



**CALIFORNIA STATE SCIENCE FAIR  
2012 PROJECT SUMMARY**

<b>Name(s)</b> <b>Courtney R. Heath</b>	<b>Project Number</b> <b>J0716</b>
<b>Project Title</b> <b>Focus: Effects of Distracted Driving</b>	
<b>Objectives/Goals</b> To determine if distractions do affect a person's ability to operate a motor vehicle.	
<b>Abstract</b>	
<b>Methods/Materials</b> Portable table, Television, Forza Motorsports 4, Xbox, Steering Wheel, Flash Cards, Cellular phone , Questionnaire.	
<b>TESTING</b> 1.Read flash card #1. 2.Have the driver complete the questionnaire. 3.Read flash card #2. 4.Start test #1. 5.Observe the television for crashes, the vehicle going off road, speed, and how the driver operates the vehicle. 6.When the driver completes a lap, record the displayed time. 7.Repeat step #4 thru #6 two more times. 8.Read flash card #3. 9.Instruct the driver to hold a cell phone to their ear while driving and answering the questions. 10.Start test #2. 11.Ask the driver questions from the orange flash cards for each appropriate trial. 12.Observe the television for crashes, the vehicle going off road, speed, and how the driver operates the vehicle. 13.When the driver completes a lap, record the displayed time. 14.Repeat step #10 # step #13 two more times, using the appropriate orange flash cards. 15.Read flash card # 4. 16.Start test #3. 17.Using the blue flash cards, show the driver a series of questions while they drive. 18.Observe the television for crashes, the vehicle going off road, speed, and how the driver operates the vehicle. 19.Observe the driver for how they accomplish the required tasks and when they looked away from the screen. 20.When the driver completes a lap, record the displayed time. 21.Repeat step #16 # step #20 two times, using the yellow and green flash cards, as well as the appropriate props.	
<b>Results</b> Analyzing the data showed many of the drivers are accustomed to talking on the phone while driving. The test showing the most impairment was the #in-car distractions# (test #3) exam. Test #3 was the hardest because the drivers were required to use a portion of the three skills needed to operate the driving test; cognitive, visual, and manual skills. In the 900 hundred tests given there was 198 total times a driver went off road. Drivers went off-road 35% during test #1, 25% during test #2, & 39% during test #3. There were also a total of 140 crashes. 20% occurred during test#1, 23% during test #2, and %57 during test#3.	
<b>Conclusions/Discussion</b> Drivers using either a cell phone or distracted in-vehicle show measurable levels of impairment. While some drivers drove faster while on a cell phone, more crashes occurred.	
<b>Summary Statement</b> To test the ability of a driver to operate a vehicle while being distracted by cell phones and in-vehicle activities.	
<b>Help Received</b> Dad helped compile data, mom helped type report, Mrs. Serrano helped proofread report.	