



**CALIFORNIA STATE SCIENCE FAIR  
2010 PROJECT SUMMARY**

<b>Name(s)</b> <b>Brian A. Clark</b>	<b>Project Number</b> <b>J0605</b>
<b>Project Title</b> <b>Driven to Distraction</b>	
<b>Abstract</b> <b>Objectives/Goals</b> The objective of this project was to determine which of the following common distractions had the greatest effect on a driver's reaction time: eating, talking on a hands held cell phone, talking on a hands free cell phone, using hygiene products, listening to a crying baby, and texting. The hypothesis was that texting while driving had the greatest effect on a driver's reaction time. <b>Methods/Materials</b> Each subject sat in front of a computer running a driving simulation program written in Multimedia Fusion 2. At random intervals during the program, an object entered the frame window and the subject stepped on a brake to stop the simulated vehicle. The program would then accurately record a subject's reaction time from when the object entered the frame window to when the subject pressed on the brake. Each driver repeated the simulated driving test eight times: twice with no distractions and one test for each distraction. <b>Results</b> Texting consistently had the greatest effect on the subjects' reaction time, slowing them down 30%. Hygiene products slowed down subjects 13%, hands held cell phones slowed them down 3%, eating slowed them down 2%, listening to a baby cry and talking on a hands held cell phone both made them 2% faster. <b>Conclusions/Discussion</b> The hypothesis was proven correct because texting had the greatest effect on a driver's reaction time. Texting and using hygiene products both have a large effect on a driver's reaction time and if used, can potentially lead to a car crash. Additionally, the standard deviation among texting subjects was much higher than other types of distractions. My results agreed with the California Department of Motor Vehicles statement that drivers should not text while driving.	
<b>Summary Statement</b> This project determined which of several common distractions had the greatest effect on a driver's reaction time.	
<b>Help Received</b> My mother helped me install software to run video in the simulator, Dad helped solder the brake together	