



**CALIFORNIA STATE SCIENCE FAIR
2010 PROJECT SUMMARY**

Name(s) Christopher A. Alexander	Project Number J0301
Project Title Hooked on Facebook	
Abstract Objectives/Goals This study attempts to identify whether people who use the Internet site, Facebook, exhibit signs of addictive-like behavior to the social network which in turn significantly impact the users' lives in a negative manner. Methods/Materials A total of 65 people participated in the Facebook Addiction test, a 20-question survey, using SurveyMonkey.com. Results Sixty-nine percent of the participants admitted that they stay on Facebook longer than intended, 32% neglect household chores so that they can spend more time on Facebook, 30% admit that their job performance or productivity significantly suffers, 21% frequently or more often lose sleep because of their late night log-in, and 14% report that school or grades suffer at least frequently because of the amount of time they spend on the social network. Conclusions/Discussion Despite the findings, the result of the survey did not support the hypothesis. The majority of participants did not have Facebook Addiction Test scores suggestive that their use of the social network site, Facebook, was significantly affecting their lives in a negative manner.	
Summary Statement Although the hypothesis of this study was not supported, it is evident that Facebook use nonetheless interferes with the daily routines and responsibilities of the survey participants.	
Help Received None	



**CALIFORNIA STATE SCIENCE FAIR
2010 PROJECT SUMMARY**

Name(s) Aven J. Ault	Project Number J0302
Project Title The Fun Factor	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals The objective was to determine if adding a fun consequence to returning carts to the cart corral would increase the number of carts returned by store customers.</p> <p>Methods/Materials I first counted the number of carts returned to the cart corral without any fun factor stimulus as the control. Then, to create a fun consequence for returning carts to the cart corral, I sat in a large box at the back of the cart corral and played a recording while lifting a paper to reveal a sign that said, "Now wasn't returning the cart fun? Thanks!" every time a customer returned a cart to the cart corral. I then removed the box and again counted the number of carts returned by customers without any fun factor stimulus.</p> <p>Results Out of all the observation periods, the percentage of carts returned with the fun factor stimulus was 59%, compared to only 46% of carts returned without any fun factor stimulus, which proved that my hypothesis was correct.</p> <p>Conclusions/Discussion My conclusion for this experiment is that if a "fun factor" is added to a regular every day thing then the amount of people doing it can increase significantly. This concept could be used to really help the environment; for example, by making picking up trash fun, recycling fun, or maybe even riding a bicycle to work fun. Also, returning carts to the cart corral is important. Carts not returned to the corral can cause serious damage to cars, or result in damages to the carts themselves, making them rusty and unhealthy for people. From my experiment I learned that making things fun really can significantly change things.</p>	
Summary Statement My project measured the results of adding a fun consequence to returning carts to the cart corral.	
Help Received Dad helped type report and count the carts returned. Consulted with Professor N. P. Mahalik to refine the project methods.	



CALIFORNIA STATE SCIENCE FAIR 2010 PROJECT SUMMARY

Name(s) Karina Avalos; Sharon Miranda	Project Number J0303
Project Title Don't Judge Me	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals The purpose of our project was to determine whether people will judge based on appearance. We hypothesized that yes, people will judge based on appearance.</p> <p>Methods/Materials For our experiment, we used the following: a Goth outfit, a girly outfit, a tomboy outfit, a sloppy outfit, and a notebook for recording data. We used two different methods to obtain our data. First, we went to a crowded location and our four different outfits were modeled on separate days to random people. At our crowded location, the person that was not wearing the outfit would randomly select a stranger. With the person in the outfit a good distance away from the interviewer, they would be asked to describe the person in the outfit using only three words. The interviewer would then write down opinions and this process was repeated for the other outfits. The other method used included pictures of us in our different outfits presented in a powerpoint format to a classroom of our peers. We asked the classes to also use three words to describe each outfit and our identities were hidden when asking our peers in order to ensure no biases. The students in each class wrote the three words for each outfit on a piece of paper and submitted them to the teacher anonymously.</p> <p>Results When looking through the responses for both the strangers and our peers, we found that most people judged our sloppy and Goth outfits more harshly than the other two. No real difference was noted between both methods used.</p> <p>Conclusions/Discussion From what we gathered, people judged this way because those two outfits were more out of their comfort zones. When our outfits were more of a normal style, the judging was not as harsh. We concluded this happening because people were used to seeing dressed this way. Therefore, our experimental results did support our hypothesis. Further experiments could use a variety of different locations which are completely different from each other such a music store and a department store. We could also distinguish between males and females as well as age groups in order to see if there were any differences given in their three descriptive words.</p>	
Summary Statement We set out to discover if people judged based on appearance and found that judging does occur when the outfits people are wearing are different from when most people consider normal dress.	
Help Received While at the crowded location, a parent was always present to supervise the project. We also received help from our science teacher. She advised us throughout the process and helped refine our project. She also helped us create the powerpoint used for our peers and allowed us to present it to her classes.	



**CALIFORNIA STATE SCIENCE FAIR
2010 PROJECT SUMMARY**

Name(s) Martina Axner; Erika Serrato; Hilarie Sit	Project Number J0304
Project Title To Lie or Not to Lie: That Is the Question	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals Our intention is to analyze the accuracy and reliability of facial/speech indications and response latency versus a polygraph machine when a subject is forced to lie under jeopardy. We hope this project will revolutionize law enforcement, by evolving the way suspected criminals are interrogated. We believe that the polygraph machine will be most accurate in determining the deceptive subject. This is because according to research and studies, the polygraph machine can measure the Cardio (heart rate), Galvo (sweating), and Pneumo (breathing rate) which is more reliable than facial/speech indications.</p> <p>Methods/Materials At a scheduled preliminary meeting, one of our four subjects was told to steal a hundred dollars and to lie about it. Then, they each took a polygraph test which asked them questions involving the money. During the test, they were filmed by a camera which allowed us to watch the videos of the polygraph sessions, look for facial indications, and calculate the response latency of each subject. We graded them based on our facial/response criteria and decided which subject stole the money. Then we discussed results with the polygraph examiner and handed out the surveys that were to be answered truthfully.</p> <p>Results On the polygraph results, it showed which person stole the 100 dollars and that there were three truthful subjects. The facial indications, however, showed that there was one deceptive, one truthful, and two inconclusive subjects. Response latency showed slight evidence of deception but not enough to prove anyone guilty.</p> <p>Conclusions/Discussion Our conclusion based on observations is that the polygraph machine is more accurate because it identified the deceptive subject. Even though our observations did the same, it did not prove that two other subjects were truthful. The response latency showed trivial results. Our hypothesis was accurate regarding the polygraph's precision of 86%-100%, by scoring a 100% in our experiment.</p>	
Summary Statement Finding the best technique for lie detection when under jeopardy using facial/speech indications, response latency, and a polygraph machine.	
Help Received Mitch Ballard: subject and teacher assistant; Cassandra deWood: helped guide us and correct report; Lila Levinsen: subject; Teresa Sit: subject; Tami Serrato: subject; Paul Mills: put videos on DVD; Rochella Axner: recorded polygraph test; Bill Naron: polygraph examiner; and all those interviewed.	



CALIFORNIA STATE SCIENCE FAIR 2010 PROJECT SUMMARY

Name(s) Supriya A. Bhupathy	Project Number J0305
Project Title Cheating, The Academic Epidemic: Is Teaching Honesty the Cure?	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals The purpose of this study was to understand cheating, the academic epidemic. Several hypotheses were developed regarding incidence, gender, student standings, and teacher perceptions. The main goal was to determine if teaching elementary students about cheating behaviors could increase their understanding of cheating.</p> <p>Methods/Materials Surveys were designed: 1st to 5th grade student surveys - Test 1 and Test 2; 6th-8th grade student survey; and 1st-8th grade teacher survey. Surveys were administered at 3 schools to a total of 850 students and 49 teachers. For grades 1 to 5, Test 1 was given first. After teachers reviewed the survey cheat statements with the students for up to 5 minutes per day for 3-4 days, Test 2 was given. Surveys were collected, data recorded, and statistical analysis performed.</p> <p>Results The incidence of cheating in elementary school was 22% and junior high was 55%. The following were the incidences: boys 37%, girls 34%, non-honors 57%, honors 54%, and director honors 51%. Following teaching, a significant improvement in the understanding of cheating behaviors was seen from Test 1 to Test 2 for 1st grade (6% to 2%, Z-value= 6.014), 2nd grade (5% to 1%, Z-value=5.543) and 4th grade (8% to 6%, Z-value= 2.19). There was no change for 3rd graders; and inexplicably 5th grade scores were significantly worse (6% to 8%, Z-value=2.155). When cheat scores were used, there was no significant difference for 3rd, 4th, and 5th graders between Test 1 and Test 2 with calculated t-values of 0.66, 0.114, and 0.48, respectively.</p> <p>Conclusions/Discussion The hypotheses were mainly refuted; however this study still gives insight into academic cheating. The incidence of cheating for elementary students was low compared to junior high, demonstrating a window of opportunity to change behaviors during early education. Furthermore, teaching elementary students about academic cheating improved their understanding, especially in 1st and 2nd grade. Repeating the study over several years will allow insight into whether improving student understanding of these behaviors can actually reduce the incidence of cheating over time.</p>	
Summary Statement By doing this study I attempted to show that students can improve in their understanding of what constitutes academic cheating early in their education, with the eventual goal of reducing the incidence of cheating over time.	
Help Received Mr. Cornell, my science teacher, helped guide me throughout the study. My parents helped gather materials that I needed to complete the study.	



**CALIFORNIA STATE SCIENCE FAIR
2010 PROJECT SUMMARY**

Name(s) Tara M. Dolin	Project Number J0306
Project Title How Obstacles Influence the Speed of Cars	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals I was interested in this topic because I wanted to know if people actually slow down when there are children or children's equipment placed on the street.</p> <p>Methods/Materials The materials I used were a radar gun from local police department, a tricycle, a neighborhood street, paper, a pencil.</p> <p>Results I averaged out the speed of the cars without any obstacles. Then I averaged the speed with a tricycle and with a child on the tricycle. After comparing the data, the speed of the cars without the tricycle was the highest. The speed of the cars with only the tricycle the cars slowed down. The cars slowed down the most when there was a child on the tricycle. This confirms that when the bike was in the street, many cars slowed down. For additional information, I also recorded whether the driver was male or female. I then averaged out their speeds with and without the bike in the street after comparing the speeds; I determined that when the bike was not in the street, the males drove faster than the female#s drivers. When the bike was in the street, the female#s drivers drove faster than the male drivers. Without anything the 40 car average of both the genders was 28.35. There were 22 cars driven by females and it averaged to 28.91. There were 18 cars driven by males and it averaged to 27.67. With only the tricycle the 40 car average of both genders was 25.33. There were 19 cars driven by females and it averaged to 24.31. There were 21 cars driven by males and it averaged to 26.24. With the tricycle and the child the 40 car the average of both genders was 22.98. There were 16 cars driven by females and it averaged to 21.81. There were 24 cars driven by males and it averaged to 23.75. I did the test on Hacienda Ave, San Mateo, California. It was dry and sunny conditions. The speed limit is also 25 miles per hour.</p> <p>Conclusions/Discussion I measured the speed of 40 cars without any obstacles going down the street. I put a tricycle on the side of the street and then I measured the speed of 40 cars. The cars did slow down about 3 miles per hour. Then I decided to put a child on the tricycle and then it slowed down even more by 2 miles per hour. So people slowed down about 5 miles per hour when they saw the tricycle and a child and they slowed down about 3 miles per hour for just the tricycle.</p>	
Summary Statement I wanted to see how a tricycle, a child, and a tricycle with a child makes traffic slow down on a residential street.	
Help Received Dad drove me to the street	



**CALIFORNIA STATE SCIENCE FAIR
2010 PROJECT SUMMARY**

Name(s) Manreet K. Dosanjh	Project Number J0307
Project Title Determining If Childproof Containers Are Really Childproof	
Abstract Objectives/Goals The objective of this project is to determine if childproof containers are really safe from children. Are children safe from childproof containers at their own house. Methods/Materials Chose four different childproof containers, Ibuprofen, Dayquil, Tylenol, Cephalexin. Clean out each container to make sure there are no toxins inside. Obtain thirty kids from each age two through seven and test each one. Give a group of four kids different childproof containers and observe each kid to see if they could open it themselves with no instructions. Obtain a timer and give one minute to open each container. Record the results and repeat the process for each group. Results All containers were childproof for two year old children. Two three year old kids opened the containers. At age four, six kids were able to open the containers. Twenty-one kids opened the containers at age five. Thirty-nine kids opened the containers at age six. At age seven, forty-two kids were able to open the containers. Most containers are not safe for kids three year olds to seven year olds. Conclusions/Discussion My conclusion is that most childproof containers are not safe from children. Parents who have kids around the ages three to seven should make sure that their kids don't go through the medicine cabinet. Also, parents should keep children away from harmful products because they can cause danger to kids. Kids can be in danger at their own house.	
Summary Statement I am going to determine which child proof caps are really childproof, and at what age are children more likely to be able to open them.	
Help Received teacher taught scientific method. helped get supplies. used a preschool to test children	



CALIFORNIA STATE SCIENCE FAIR 2010 PROJECT SUMMARY

Name(s) Nicholas F. Eisenhauer	Project Number J0308
Project Title A Study Investigating the Effects of Forest Sounds vs. City Sounds on Stress in Human Subjects	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals The objective of this study was to examine how city sounds and forest sounds may affect stress in subjects as measured by fluctuations in clinical measurements and salivary cortisol levels.</p> <p>Methods/Materials This was a randomized trial involving 9 human subjects, 5 adults ages 40-55 years and 4 children ages 8-18 years. After obtaining written consent, subject's baseline measurements of heart rate, blood pressure and respiration rate were taken and saliva was collected for cortisol measurement. Subjects were then seated in a quiet room with noise-reducing headphones through which they listened to either forest or city sounds for 10 minutes. Immediately after the listening session, the same measurements as at baseline were obtained and saliva collected. At visit 2, the subjects were exposed to the alternate sound and measurements/collections were taken in the same manner as at visit 1.</p> <p>Results After listening to forest sounds, subjects showed a significant decrease in heart rate, blood pressure and respiration rate, while salivary cortisol measurements were inconclusive. City sounds affected no significant change in any of the parameters measured.</p> <p>Conclusions/Discussion A paired T-test (using Infostat) confirmed a significant decrease in clinical measurements in nearly all subjects after listening to forest sounds. These same measurements were not significantly affected by exposure to city sounds. The cortisol values were inconclusive and a paired T-test showed no significant change for any cortisol values before or after listening to either city or forest sounds. Closer examination of the data revealed that non-commuters had lower baseline cortisol levels and that these levels did not change significantly after exposure to city sounds. One explanation is that non-commuters (children) did not find the city sounds, which were largely traffic noise, a trigger for stress. On the other hand, regular commuters' baseline values were double that of non-commuters and their cortisol values did go up an amount that might have been significant if we had examined a larger study population of commuters only.</p>	
Summary Statement My project explored the effects of forest sounds vs. city sounds on human stress levels.	
Help Received My mother's lab helped with the cortisol assay once I had collected the saliva samples. Also, my mom showed me how to compare 2 data points using Infostat.	



**CALIFORNIA STATE SCIENCE FAIR
2010 PROJECT SUMMARY**

Name(s) Jared F. Ericksen	Project Number J0309
Project Title Yawnology: The Study of the Contagious Yawn	
Abstract Objectives/Goals The objective of this project was to determine if yawning was contagious in the sense that the yawn passes from one individual to another. The scientist originally believed that yawning would be contagious in this scenario. Methods/Materials 10 different test subjects were brought individually into a quiet room with the scientist. Each subject was asked 30 common knowledge questions over the course of 5 minutes (the accuracy of the answers did not matter). The scientist yawned at questions 5, 15, and 25 to see if they would receive a "contagious yawn". (The subjects were not aware that the experiment they were participating in involved yawning, so they were under the impression that they just needed to answer a series of questions). Results The scientist's hypothesis was disproved, concluding that yawning was not contagious in the certain scenario tested. This result was drawn from the data that none of the subjects returned a yawn. Conclusions/Discussion The scientist concluded that yes, yawning is contagious because humans have empathy in the brain that causes one to observe an emotion and want to mimic said emotion, but yawning was not contagious in this certain environment. The scientist believed that this result was brought about because, the scientist believes, that the subjects were more anxious while being asked the questions than they would have been in a more casual environment. This will be tested in further experimentation. This experiment is beneficiary because it can help the scientific community by providing information about such a not-so-well-known subject like yawning. Yet a more practical application for this information is to better inform people about their body, how it works, and how to stay healthy.	
Summary Statement This project was used to determine if yawning is contagious.	
Help Received Parents and teacher helped with editing. the report. Teacher helped with collaboration about the experiment. Test subjects for participated in experiment.	



**CALIFORNIA STATE SCIENCE FAIR
2010 PROJECT SUMMARY**

Name(s) Madeline W. Garb	Project Number J0310
Project Title Effect of Gender on the Placebo Effect	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals Since I was little, I've had a growing interest in human psychology which therefore led me to wonder which gender the placebo effect impacts most. In my science fair project titled "Effect of Gender on the Placebo Effect" I decided to scientifically investigate whether males or females have a stronger reaction to the mind trickery in which the placebo effect possesses.</p> <p>Methods/Materials In my study I purchased two jugs of the same brand lemonade and gathered a group of ten males and ten females to test which of then genders was more prone to being impacted as a result of the placebo effect. The brand of lemonade and cups that I used include Newman's Own and three ounce Dixie Cups.</p> <p>Results After finishing my experiment my results turned out to be that males are more impacted by the placebo effect than females. These results prove that in medicine the placebo effect should be used on males more than females. Also these results show how affective the placebo effect is because only two people out of twenty weren't affected by the placebo effect.</p> <p>Conclusions/Discussion In conclusion, the placebo effect is a vital form of medicine to everyone, and according to my results mostly males. My hypothesis was indeed correct, so therefore I can finally conclude that the placebo effect doesn't work as well on females. As I worked on my study, I began to wonder if patients don't believe in placebos, will the sham still be affective? How does this change the results of a placebo's typical outcome. This topic is something that I would enjoy further investigating and researching on in another study.</p>	
Summary Statement In this project both genders were tested to identify which sex the placebo effect works best on.	
Help Received My dad provided some information on what the placebo effect is.	



**CALIFORNIA STATE SCIENCE FAIR
2010 PROJECT SUMMARY**

Name(s) Lourdes M. Gomez	Project Number J0311
Project Title Mature Audiences Only: Media and Cultural Pressure to Behave Suggestively in Middle School	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals Through personal experiences with peers, I made the assumption that adolescents feel pressure to dress or behave in ways that make them feel uncomfortable. For my science fair project, I surveyed middle school students asking questions that addressed media and cultural pressure put on adolescents. I developed the question, "Do adolescents feel pressure from the media and current culture to dress and behave suggestively?" I hypothesized that adolescents do feel pressure from the media and culture to dress and behave suggestively.</p> <p>Methods/Materials I made a survey of twenty questions regarding clothing styles, video games, TV shows, movie ratings, and specific songs. I canvassed the Del Monte Mall, Capitola Mall, Gilroy Outlets and Sacred Heart School in Hollister. I had the parents of the middle school students I approached sign the required parental consent form supplied by the SCCSF. I made sure that the students filled out the form in privacy and anonymously so that their answers would not be influenced by peers or parents. I collected a total of seventy-nine surveys.</p> <p>Results Fifty to eighty percent of students don't like suggestive clothing. I found that ten to twenty-five percent of adolescents do like suggestive styles based on the influence of peers and the media. My surveys showed that forty percent of adolescents don't play video games with ratings; Teen, Mature, or Adults Only, while forty percent like and play those games, but don't pay attention to the ratings. Twenty percent played games with those ratings when with friends. Ten to forty-five percent of adolescents watch MTV and "R" movies either just with their friends or because they're popular. For the last question of the survey, "Do you at times feel cultural or peer pressure to dress or behave in a way that makes you feel uncomfortable?" Forty-four percent respondents said "A. Never", forty-one percent said "B. Sometimes" and fifteen percent said "C Often". My hypothesis was correct; adolescents do feel pressure from peers and current media dress and behave suggestively.</p> <p>Conclusions/Discussion Adolescents feel pressure from the media and current culture. Many parents do not discuss with their children cultural pressures. I believe my project helps to raise awareness of the pressure that adolescents feel and can encourage parents to discuss issues with their adolescents while encouraging the values that are upheld in their home.</p>	
Summary Statement My project addresses media and cultural pressure that is put on adolescents.	
Help Received Mom helped hand out surveys; Mrs. Jurevich of Sacred Heart School helped distribute surveys.	



**CALIFORNIA STATE SCIENCE FAIR
2010 PROJECT SUMMARY**

Name(s) Abigail Graber; Lindsey Orlandi	Project Number J0312
Project Title Facial Feature Recognition	
Objectives/Goals The brain is very good at recognizing faces, even though the basic structure of all faces is relatively similar. People can recognize thousands of different faces. We wondered which part of the face the brain is best at recognizing. We think that the eyes are the easiest part of the face to recognize.	
Abstract	
Methods/Materials Step 1: Find photos of 30 famous people, and crop and size with photoshop. Step 2: Crop and print the photos so there is a nose, mouth and eyes for each person. (45 photos in all.) Step 3: Have test subjects mark celebrities that they recognize, on a list of names. Step 4: Show test subjects the noses, mouths and eyes separately of 15 famous people that they know of, in random order. Step 5: Ask test subjects to identify the person in the cropped photos and guess if they are unsure. (We did not force an answer if they couldn't guess.) Step 6: Tally responses, calculate percent correct. We did statistical comparisons using Microsoft Excel. (T-test 2-tailed paired.)	
Results On average, 12% of test subjects correctly identified the celebrity from the photo of the nose. By contrast, 44% correctly identified the mouths of the celebrities, and 52% made a correct identification from a photo of the eyes. 0% of test subjects correctly identified more celebrities from photos of noses rather than eyes or mouths. 53% of test subjects correctly identified more eyes than mouths, and 40% correctly identified more mouths than eyes (and one test subject performed equally with mouths and eyes). Pictures of eyes or mouths appear to give more identifying information to the brain than pictures of noses.	
Conclusions/Discussion We show that there is a significantly easier to identify a face by looking at the eyes in comparison to the nose. We also show that noses have significantly less identifying features than mouths. Our original hypothesis was that eyes would be the most characteristic feature of the face. We failed to show that there is a significant difference in comparison to looking at mouths, however, most of our test subjects did find it easier to identify eyes than mouths. (If there is a significant difference, it would likely require many more test subjects to determine this.)	
Summary Statement In our project, we tried to find out whether it easier to recognize a face by the eyes, nose or mouth.	
Help Received Parents helped type pages for board. Science teacher helped with procedure.	



**CALIFORNIA STATE SCIENCE FAIR
2010 PROJECT SUMMARY**

Name(s) Kate C. Harvey	Project Number J0313
Project Title How Do Cell Phones Affect Your Driving?	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals My objective was to learn if talking on a hand-held cell-phone affected your driving. I believe talking on a cell- phone does lessen your ability to drive.</p> <p>Methods/Materials I made a driving course out of cones. Drivers were instructed to stop at all the blocks in the road, stay within the cone lines, stop for a red ball that rolled across the lane, all while staying under 10 miles per hour. I had 14 people do the course twice, once while talking on a cell-phone and once without talking on a cell-phone, alternating whether the drivers got called the first time or the second time they drove the course.</p> <p>Results Two of my drivers did not answer the cell-phone. Of the other 12, the average driving accuracy (stops and staying within the lines) was the same for people who were talking on a cell-phone and people who weren't. The reaction time to the ball was 1 second longer for people talking on a cell-phone. The drivers talking on a cell-phone took about 50% longer to drive the course.</p> <p>Conclusions/Discussion My conclusion is that talking on a cell-phone does affect your driving. Both slower driving and longer reaction times by cell-phone users in my experiment shows that cell-phone use significantly reduces the attention given to driving.</p>	
Summary Statement My project was to see if talking on a handheld cell-phone affected your driving.	
Help Received All the drivers who drove the course, my mom who called the drivers, my teacher who helped me enter my project in county, and my dad who helped me set up my course, graph my results and type the backboard.	



**CALIFORNIA STATE SCIENCE FAIR
2010 PROJECT SUMMARY**

Name(s) Allison T. Hickok	Project Number J0314
Project Title Waste Not, Want Not: Can a Simple Sticker Cause People to Go Green?	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals Paper towels are a very wasteful use of natural resources. Even though more paper is used to make newspapers and magazines than paper towels, paper towels cause more landfill waste because they are almost never recycled unlike newspapers and magazines which are often recycled. Because they are not recycled, it is important to find a way to reduce the use of paper towels in the first place. My objective was to determine if paper towel use could be reduced by using a simple sticker on a paper towel dispenser that reminds people that paper towels come from trees.</p> <p>Methods/Materials I designed reminder stickers that had a picture of a tree and said, Hey! These are made from trees! Take only what you need please!. I placed these stickers on paper towel dispensers in four bathrooms at my school, one boys and one girls student bathroom, and one mens and one womens staff bathroom. The amount of paper towels that were used during two weeks when the stickers were up was compared to the amount used during two baseline weeks with no stickers. The sticker and baseline weeks were alternated: week 1, baseline; week 2, sticker; week 3, baseline; week 4, sticker.</p> <p>Results Paper towel use was lower during the weeks when the stickers were up compared to the weeks when stickers were not up. The stickers influenced paper towel use by kids more than adults. Males and females were influenced about equally.</p> <p>Conclusions/Discussion Reminding people that paper towels are a natural resource and should be conserved can reduce paper towel use and save trees. Because of my research, my school has allowed me to put reminder stickers on the paper towel dispensers in all the bathrooms. If the stickers save paper towels and money over longer periods of time, I plan to ask if the Irvine Unified School District will allow me to put stickers in all the bathrooms in all the schools. Maybe the whole state or country could eventually do this. This could save thousands of trees a year.</p>	
Summary Statement My project is about finding ways to change people's behavior so that they reduce waste of natural resources, such as paper towels, and save the Earth.	
Help Received Principal allowed me to use school bathrooms; Janitors helped me remove and place paper towel rolls and stickers in the bathrooms; My parents drove me to the post office to weigh the paper towel rolls on the postal scale	



**CALIFORNIA STATE SCIENCE FAIR
2010 PROJECT SUMMARY**

Name(s) Benjamin W. Jannasch	Project Number J0315
Project Title What's So Funny?	
Abstract Objectives/Goals My project looked at how humor in cartoons changes with age for children in 3rd through 8th grades. The goal of this project was to try to understand why kids laugh and what they think is funny in popular cartoons. Methods/Materials I asked students, and some adults, about their cartoon reading habits, and to rate 12 cartoons for their degree of humor and answer why they thought the cartoon was funny or not. Results I analyzed 172 questionnaires from grades 3 to 8. The results generally support the hypothesis that younger children find humor in cartoons because of the drawings and expressions, while older children and adults look for humor in situations, meanings, and implied jokes included with the drawings. Conclusions/Discussion Lower school children (grades 3 to 8) definitely enjoy reading comics because they find them funny. I hypothesized that younger kids that are in 3rd-5th grade would like cartoons more for the drawings and expressions on the cartoon characters' faces. This was clearly true for Peanuts, but also for Calvin and Hobbes and Garfield. I also hypothesized that kids that are in 6th-8th grade would enjoy cartoons more for the meaning and joke, along with the drawings. This was shown in responses to Garfield, Zits and Lukovitch, and to a lesser extent in Baby Blues and Hagar. Thus, my hypothesis seemed to be mostly correct.	
Summary Statement My project looks at how humor in cartoons changes with age for children in 3rd through 8th grades.	
Help Received My father helped format and print questionnaire, and compile data in Excel spreadsheet. I discussed the project with both my parents and teacher.	



**CALIFORNIA STATE SCIENCE FAIR
2010 PROJECT SUMMARY**

Name(s) Victoria S. Jones	Project Number J0316
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Project Title Mario Kart Distraction Test

<p>Objectives/Goals My objective was to determine what distraction makes it hardest to drive and why.</p> <p>Methods/Materials The materials I used were a Wii, a Wii remote and a steering wheel attachment, four bananas, two cellphones, a computer, video camera</p> <p>The steps I used to perform my project were</p> <ol style="list-style-type: none">1. Put steering wheel attachment on the Wii controller.2. Put Mario Kart DVD into Wii.3. Enter main screen and select time trial.4. Choose a character and kart. This will not change throughout the test.5. Have the subjects play a few times without timing them so that they get used to the controls.6. Turn on camera and time the first subject with no distractions.7. Turn on the camera and time the subject in a random order with the following distractions:<ol style="list-style-type: none">7a. Talking on the phone with no handsfree.7b. Talking on the phone with handsfree or speaker on.7c. Eating a banana (don't let them peel it until they've started)7d. Texting (send first message as they start)7e. singing a song (a song everybody knows such as Happy Birthday will be best)7f. Having a conversation with someone in the room with you.8. Record each as it comes, the time will disappear on the screen in about 20 seconds.9. Repeat steps 5-8 on your other subjects. <p>Results Out of the distractions I tested, the collected data showed that texting was the most distracting and eating was the second most distracting.</p> <p>Conclusions/Discussion My hypothesis was that texting would be the most distracting and singing would be the least because of mental difficulties. I was partly right, but I discovered that the amount of distraction was based on physical challenge, not mental.</p>	<p>Abstract</p>
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Summary Statement My project was a test to determine what was the most distracting thing to do while driving.

Help Received Brenden Dilloughry gave my my poster board and Jordan Carter, Teresa Grote and Nabil and Bryanna Jackson helped me test my project.



CALIFORNIA STATE SCIENCE FAIR 2010 PROJECT SUMMARY

Name(s) Dylan J. Karlsson	Project Number J0317
Project Title Exploring the Uncanny Valley: Stylized Animation vs. Computer Generated Imagery	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals The objective was to see if the psychological theory of the uncanny valley (Freud/Jentsch), as applied to robotics by Dr. Masahiro Mori in the 1970s, is scientifically valid, does it apply to media images such as stylized animation and computer generated imagery (CGI), and do age differences affect how these images are viewed. The theory explains the uneasy feeling people get when seeing something that looks almost human, but has certain flaws, which make the non-human characteristics stand out. The debate as to media images grew with the release of The Polar Express (2004), using CGI photorealism to replicate characters, was viewed as discomfoting while The Incredibles, using stylized animation did not attempt to look like normal humans and was more appealing. It is hypothesized that subjects who view stylized images will have a more positive reaction than similar CG images, because if the image is more realistic, its non-human flaws will stand out and likeability will decrease.</p> <p>Methods/Materials Using Moris graphing of the uncanny valley, 14 animated images and 14 similar realistic CG images, ranging from robotic to human, were gathered. A questionnaire was used for testing. Four age groups, and 28 subjects, 7 from each group, were surveyed. Each subject rated the image on a visual analog scale, from 0 (dislike the image) to 10 (enjoy the image). Controls were in place and variables were accounted for in the testing.</p> <p>Results The scientific validity of the theory was proven and the curves on the graphs, especially for stylized animation, are for the most part the same as with Dr. Moris graph as distinct uncanny valleys were formed. Older subjects, aged 30 and above, rated more images as falling into the uncanny valley as compared to younger subjects. The subjects however actually had a slightly more positive reaction to seeing CGI, than with seeing stylized animation, and disproved that part of my hypothesis.</p> <p>Conclusions/Discussion The uncanny valley does exist and applies to stylized animation and to a lesser extent computer generated images. The subjects had a slightly more positive reaction in seeing CGI than with stylized animation, and this was more so with younger people, a group exposed to CGI with videogames. Continuing technical advances in CGI technology such as in the movie Avatar will likely increase realism and viewer likeability with CGI and allow media producers to avoid the uncanny valley.</p>	
Summary Statement A study of the theory of the uncanny valley, using quantitative data from surveys, to prove or disprove if the theory is scientifically valid, does it apply to media images and do age differences affect how these images are viewed.	
Help Received My parents helped to find subjects for testing and my dad helped with some of the board layout.	



**CALIFORNIA STATE SCIENCE FAIR
2010 PROJECT SUMMARY**

Name(s) Addie McNamara	Project Number J0318
Project Title What Is the Effect of an Authoritative Figure on Different Age Groups?	
Abstract Objectives/Goals The purpose of this experiment was to investigate how different age groups would react to an authoritative presenter versus a non-authoritative presenter. When given a speech with some clearly false information, would subjects rate the accuracy of the information higher when it was presented by an authoritative figure? Based on background research, my hypothesis was that pre-teens (10-12) and adults (30+) would believe both figures equally while teenagers (13-19) would favor the authoritative presenter. Methods/Materials This project involved about 25 people in three different age groups as well as an authoritative presenter (adult, well-dressed, confident) and a non-authoritative presenter (child, casually dressed, hesitant). The presenters read a speech with about half of the information being clearly false to two different test groups. The subjects were then given a questionnaire that asked them to rate their belief in the accuracy of the presenter's information. Results The data showed that belief in the accuracy of the authoritative presenter decreased as the age of the subjects increased, most likely due to the subject's greater knowledge of the material. The pre-teens highly favored the authoritative presenter and did not favor the non-authoritative presenter. The teenagers believed both figures equally. The adults strongly disbelieved the non-authoritative presenter. The results were roughly the same for male and female subjects. Conclusions/Discussion My hypothesis was not supported by my data. The data showed that the belief in accuracy of an authoritative presenter decreased with age. It also showed that pre-teens and adults favored the authoritative figure over the non-authoritative figure while teenagers believed both figures equally.	
Summary Statement This project investigates how age can affect reactions to an authoritative figure versus a non-authoritative figure.	
Help Received Parents were authoritative figures, little sister was non-authoritative figure, brother assisted in drafting speeches about Japan and Korea to read to subjects, friends / volunteers were test subjects.	



**CALIFORNIA STATE SCIENCE FAIR
2010 PROJECT SUMMARY**

Name(s) Zehra Naseer	Project Number J0319
Project Title Effects of Sleep on School Performance	
Abstract Objectives/Goals The primary objective of the project was to evaluate the effects of sleep on the performance of 6th grade students from 5 different schools in the Chino Valley Unified District Methods/Materials The project was designed to be a multicenter, two arm, non- randomized, uncontrolled, blinded, convenience sample behavioral science study. The project was started with a comprehensive research. Based on the research a seven (7) question survey was developed. Students were explained the purpose of the research, and all survey questions were reviewed with the students. The students were asked to share the survey with their guardians and seek their permission. Data from the surveys that were returned was entered in the Microsoft Excel Sheet 2007 (Microsoft Corporation). The data from the surveys was entered sequentially in the rows (S1 #. S300; S = Student) and responses to the seven questions from each survey were entered in the columns created for each question in Data Entry sheet. The database also had multiple Analysis Sheets. Each Analysis Sheet obtained the data from the Data Entry sheet. For primary analysis the data automatically calculated students in group A that earned honor roll in the appropriate cell by using the "COUNTIF" command of the Microsoft Excel. Similar data for Group B and secondary analysis was calculated and populated using the same command. Results The overall participation of the students in the survey was 29%. Mean age of the students was 11.25 years. There was no difference in ages of the students across schools or genders. Girls participation was higher than boys by 14%. Sixty percent of the students indicated that they sleep for 8 hours or more. Responses from students with Honor Roll was 2.33 times more than their peers without honor roll. Primary analysis of the data confirmed the Alternate Hypothesis and showed that students who sleep 8 or more hours secure 9% more Honor Rolls compared to their peers who sleep for less than 8 hours. The data failed to show any relationship of performance to either 1) Breakfast eating habits, 2) Reading habits, 3) Playing activities at home, or 4) Study help at home. Conclusions/Discussion The primary analysis satisfied the Alternate Hypothesis and showed that students that sleep for 8 or more hours had better performance in the schools.	
Summary Statement To Evaluate Effects of Sleep on School Performance in 6th Grade Students of CVUSD	
Help Received Parents helped to secure the screen on the board.. Vice principal and class teacher helped with project in selection from 3 choices that I presented.	



**CALIFORNIA STATE SCIENCE FAIR
2010 PROJECT SUMMARY**

Name(s) Ethan S. Oro	Project Number J0320
Project Title Which Habits Contribute Most to Obesity?	
Abstract Objectives/Goals One of the USAs most common health problems is obesity, and the factors that cause obesity are poorly understood. The objective of this study is to identify factors that contribute to childhood obesity. My hypothesis is that kids who eat school lunches like Kid Chow will have a lower BMI and that genetics and eating strategies of parents will play a role. Methods/Materials Along with mandatory BMI collection required by the state, I used an online survey program called Survey Monkey and collected responses from the 102 5th grade students at my local elementary school. I asked 36 questions about students habits such as snacking and meal behavior, after school activities, and parental guidance. I examined the responses in kids with normal and high BMIs and then determined which differences were significant. Results In contrast to my hypothesis, I found that the type of lunch and the amount of TV watching does not correlate with BMI. However, I found that whether you eat a snack at school matters, as does participation in certain sports activities and parental size. Conclusions/Discussion I found that snacks, type of sports and parent size were important factors in childhood obesity. This information will be useful to school principals in determining programs to keep kids healthy. I hope to extend this study to other schools in my area.	
Summary Statement Using online surveys and BMI calculations, I found that snacks, type of sports and parent size were important factors in childhood obesity.	
Help Received I received help from the PE teacher who collected BMI data and directed kids to take surveys. She provided invaluable suggestions. My father helped with the statistics.	



**CALIFORNIA STATE SCIENCE FAIR
2010 PROJECT SUMMARY**

Name(s) Hannah M. Phelps	Project Number J0321
Project Title Product Sampling	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals The purpose of this project was to determine if product sampling influences consumer purchasing. My goal throughout this experiment was to prove my hypothesis: sampling will positively influence sales.</p> <p>Methods/Materials My experiment was performed at my school, using the students whom attend as subjects, to determine product sampling's effectiveness. On the first day at our weekly snack break, there were no samples provided, but a new product (a small bag of seven pretzels) for \$.25 was available. On the second day, one week later, I stood out with a bag of samples for those who wanted to try the product.</p> <p>Results My results proved product sampling to be an extremely effective way to increase an item's sales. On the first day, without samples, 12 out of 30 bags of pretzels were sold. On the second day, with samples, 30 out of 30 bags of pretzels, in half the time, were sold. Product sampling influenced a 60% increase in the product's sales.</p> <p>Conclusions/Discussion After researching, conducting, and comparing data in my experiment, my conclusion was surprising. Although my hypothesis that product sampling would positively effect sales, was proven correct, I greatly underestimated to what extend sampling would influence sales. In addition, my research identifies the complexities involved in the consumer purchasing process. This topic is relevant to current events involved with our struggling economy. By understanding the significance of product sampling and the various factors involved (human interaction, presentation, sensory stimulation), we are able to increase sales of products throughout businesses and stores.</p>	
Summary Statement The focus of my project was to determine if and to what extent product sampling influences an item's sales.	
Help Received My mom bought the pretzel bags and helped with proofreading the final draft. The P.T.A. gave me a opportunity to conduct the experiment at their weekly snack break.	



**CALIFORNIA STATE SCIENCE FAIR
2010 PROJECT SUMMARY**

Name(s) Evan H. Rhee	Project Number J0322
Project Title The Study of the Relationship Between Solar Flux and the Stock Market	
Objectives/Goals The purpose of my experiment was to find a correlation between two variables, solar flux and the stock market, and see if the correlation was consistent and if it was inversely or directly related.	
Abstract	
Methods/Materials Materials: Microsoft excel, a computer, CQG software, Tradestation, Internet connection. Procedure: 1. Identify dates of different solar flux peaks by going on to www.solenn.info/solar/ . 2. Go to the archives section and a list with all the years, months, and days of solar flux data will be opened. 3. Click on each month to see what the solar flux was for those months. 4. Copy the data for solar flux and the dates and transfer it to Microsoft excel by pasting it onto a spreadsheet. 5. Go on to Tradestation and retrieve data on stock prices in different years. 6. Go to Microsoft excel and insert the stock price data onto the spreadsheets with the same dates as the prices and solar flux. 7. Insert a graph containing each months' data on solar flux and stock price with solar flux data on one y-axis and stock prices on the secondary y-axis. 8. Repeat steps four through seven for each year in all the stock indices. 9. After obtaining all of the data for solar flux and stock prices and creating small graphs, take the solar flux and a stock index data for one year and create a table. 10. After creating the table enter Pearson's correlation formula into the excel spreadsheet containing the data table and select the solar flux and stock index data. 11. Then select the data for solar flux and the stock index prices again and create a big line graph with solar flux on the primary y-axis and stock index prices on the secondary y-axis. 12. After repeating this process for all of the indices and years create line graphs with the correlation coefficients plotted in the graph for each stock index along with the wheat commodity.	
Results see methods and materials	
Conclusions/Discussion My conclusion is that the correlation between solar flux and the stock market is random because the correlation coefficients were low and fluctuated between positive and negative numbers, making the	
Summary Statement My project is to see if there is a correlation between solar flux and the stock market.	
Help Received Father and Uncle helped downloading data, teaching me how to use excel, and explaining correlation formula and basic economics.	



**CALIFORNIA STATE SCIENCE FAIR
2010 PROJECT SUMMARY**

Name(s) Darrah Rosin	Project Number J0323
Project Title How Green Is Your Granny?	
Abstract Objectives/Goals To determine which age group is the most and least eco-friendly based on answers in a survey. Methods/Materials A clipboard, a pencil, a survey, directions Results The 60 year old females are the most eco-friendly and the high school girls are the least eco-friendly. Conclusions/Discussion My hypothesis was incorrect. My hypothesis stated that the 50 year olds would be the least eco-friendly which was incorrect. And my hypothesis stated that the 20 year olds would be the most eco-friendly which was also incorrect. It was very surprising to me that the 60 year old females were the most eco-friendly. It was not as surprising to me that the high school girls were the least eco-friendly. Maybe one of the reasons why the high school girls being the least eco-friendly was not as surprising is because most of the high school girls do not take the time to care for the environment and do not realize how much money they are wasting by not being eco-friendly.	
Summary Statement My project is to see if people are trying to help the environment or not, even if they say they know about the environment.	
Help Received Mrs. Sarah Rines helped with making sure all information was correct and testable.	



**CALIFORNIA STATE SCIENCE FAIR
2010 PROJECT SUMMARY**

Name(s) Ilana S. Skikos	Project Number J0324
Project Title The Greatest Mind (Adult Version)	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals The purpose of my experiment is to see if men and women see different things in abstract pictures. It is also to see which of these genders agree with suggested answers more. The final thing I tested this year was whether the thoughts and answers of men and women were the same as the boys and girls answers from last year.</p> <p>Methods/Materials I showed adults abstract pictures that I had taken from the Rorschach test. For pictures 1-5, each adult would circle one of four suggested answers. For pictures 6-10, each could choose one of the four answers or they could write in their own answer. In the second part of the test, I showed the adults the same 10 pictures. I told them what other groups of people thought the pictures looked like. They could agree or disagree with the suggestions. I then compared the results that I received this year to the results I had taken from last year on seventh grade boys and girls. I had given the seventh grade boys and girls the same test that I gave the adults.</p> <p>Results The biggest differences between the groups were: Men saw women. Women saw rats. Girls saw Christmas. Boys saw aggressive animals. Also, I found that the acceptance of suggestion for girls and women is almost the same, but the acceptance for males is opposite. Boys are the most accepting group and men are the least. Finally, women and girls chose to write in answers 42% more often than men and boys did.</p> <p>Conclusions/Discussion My first hypothesis was mostly correct. Both females and males saw similar things in abstract pictures. However, they did see some things that were completely different. My second hypothesis was correct. Women agreed with suggestion more than men did. Finally, my last hypothesis was partially right. Women and girls agreed with suggestion about the same rate, but men agreed to suggestion far less than boys did.</p>	
Summary Statement I tested what men, women, boys and girls see in abstract pictures and which group agreed with suggested answers more often.	
Help Received Grandma and mom went with me to administer test. Dad helped me with the board and the analysis.	



**CALIFORNIA STATE SCIENCE FAIR
2010 PROJECT SUMMARY**

Name(s) Michael F. Thompson	Project Number J0325
Project Title Your Lyin' Eyes: Do Individuals or Groups of People Make Better Eyewitnesses?	
Abstract Objectives/Goals My project measured the reliability of eyewitnesses and answered the question: Will you get more accurate information from eyewitnesses if you ask them individually about what they saw, or will you get more accurate information from a group of people? Methods/Materials I arranged for an incident to be staged in front of 174 unsuspecting subjects at a local college, obtained their informed consent and asked the subjects to complete a questionnaire about the incident. Some subjects responded as individuals, others as groups. I scored each response and calculated the number of right, wrong and no answers, then figured out the percentages and compared the results for individuals and groups. Results I was able to stage three incidents and collect data from 174 subjects. 59 subjects completed the questionnaire as individuals and 115 subjects were divided into 30 groups and responded as groups. Conclusions/Discussion --Eyewitnesses are not very reliable. On average, all subjects combined got just over 60% of the questions correct. That score would earn you a D- on a test at my school. They were unable to provide an answer or gave a wrong answer nearly 40% of the time. --Individuals are more reliable than groups because the groups gave more wrong answers. --Groups do better on appearance-related questions. Individuals do better on the substance of the incident. --All subjects made assumptions and reported them as facts. But groups were more likely to report assumptions as facts and less likely to say they didn't know an answer.	
Summary Statement My project measured the reliability of individuals versus groups as eyewitnesses.	
Help Received My mom contributed to my idea, Professor Clifford let me do my experiment in his classes, the subjects participated, my dad helped me set up the data tables and was the actor in the incident, and my parents drove me to the junior college to do the experiment.	



**CALIFORNIA STATE SCIENCE FAIR
2010 PROJECT SUMMARY**

Name(s) Natalie A. Tostado	Project Number J0326
Project Title When Science Is Sweet: Working with Kids and Marshmallows	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals</p> <p>I believe that children's self control level does in fact correlate with test results. If children have the self control to pay attention and listen to the teacher while they are giving a lesson, then it will show in their test results. I plan to test this by giving 100 kindergarteners a marshmallow, and telling them that if they can wait for 5 minutes; they will receive another one. Then I will record if they ate it or not. After that I will give them the all subject test. I will compare the amount of questions that the children got correct, with the amount of time that they were able to wait.</p> <p>During my testing, I discovered numerous things. While timing the child, I realized that this test was a great success. Not only was every test controlled, but each student was different in their own way. I learned that a test quite similar to mine was performed in the 1960s. A man named Walter Mischel tested four year olds, but then did a follow up test when they were 18 to see if the children that had the ability to wait were "smarter." I believe that the amount of self control will somehow connect to children's test results.</p> <p>I was proven correct; the amount of self control does correlate with test results. I noticed that as the amount of time children were able to wait, so did their test scores.</p>	
Summary Statement I enjoy the presence of children, so my quations was, "Does the amount of self control that a young child has correlate with their test results?"	
Help Received A teacher (Mrs.Peitryk) from the local elementary school allowed me to test her students, Dailard Elementary allowed me to test their students, My teacher Mrs. Marcarelli excused me from class, my Mother drove me to and from my school and the elementary school, and Anna Petrova helped me test.	



**CALIFORNIA STATE SCIENCE FAIR
2010 PROJECT SUMMARY**

Name(s) Gillian S. Weatherford	Project Number J0327
Project Title Ballet Angles: It's Not All Tutus	
Objectives/Goals My goal was to discover if the angles professional dancers demonstrate with their legs in a grande jete leap correlate with their esteem within the dance community.	
Abstract	
Methods/Materials Three photos of each dancer (Hee Seo, Gillian Murphy, Patricia Neary, Irina Dvorovento, Margot Fonteyn) were measured with a protractor to determine the angle of the dancer's grande jete leap. The measured angle was compared to the ideal angle of 180 degrees. Each dancer's esteem was defined by the number of professional lead roles they danced.	
Results Hee Seo, who danced in 15 professional roles, displayed an average angle of 177.25 degrees in her grande jete leaps. Irina Dvorovento danced in 19 professional roles with an average angle in her grande jete leaps of 178.25 degrees. Gillian Murphy had an average angle in her grande jete leaps of 176 degrees and a background of 17 professional roles. Patricia Neary danced 21 professional roles and had an average grande jete leap angle of 176.75 degrees. Margot Fonteyn had an average grande jete leap angle of 174 degrees and danced 24 professional roles.	
Conclusions/Discussion The ideal angle for a grande jete leap is 180 degrees. Therefore, the goal for any professional ballerina is to achieve a 180 degree angle in her grande jete leap. In conclusion, my results did not show a significant relationship between the measured angle of 5 professional ballet dancers' grande jete leaps and their esteem, as defined by the number of professional roles they have danced.	
Summary Statement My project is about the angles a dancer creates in a grande jete leap and how those angles correlate with the dancer's esteem.	
Help Received No help received.	



CALIFORNIA STATE SCIENCE FAIR 2010 PROJECT SUMMARY

Name(s) Tyler J. Bennett	Project Number J0399
Project Title Speeding in Residential Areas	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals The safety of child pedestrians, both walking to school and playing in the street, is threatened by speeding drivers. My project is designed around this question, "Does any type of 'slow' sign have any effect on the everyday driver?" If I post myself 10 ft. away from a speed detecting electronic "slow" sign during two different scenarios (with the sign on and with the sign off) drivers will drive slower with the sign on, rather than when the sign is off.</p> <p>Methods/Materials Materials: 1. "Slow, school zone" electronic sign; 2. Radar Gun with automobile setting; 3. Notebook and pencil to record speeds and other data.</p> <p>Procedure: Step 1: Find access to a radar gun. Step 2: Obtained legal approval by San Marcos Sheriffs Department. Step 3: Locate a hill in a residential area where you notice that drivers always speed down. Step 4: Find a with a posted "SLOW" sign which displays drivers' speed during school hours. Step 5: Identify times with consistent traffic flow (morning just before school starts and afternoon just as school is getting out). Step 6: Sit 10ft. back from your "SLOW" sign with the radar gun. Step 7: One person will hold the gun and yell out the car type and it's speed. Step 8: The second person will then locate the car and yell out the gender of the driver. Step 9: Then record the speed and gender are recorded. REPEAT STEPS 6-9 WHEN SIGN IS OFF.</p> <p>Results After observing traffic and collecting data at both morning and afternoon designated times, the following results were found. The "SLOW" sign had only a very slight impact on slowing the speed of the drivers, however, most drivers may have only been slowed due to an increase in traffic at those times. The average non-sign speed of drivers was between 41 and 44 miles per hour, with speeds ranging from 32 miles per hour to over 65 miles per hour. In relationship to the gender of the drivers, males, in fact had a higher average speed under both conditions.</p> <p>Conclusions/Discussion My hypothesis related to the overall slowing of drivers was only slightly correct. The sign had only a very slight impact on slowing the speed of the drivers, however, most drivers may have only been slowed due to an increase in traffic at those times. In relationship to the gender of the drivers, my hypothesis was incorrect. Males, in fact had a higher average speed under both conditions.</p>	
Summary Statement The focus of this project is to determine the effectiveness of "Slow" signs on male and female drivers' speed in residential areas.	
Help Received Mother helped with proof reading report.	