 56%. When tuning a radio their reaction time slowed down by an average of 45%. In regards to driving experience, t-tests show that there is no significant difference between students with and without driving experience. However, tuning a radio had far more of an effect on the reaction time of non-experienced drivers. This study also shows that students were more susceptible to an invalid reaction (reacting to the billboard) when distracted. Conclusions/Discussion This study shows that driving distractions do affect the reaction times of high school students and regardless of driving experience, the reaction time of students is still significantly affected.	
Summary Statement Students, with or without driving experience, completed a reaction time program to determine if driving distractions, such as dialing on a cell phone or tuning a radio, would have an effect on their reaction times	
Help Received Raymond Buckley created the Reaction Time Program; Mr. Linke provided the laptop; Josephine Carig provided the radio.	