Name(s)	Project Number
Haleema F. Abbasi	**J0401**

Project Title

Recycle Yourself! An Analysis of Sociological Factors Affecting the Decision to Donate Organs in US Sub-populations

Abstract

Objectives/Goals
In the US, there are 105, 567 people waiting to receive an organ on the organ donor list. 18 people die every day because they did not receive the organ that they needed to save their life. According to the Health Resources & Services Administration (HRSA), the need to increase the number of donors from various ethnic groups is particularly important since the chance of getting a match is greater from people of the same race and the need for transplant in some groups is disproportionately high, frequently due to a high incidence of some medical conditions. Based on this information, I took an informal poll within my community about how many people were organ donors. I was surprised to see that not many people were. I recognized that this is a problem, and I wanted to explore some of the aspects within my own community that were factors in making the decision to sign up to be an organ donor.

Methods/Materials
Google Docs, Facebook, QR code, e-mail, hard copies and Microsoft Excel.

I used Google Docs to develop an online survey designed to capture a cross sectional population sample. Survey was distributed through social media, email and hard copies. QR code was developed and used. Hard copies were input. Data was analyzed and graphs were made using Microsoft Excel. About a 1000 requests were made, and about 795 electronic surveys were completed. Of 100 paper surveys that were distributed, about 30 were completed and returned.

Results
825 surveys were collected. 84 were eliminated as being out of bounds because respondents do not live in the US. Participation bias led to collection of more Muslims than (n=402) and Christians (n=258) than Other Religions (n=81). All data sets were used, with the Muslim data set being a representative sample size for the 8,000,000 US sub-population and the other sets used as an anecdotal trend comparison. 72% of the Christians and 69% of the Other Religions are donors, while only 10% of Muslims are donors.

Conclusions/Discussion
It appears that the US Muslim sub-population requires a significant level of education on the organ donation process, and how their religion views this process. Since one person can save 8 lives through deceased organ donation, even a slight increase in sign-ups could potentially save 1000 of lives.

Summary Statement

An Analysis of Sociological Factors Affecting the Decision to Donate Organs in US Sub-populations

Help Received

Professor Yasar Tasnif, Pharm. D. , University of Texas Pan Am and Gurch Randhawa Professor of Diversity in Public Health and Director, Institute for Health Research University of Bedfordshire)

CALIFORNIA STATE SCIENCE FAIR
2013 PROJECT SUMMARY

Name(s)	Project Number
Maria Andrade	**J0402**

Project Title
Games in Brains

Abstract

Objectives/Goals
The objective of my project was to determine if there was a correlation between violent video games a person plays and how they behave.

Methods/Materials
My hypothesis was that there would be a correlation between how a person behaves and what types of video games they play. I based this on my research about the recent shootings and studies about how people behave after playing such games. I sent Inform Consent Forms to students to be signed by their parents so they would have been able to fill out the survey that I created. Once they were turned, the students would then fill out the survey. I sent out 180 forms and received 62. The question ere was sent out to 6th, 7th, and8th graders. This survey was anonymous. This survey was also given to 30 high school 9th graders and 30 high school 10th graders.
 I placed each survey in a category by how many hours a week the person played. I measured how many positive and negative behavior a person had by counting. There were a few students that they said didn#t play video games. As the number of hours played increased, the amount of girls playing decreased. In the category of do not play there were 98 positives and 9 negatives altogether. The less than 1 hour had 85 positives and 10 negatives. The 1-2 hour category had 89 positives and 14 negatives. In the 3-5 categories there were 102 positives and 41 negatives. The 6-8 categories had 33 positives and 13 negatives. In the 9-12 categories there were 25 positives and 13 negatives. The more than 12 hours category had 46 positives and 13 negatives.

Results
The results indicate that my hypothesis was supported by the data that was collected from the middle school students; however it was unsupported for the high school students. As the number of hours played increased the number of negative behaviors increased also. This experiment proved that there was a correlation between how a person behaves and what type of video game they played. Another observation that was made was that more female students play violent video games than in middle school.

Conclusions/Discussion
I know this information is beneficial to society because it shows what can happen after playing violent video games. Thus, it is important for parents to oversee what types of types of video games are played by their children.

Summary Statement
My project is about how violent video games affect bahavior.

Help Received
Father helped in creating graphs and mother helped with board

Name(s)	Project Number
Beth E. Buchanan; Emily E. Pofahl	**J0403**

Project Title

Understanding or Competent? A Study of Gender Stereotypes of Professors

Abstract

Objectives/Goals
The purpose of the project was to determine if college students display gender stereotypes towards professors.

Methods/Materials
Three hundred forty-three college students completed the study. Students were randomly assigned to take an online survey from one of three conditions (male professor, female professor, and gender-neutral professor). The conditions (our dependent variables) were identical except for the gender of the professor, which we manipulated by changing the first name of the professor and using gender pronouns. The gender neutral survey did not provide a first name and did not use gender pronouns. After the informed consent, the survey presented a biography of the professor, a short syllabus, and several questions about the syllabus. Next the survey measured the dependent variables by asking the students eight questions about what they think the professor would be like in terms of personality and behavior in the classroom (2 questions each about warmth, understanding, competence, and confidence).

Results
First, means were calculated for each condition to test hypothesis 1. The data did not support the first hypothesis. College students did not rate the male professor more competent and confident and did not rate the female professor more warm and understanding. Next, separate means were calculated for male students and for female students for each of the conditions to test hypothesis 2. The data did not support the second hypothesis. Female and male students did not rate the professor higher on the dependent variables when the professors were the same gender as the student. However, the female students did rate the male teacher significantly higher in the qualities typically associated with male stereotypes (confident and competent).

Conclusions/Discussion
Our hypothesis 1 results are surprising and different from previous research. Overall, we did not find that female professors are rated differently from male professors. Perhaps college students are becoming more aware of gender stereotypes. Our hypothesis 2 results are particularly intriguing because they are also inconsistent with previous research and are somewhat discouraging because they indicate female students seem to consider male professors to be more competent and confident. Future research should examine if this finding replicates and if personal experience might affect the results.

Summary Statement

This project uses an experimental design to examine whether college students make assumptions about professors' personalities and behaviors based on their gender.

Help Received

A family friend helped us recruit participants.

Name(s)	Project Number
Emma M. Butler	**J0404**

Project Title

How Mental Stress Impacts the Tennis Game

Abstract

Objectives/Goals
The purpose of this experiment was to answer the following question, "During a tennis match, how does your stress level affect the way you perform?"

Methods/Materials
Data from a total of 11 advanced tennis players was collected to help answer the question. Each player was required to play at least 3 matches wearing a heart rate monitor. Heart Rate was measured in beats per minute (bpm). Each participant then played his or her match as they normally would, while making a note of their heart rate every odd numbered game (i.e. when they changed sides). Throughout the match, the player's outward signs of stress were noted such as throwing his or her racquet or talking negatively to themselves. The participants also answered a short survey asking them how they feel prior to playing in a match.

Results
After looking at all 3 data collection components, results had to be drawn. All three components were charted and graphed to get a conclusion that stress positively impacted 8 of the 11 participants.

Conclusions/Discussion
The data obtained from this experiment demonstrated that a player needs to have a certain amount of stress in a match to perform at their highest level. After all the data was carefully analyzed the conclusion was drawn that a certain amount of stress is needed for a player to perform at their highest level. Too much stress (so a higher heart rate) or not enough stress (so a low heart rate) impacted a player negatively. When a player had the optimal amount of stress the player played at the highest level.

Summary Statement

Three different ways to collect data (heart rate, before match survey, and outward signs of stress) were used in attempt to see how mental stress impacts the tennis game.

Help Received

Mother helped glue down the board, parents and coaches helped collect data as multiple matches were going on at once

Name(s)	Project Number
Devin M. Derecho	**J0405**

Project Title

STOP

Abstract

Objectives/Goals
My project was to determine if drivers are more likely to come to complete stops at a stop sign when they know that someone is watching them.

Methods/Materials
I went to the chosen stop sign for a half an hour, at the same time, every day for 20 days. For the first ten days, I was hidden from the drivers, and for the last ten days, I was visible to the drivers. Using a thermometer, notebook, clipboard, and pen, I first recorded the temperature and weather conditions each day. Then, I recorded how many drivers came to a complete stop, how many rolled through the stop sign, and how many ran the stop sign.

Results
More people came to a complete stop when I was visible than when I was hidden. When I was hidden, an average of 34.91% of the drivers came to a complete stop, as opposed to when I was visible, 40.67% of the people came to a complete stop. Approximately 64.77% of drivers rolled through the stop sign when I was hidden, and 58.91% when I was visible. Not many people ran the stop sign in total: hidden was .32% and visible was .42%.

Conclusions/Discussion
From this research, I conclude that people behave differently when they know they are being watched.

Summary Statement

My project is about human nature and whether people will change their behavior when they know they are being watched.

Help Received

Mother and babysitter helped with edditing; science teacher helped me choose this project out of my three ideas.

Name(s)	Project Number
Cade A. Dinsmore	**J0406**

Project Title

Do Video Games and Other Distractions Ease the Awareness of Pain?

Abstract

Objectives/Goals
  The objective is to determine if video games and other distractions ease a person's awareness of pain.

Methods/Materials
  14 people, ages ranging from 8 to 49, participated in the experiment by placing their toes of one foot into a bucket of ice water. The time they kept their toes in the water was recorded. Next, they placed their toes of their other foot into the bucket of ice water. This time, though, they played a video game while having their toes in the ice water. The time they kept their toes in the water was recorded. I made sure that I used the same chair, the water temperature was approximately the same and the experiment was done in the same room of my house for each participant.

Results
  I created a chart to record the times for each participant. The difference of the two trials was calculated for each participant to determine if the participant, while playing the video game, kept their toes in the same, more or less time than without the video game. In all but two trials the times with distractions were longer than the times without distractions.

Conclusions/Discussion
  Based on my experiment the results show that when you have a distraction the awareness of pain goes down. I observed in my experiment that when the participants had their toes in the water while not playing the video game they were squirming and grimacing. While they were playing the video game it seemed like they didn't even know that their toes were in the ice water. I also did some research in addition to my experiment.

  When you injure yourself the pain signal goes through the peripheral nerves and travels through the spinal cord. The pain meets up with cells called gatekeeper cells. The gatekeeper cells may send the pain signal up to your brain, reduce the signal or block it out. Your brain will then tell your body how to react to the pain. One thing the brain may tell your body to do is to to release endorphins. Endorphins are a natural painkiller. Besides your own body's way of dealing with pain such as releasing endorphins, distractions are another way. If a person is concentrating on something else their awareness of pain is less.

Summary Statement

  My project is about how distractions which might include playing video games, playing sports or concentrating on a task could reduce a person's awareness of pain.

Help Received

  Mom and Dad helped conduct the trials. Science teacher approved the project and Mom helped with the placement of items on the board.

Name(s)

Aria J. Empakeris

Project Number

J0407

Project Title

Four Eyes AND 4.0 GPA? The Study of Whether People with Glasses Are Perceived to be More Intelligent and Less Attractive

Abstract

Objectives/Goals

The experiment was performed to evaluate, through a survey, if individuals who wear glasses appear to be more intelligent but less attractive. The expectations were that people who wear glasses appear to be more intelligent but are considered less attractive than those who do not. This was done in order to investigate whether or not the glasses stereotype is still valid.

Methods/Materials

Stock photos of twenty various adult subjects, eight with glasses, were organized into five groups of five photos and made into a survey. Each group represented a different category of individuals: females, multiracials, young adults, males and senior citizens. Fifty participants who took the survey ranked the subjects based on attractiveness, intelligence, successfulness, popularity, and friendliness. Data was then tallied and graphed in an Excel spreadsheet.

Results

Individuals with glasses were voted most intelligent in three out of five groups and were voted least attractive in two out of the five groups. The type of glasses also impacted the results, with subjects wearing "hipster" glasses, glasses with thicker frames, receiving the most votes for attractiveness in every group.

Conclusions/Discussion

The conclusion is that people who wear glasses are more likely to be perceived as intelligent, and are in fewer instances perceived to be less attractive. This weakly reinforces the stereotype of people who wear glasses to be more intelligent, but less attractive.

Summary Statement

The project is about whether people with glasses are perceived to be more intelligent and less attractive.

Help Received

My mother helped with using Microsoft Excel spreadsheet and both parents helped distribute the surveys.

Name(s)	Project Number
Chloe Glikbarg	**J0408**

Project Title

Click Here: The Effectiveness of Online Advertising

Abstract

Objectives/Goals

My objective was to see if online banner advertisements were more effective to either men or women, and to what degree. I hypothesized that there would be no difference between genders, and that men and women would tend to look in the same initial areas of the screen.

Methods/Materials

I created an online survey that showed simulated banner advertisements and a search engine. Survey takers were told to click the area in which they look first. I received the information by using hotspot technology, which told me in which hotspot box the user had clicked. There were 29 slides to the survey with 11 containing hotspots. I then sent out the link through a mass email to the survey that I had posted online.

Results

I found that online banner advertisements are more effective to women, and that in my study they clicked on banners 20.3% more often than men did. I conducted a chi square test and found that the statistical probability that my results were insignificant was 0.001.

Conclusions/Discussion

Interestingly, my results did not support my hypothesis. However, I did obtain my goal of learning more about the effectiveness of online ads. Online advertisements affect almost everyone daily, but hardly anyone has conducted researched on these advertisements. Also, the information I found applies to the idea of banner blindness. This is when people completely ignore online advertisements and instead look anywhere but the areas in which that they have grown used to seeing ads. This is an issue for people who are using online banner advertisements to market the product or services they are selling. My study has expanded the knowledge on online advertising to consider how banner blindness varies by gender.

Summary Statement

I studied online banner advertising's effectiveness by gender through the creation and distribution of an online survey using hotspot technology.

Help Received

Teacher recommended using Articulate Storyline for survey creation; Father explained how to use Excel and perform a chi square test; Mother beta-tested survey before it was sent out.

Name(s)	Project Number
Marcus R. Helliker	**J0409**

Project Title

World War II... Remembered?

Abstract

Objectives/Goals
The objective of the study is to determine the extent to which each succeeding generation since World War II is aware of the sacrifices of the "Greatest Generation."

Methods/Materials
Over 150 people were interviewed equally representing three generationns since World War II. Informed consent was obtained from all individuals ranging in age from 12 years to 80 years. The questionnaire tested their knowledge of major events of World War II. Materials used were GSDSEF forms, quizzes based on research, clipboard, pen/pencil (2), and a camera.

Results
The charts/graphs assume the "Greatest Generation" is very familiar with the major events of World War II. Results of the study show Generation II as having a familiarity of 83%; Generation III individuals were 75% aware; and Generation IV were 63% aware.

Conclusions/Discussion
Results of the test interviews clearly show a reduction in familiarity with World War II major events with each subsequent generation, thereby substantiating the Hypothesis.

Summary Statement

The present generation is not fully aware of the sacrifices and accomplishments of those who served and prevailed in World War II.

Help Received

Grandmother helped type report; Grandfather drove me to various locations to conduct interviews and helped with chain on my display board.

Name(s)	Project Number
Grayson W. Hofer	**J0410**

Project Title
Is the Name to Blame? Investigating Consumer Brand Bias

Abstract

Objectives/Goals
While shopping with my peers I have noticed their opinions of brand names and articles of clothing influence each other. I am interested in fashion, and I was curious to discover how much brand bias affects clothing choices in adolescent and pre-teen girls. The purpose of this project was to attempt to discover whether or not brand name bias affects adolescent clothing choices and if peer pressure might influence the opinions of the girls as well. My hypothesis was that store labels would influence clothing choices and that peer pressure would make these biases even more significant.

Methods/Materials
I performed two separate trials, and I also created a survey which each girl completed. In both tests, the girls were given a sheet with five blouse choices. Half of the test sheets had the correct brand name assigned to the blouses while the other half had the brand names assigned at random to the five blouses. The first tests were taken in privacy, and I called these the Independent Trials. The girls ranked their preferences for five blouses with assigned store labels. In the Peer Pressure Trials, the girls could interact and view each other#s responses. The participants later each completed a shopping survey I created.

Results
I performed a total of 150 tests with 75 test subjects and also analyzed the results. I also analyzed 75 surveys the participants completed. When the students ranked blouse choices with assigned labels independently (in privacy) brand bias was evident. Unexpectedly, in another trial when the students ranked their blouse choices when they could interact with one another, brand bias was not as evident. Close friends instead ranked their clothing choices according to the blouse styles and largely ignored the labels.

Conclusions/Discussion
In conclusion, in contrast to my hypothesis, label brand bias was more significant when students ranked choices privately than when with a peer group. The blouse styles rather than labels seemed to drive the peer pressure decisions. Still, according to my shopping survey results, the students revealed definite bias towards certain brands.

Summary Statement
The purpose of this project was to attempt to discover whether or not brand bias affects adolescent clothing choices, and if peer pressure might influence the opinions of the girls as well.

Help Received
My science teacher allowed me to test her students.

Name(s)

Gabriel M. Jacobs

Project Number

J0411

Project Title

The Placebo Effect

Abstract

Objectives/Goals

I researched the effects of a placebo on subjects aged 5-12 on vision enhancement to see if it would improve their vision or affect the psychologically.

Methods/Materials

I took 100 test subjects age 5-12, boys and girls and equally divided them into two groups, non-placebo and placebo. For the placebo group the procedure was: First present a drink comprised of apple, orange and grape juice. Before the subject drank the mixture, I explained the drink was a developmental medicine that improves their vision. After drinking the mixture, they took a vision test to identify 10 objects in a picture in one minute and ten seconds. I recorded the results. For the second test they took a standard vision test. Again I recorded the results. They last test was I asked if they felt the drink improved their vision, recording the results. If subject answers unsure, then I recorded it as no. For the non-placebo, I did the same exact tests but before giving them the drink, I do not tell them it would improve their vision. Materials used were an eye chart, pictures with hidden objects, Binder, Stopwatch apple, grape and orange juice, 100 cups, pencil, paper, 100 test subjects ages 5 to 12 markers, computer, 100 Consent forms.

Results

The first two test results did not differ by more or less than less than 5% but the last test proved very different. On the last test 78% of those who received the placebo said the drink improved their vision while in the non placebo was 25%.

Conclusions/Discussion

Although these results disproved my hypothesis that the placebo group could show an improvement in vision over the non placebo group, it yielded an interesting result. Rather than affecting the group#s visual performance, the placebo altered the mindset of the subjects. They believed that their performance was enhanced. Because the results demonstrated the experimental condition affected attitude only and not performance, the placebo appears best suited for affecting psychological experiences. But, the use of placebos raises ethical concerns for doctors. One way in this powerful effect can be used is to combine the use of active treatment with an encouraging attitude by the doctor which could potentially influence both the patient#s attitude and their response.

Summary Statement

This project was to study whether a placebo would improve the vision for subjects aged 5-12.

Help Received

My teacher supervised me and my parents purchased the materials. I did the rest by myself.

Name(s)	Project Number
Ryan Kim; Brandon Kyle; David Reo	**J0412**

Project Title

The Effects of Video Games on the Brain

Abstract

Objectives/Goals
To discover how different types of video games affect the human brain.

Methods/Materials
Eight human volunteers were recruited for the experiment, and a quiet environment was created. During each session the subject wore the Mindwave Mobile Headset, which is an Electroencephalogram. Each subject played Spyglass Chess for one complete game, and then played Halo 4. The subject's brain waves were recorded in combinations called "eSense" Attention and Meditation scores ranging from 0-100 (lo-hi intensity). Next the subject filled out a questionnaire on game playing habits like frequency and type of game play to understand behavior. Conclusions were drawn based on data analysis. Materials used were the following: Mindwave Mobile Headset, Plasma TV, Xbox 360 System, Spyglass Chess & Halo 4, PC with NeuroView research software and Excel.

Results
The Halo vs. Chess analysis shows a normal yet slight difference in Meditation and Attention levels. The standard deviation of the Chess group is also higher than that of the Halo group. The E-T vs. M ("Everyone vs. Mature") analysis shows Meditation and Attention differences in Halo and Chess between E-T gamers and M gamers. The M gamers also received slightly above average values in the Chess Meditation of 63.8. While this was slightly above average, it might be irrelevant because of the standard deviation of 15.8. The Time Exposure analysis shows the difference in the Meditation and Attention in Halo and Chess between people who play less frequently and people who play more frequently. In each study group, no values were found significantly outside of the normal range of 40 to 60 eSense units because of the high standard deviation (14-19 units).

Conclusions/Discussion
People often think that violent video games have a negative effect on the human brain. Regardless of gaming background, the results found in this study proved that there is little difference between the violent game and the milder strategy game. The games studied were the "Mature" game Halo 4, and the "Everyone" game Spyglass Chess. Based on the eSense responses of Attention and Meditation as well as questionnaire responses, the results showed that the violent video game in this study does not have a bad effect on the human brain. Even though the data showed these results, future work may look at other brain waves or combinations showing effects not found in this study.

Summary Statement

This project was conducted to show how different types of video games affect human brain waves.

Help Received

Name(s)	Project Number
Lucas G. Kurlan	**J0413**

Project Title
Attitudes on Acne

Abstract

Objectives/Goals

When I began to develop inflammatory acne, my mother insisted on me taking medication to reduce the outbreaks. Initially, I wasn 't very receptive; I did not see the need for medication. This led me to wonder about other teenagers with acne; did they share my feelings? I designed a survey to help doctors better treat patients who are overly concerned, as well as those who need to be convinced of the harm of permanent acne scarring to improve compliance. This is a relevant project because 75-80% of all teenagers develop acne, and the scarring may have long-term effects that impact job-chances, among other things later in life.

Methods/Materials

To accomplish this goal, I wrote a survey. A total of 52 acne patients took part. After much editing, I gave the questionnaire to a group of dermatologists to distribute after visits. The survey included 12 questions designed to judge patients' acne concern, objectiveness, influences, and knowledge on acne conditions. The 52 subjects' results were compiled on the basis of race, age, and gender and correlations between questions, which all helped me form my conclusions. With the results, dermatologists might be able to better treat and inform patients who may be at higher risk for non-compliance or unsubstantiated acne fears.

Results

In this study, patients were generally concerned about their acne. Their self-severity ratings were very near to the doctors' opinions of their acne severity. Females visited the dermatologists almost twice as much as males. The media concerned females more (average 7.6) than males (average 4.9) [Newspaper Editorial to Raise Awareness?]. There was a positive trend between acne severity and the patients' concern for acne scarring. Subjects who scored their severity less than 7 had an average scar concern of 6.9, while those who scored their severity equal or greater than 7 had an average scar concern of 8.4. There was a similar trend at a cutoff of 5.

Conclusions/Discussion

I believe doctors should rest assured that patients are objective, but still make sure patients do not overreact about their condition and desire unnecessary treatment. Patients also became more concerned about scarring as their acne severity increased. Teens perceived their parents as being more concerned about their acne as it worsened. All in all, patients who visited the doctor seemed to be concerned about treatment and were objective in acne self-analysis.

Summary Statement
I designed a survey to help doctors better approach & treat patients with acne.

Help Received
Acne patients filled out surveys after visits to dermatology offices; Father, Mother, and Science Instructor Mrs. Hunker helped edit; Dr. Kurlan, Dr. Speelman, Dr. Bradshaw, Mr. Peterson, and Mrs. Anwar distributed the surveys; Father bought some supplies; Dr. Kurlan taught me about acne and helped me

Name(s)	Project Number
Kaylie N. Moropoulos	**J0414**

Project Title

Connections without Context: Is Texting Affecting Our Ability to Read Facial Expressions?

Abstract

Objectives/Goals

My objective was to explore whether the increased use of text-messaging as a means of communications by my peers might be impacting our ability to effectively read facial expressions in others.

Methods/Materials

My teachers and I asked a group of 6th graders to participate in a survey and subsequent test. I obtained consents and surveyed the general amount of text-messaging engaged in by individual volunteer subjects. I divided that group into three sub-groups, based on how much they reported using text-messaging (none; 1-99 texts/month; and >100 texts/month). Each volunteer then took a publicly available online test of their ability to read facial expressions developed at U.C. Berkeley. The test displays a series of facial photos and asks the test subject to select one of four possible answers best describing the emotion displayed. I recorded and analyzed the answers and scores.

Results

The third sub-group (the most pervasive text-messagers) scored the highest, suggesting the highest ability to read facial expressions. The first group (non-text-messagers) achieved the second-highest scores, and the middle group (moderate users of 1-99 texts/month) achieved the lowest scores. In general only relatively small variances in test scores were observable.

Conclusions/Discussion

My study revealed that the those who most frequently text-message also demonstrated better abilities to read facial expressions. My results were surprising and did not match my hypothesis. I expected those who text more to have less experience with context in face-to-face encounters, and thus a diminished ability to read facial expressions. I believe this mismatch resulted from my implicit and false assumption that texting was a replacement for face-to-face interactions, and overlooked that more social individuals might still engage in extensive face-to-face encounters, or simply be better skilled at reading facial expressions -- while also texting more frequently than their peers.

Summary Statement

Testing the impact of increased text-messaging on the ability to read facial expressions.

Help Received

Science teachers helped gather subjects and organize my experiment; Father helped with consent forms, typing, and creating display board .

Name(s)	Project Number
Daniela Osowiecki	**J0415**

Project Title

Raising Awareness to Prevent Tay-Sachs

Abstract

Objectives/Goals
Tay-Sachs is a neurodegenerative disease that has no cure. Since many people don't know about this devastating disease,the goal of this project is to learn if the population in San Diego is informed enough about the Tay-Sachs disease and to raise awareness about it.

Methods/Materials
An electronic survey regarding Tay-Sachs was conducted and sent to a variety of subjects from different genders, religions and ages. Although Tay-Sachs is mostly common among Ashkenazi Jews(Jews from Eastern European descent), the survey was also sent to Non-Ashkenazi Jews, and Non- Jews as well. The results of the survey were graphed and carefully analyzed.

Results
Out of the 109 subjects who completed the survey, 91 were Jewish and 18 were not Jewish. Out of the 91 Jewish subjects, 80 were Ashkenazi Jews, meaning that they belong to the risk group for Tay-Sachs and 11 were not Ashkenazi Jews. The group control consisted only of 18 Non-Jews, since being not an Ashkenazi Jew doesn#t mean that that subject couldn't have some Ashkenazi background.The results of the survey showed that 52.5% of the risk population(Ashkenazi Jews) did not get tested for being a carrier of the Tay-Sachs disease and 40% had never heard of Tay-Sachs. 69% (29 out of 42 not tested) mentioned that the reason for not being tested was because it never occurred to them. There were 6 subjects who presented the most risk for having a baby with Tay-Sachs because they belonged to a risk group by being Ashkenazi Jews, they haven#t been tested for Tay-Sachs to find out if they are carriers,they are between the ages of 19-38 and they are all planning on having children within the next two years.

Conclusions/Discussion
It is concluded that for this type of disease, prevention is the best cure and it is necessary to raise awareness , especially in the high risk group. This can be achieved through educational programs at different levels in the community.

Summary Statement

This project is about finding out if the population in San Diego is informed enough about the Tay-Sachs disease.

Help Received

Grandmother told me the story of a child with Tay-Sachs; Aunt helped with ideas for decorating board; Mother advised questions for survey

Name(s)	Project Number
Zoey M. Suggett	**J0416**

Project Title

Expressions

Abstract

Objectives/Goals
   The purpose of this project is to determine is smiling more "contagious" than yawning.
Methods/Materials
   1. Obtain permissions slips from teacher for class testing
   2. Make video compiling pictures of people smiling, laughing and yawning.
   3. Set up digital projector and video camera.
   4. Welcome each group into the classroom reminds them to sit up straight and enjoy the presentation.
   5. Start presentation.
   6. Stand off to the side and videotape each group as they watched the presentation.
   7. Thank each group of students for participating.
   8. Records students reaction in log book

   # Participant
   # A video that shows various smiles and yawning
   # Computer
   # Overhead digital projector
   # Video camera
Results
   In testing 303 subjects for this experiment, 138 of the subject were boys. 112 of the boys smiled while
   only 72 yawned. When testing the girls with a group total of 165, 127 of them smiled while only 53 of the
   girls yawned. In the end with all 303 subjects in total 239 of them smiled and only 125 of them yawned.
   Overall three hundred and three were tested. Only sixty-four of the subjects did not smile. One hundred
   and twenty-five yawned out of the three hundred and three.
Conclusions/Discussion
   The hypothesis of this experiment was that smiling is more contagious than yawning.The purpose of
   doing this test was to see if humans are more likely to yawn than smile when viewing people yawning or
   smiling. The emotion of smiling was "hypothesized to be more contagious." the experiment was
   performed and proven to be that with the average of 78.4% of the subjects were prone to smile rather than
   yawning. The results proved to a difference of 41.3%.
   Therefore the hypothesis was proven to be correct. Smiling is more "contagious" than yawning.

Summary Statement
   Is yawning or smiling more contagious in boys or girls?

Help Received
   My Parents kept me on track and took me to print my graph's and my teacher answered any needed
   questions.

Name(s)	Project Number
Priyanka R. Vatturi	**J0417**

Project Title

Saccadic Eye Movement and Reading Ability

Abstract

Objectives/Goals
This experiment explores the right delivery mechanism to maximize the absorption of the information from the size of the reading media, which is the screen size. The questions that are being asked during this experiment are: Does the aspect ratio of the reading media (portrait or landscape) influence our ability to read, Is there a correlation between the aspect ratio of the reading media and the accuracy of reading, and does the Human brain and human eye favor the same reading parameters to maximize, reading speed, accuracy and ease.

Methods/Materials
\# Ten subjects (8th grade students)
\# Five different reading screens (all the five reading sizes has the content taken from the same book. The number of words and the font shape and size in each reading screen were the same.)
\# Stop watch

Results
Reading time is a function of saccadic eye movement, fixation between saccades, regression time, return sweep and head movement (in cased of large amplitude). If the reading size involves a lot of return sweeps, then the reading time will increase as in case of Type C. If the reading size involves a lot of head movement (up to down or left to right), then the reading time increases as in case of Type A and Type C. The experiment also suggests that the key responses, speed, preference and accuracy are well correlated. The experiment also suggests that the key factors that affect reading speed are the head movement (for large amplitude) and excessive return sweeps

Conclusions/Discussion
\# Since saccadic eye movement is very critical for reading, explore the correlation between people who have issues with reading and their eye movement
\# Investigate people with reading times excessive of the 3sigma limits with respect to their saccadic eye movement.
\# Young children with reading problems may need their eye muscles and focus examined. Early correction may prevent future reading issues.
\# Explore optimal reading / viewing sizes for pictures and videos and combinations of pictures and videos
\# Experiment with Braille to determine best reading size

Summary Statement
How saccadic eye movement effects reading

Help Received
Dad helped me with guidance in this project

Name(s)	Project Number
Hannah N. Vermilyea	**J0418**

Project Title

What Type of Praise Raises Your Grade?

Abstract

Objectives/Goals
The objective of this experiment is to determine if the type of praise a student receives can alter a student's mindset and therefore influence their performance on an IQ test. I believe students who receive growth praise will have the highest test scores.

Methods/Materials
The Raven IQ test was administered to three groups of ten, 12-14 yr old honor students. Half way through the test the students were given a certain type of praise according to which group they were assigned to: fixed, growth or control. I then recorded each student's score for each part of the test and calculated the averages for each subject group for each part of the test.

Results
The results were inconclusive. There were no significant differences in the average test scores before and after recieving the praise between the subject groups. This indicates that the type of praise that the test subjects received did not influence their test scores.

Conclusions/Discussion
My hypothesis was not supported. This experiment did not show the results I was expecting nor support the research I had found on mindsets. One reason for this might have been that the subjects did not think the praise was believable as it was given by a peer and not an authoritative figure such as a teacher or parent. Also I could have allowed more time between tests for the subjects to absorb the praise and influence their mindsets.

Summary Statement

My project investigates how the praise students receive affects mindsets which influences their perfornce on tests.

Help Received

Mother proof read report

Name(s)	Project Number
Rhys C. Wisner	**J0419**

Project Title

How Does Gender Affect Color Perception?

Abstract

Objectives/Goals
The objective of this project is to discover if there is a gender difference in response to color. Studies have shown that people of the female gender are less tolerant to grey-ish colors than males are. This means men are more likely to enjoy duller colors than women. Thus, it is proven that women may be more color-conscious and their color tastes more diverse.

Methods/Materials
Materials: Ten girls and ten boys from the grades second, third, fourth, fifth, and sixth. 20 paint chips categorized as tertiary colors.
An empty room. Clipboard. Paper. Pencil or pen. Camera in order to record grouping of the colors.
Method: One by one, I gave the children a stack of color chips all of the size size. I had a set scrpit stating "What you're going to do for me is sort this pile of colors into three piles any way you like. They do not have to be even." Then when the child was finished I took a photo of the piles the had sorted and asked them to bring out the next child.

Results
After testing many young children, I discovered an interesting color sorting tactic used by many of the subjects who made random piles. Even when I specified that they DID NOT need to make the piles even, the children dealt the colors out like playing cards. When there was one color left, due to the odd number, the subjects were very confused and conflicted.
The girls of the Fifth grade did not sort random piles at all, compared to the majority of boys choosing to randomize the colors. As the children get younger, it is apparent that the likelihood grew that the subjects would group the chips randomly. As the girls get older, they also sort the colors as "Looking Good Together" more frequently. Another tactic of grouping by a majority of girls and a minority of boys which was used more than I had originally anticipated was "Dark to Light" or "Warm to Cooler." This is probably just due to the association of these pairings in art education.

Conclusions/Discussion
My Hypothesis was correct. Women and girls are more color oriented in life and take more notice to the ways colors are paired and grouped. Men and boys are less focused on color. I have discovered that the younger the subjects, the more likely it was that subjects would sort the colors more randomly. This may be due to the smaller exposure to color groups and general education of color.

Summary Statement

My project analyzes the differences in color perception, pairing and grouping that correlate to gender differences.

Help Received

Science teacher helped with focusing my idea and suggestions for data gathering.

Name(s)	**Project Number**
Mellanie A. Wert	**J0495**

Project Title

Mice Memory

Abstract

Objectives/Goals

For this year#s science fair project, I chose to investigate if a mouse will memorize a maze if he or she completes it multiple times, allowing me to see whether or not mice learn just as humans do. The main topic that this relates to is animal psychology. I chose this experiment because I love psychology and I love animals, and have often thought of one day searching for cures for difficult and painful illness and disease many humans suffer, as well as fighting against cruel treatment of animals, so this just clicked!

Methods/Materials

After began by learning of the various types of mazes suitable for my experiment. After choosing a style and building my maze, I took 10 mice and individually ran them through the maze multiple times to learn if they#d show signs of improvement in memorizing the maze. I used treats (I found fresh produce worked better than dried treats) and placed several at the end of the maze, to create positive reinforcement and association with its completion. I sent each mouse through multiple times, documenting their time for each run, and for each mouse.

Results

Each mouse showed some substancial improvement after completing the maze even just once, though each clearly showed diferences in personality and motivation or lack there of. In the course of my study, I have concluded that mice have both STM (short term memory) and LTM (long term memory) just like humans. This enables them to have the ability to memorize pieces of information. That#s why these mice were able to memorize this maze. This proves my hypothesis correct; mice can learn to memorize a maze if he has completed it more than once.

Conclusions/Discussion

As we find how similarly mice learn to humans, they could help us learn about how we lose memory, how we strengthen our memory, and how we might treat memory loss. Learning how similar they are to us, and how intelligent they are, might have an effect on how humanely we treat these animals. Maybe cruel mouse traps wouldn#t be used as easily as they are now, where the mice suffer for long periods of time dying a slow and inhumane death. Did you know that when a collection of favorite treats were placed near a trapped mouse, a mouse free to eat and keep their favorite treats all to themselves, chose to free the trapped mouse first and share their treats instead. Something to consider when choosing how you might choose to deal with one running free in your home.

Summary Statement

To learn if mice mice are able to memorize a maze by completing it more than once, using both STM (short term memory) & LTM (long term memory) just like humans, as I proving such similarities can help us to stengthen our own memories and to

Help Received

My father helped w/design ideas and to cut the thick materials in the maze, When it got late, my mother stayed up to help type my report and encouraged me to do my best, Mark the Manager @ Pet Smart allowed me to use supplies & even mice to do my research, & my teacher Miss Ligeti offered her

Name(s)	Project Number
Parker A. Ornellas	**J0496**

Project Title

Training Dogs with Hand Signals

Abstract

Objectives/Goals

My objectives goals were to find a less time consuming more effective way of training dogs other than verbal commands that will benefit dog owners all over.

Methods/Materials

\# Timer
\# Petco dog treats
\# Twelve dogs

Results

In my experiment the six dogs using hand signals took a shorter period of time to learn the two skills, #Sit# and #Lay Down# than the six dogs using voice commands. The dogs using voice commands took about three sessions (thirty minutes) to learn the two skills. However, the dogs using hand signals each took about two sessions (twenty minutes).

Conclusions/Discussion

My experiment demonstrates that when training dogs, hand signals are a more efficient training method then voice commands. Because my experiment supports my hypothesis, it takes a shorter period of time for dogs to learn skills.

Summary Statement

my project is about discovering the most efficient training method for dog owners to train their dogs with.

Help Received

Mother helped type report.

Name(s)

Rayna R. Kanapuram

Project Title

Person Identification by Voice Spectral Analysis

Abstract

Objectives/Goals
The goal of this project is to determine if voice spectral analysis can characterize a human voice to identify a specific person.

Methods/Materials
The software used to chart the voice spectral analysis is Raven Pro: Interactive Sound Analysis Software from the Cornell Lab of Ornithology. To conduct this experiment, test subjects from the age groups: 6-12, 13-19, 20-50 of each gender. The phrase each test subject spoke was:"It is a beautiful day outside." Later, a separate phrase was recorded,"Science rocks", to compare different phrases the same people have spoken. After the voice analysis was completed, the spectrographs were compared in the changes in frequencies and the highest frequency for every sample.

Results
The data clearly showed that the spectral properties differed uniquely, in terms of frequency variations and waveform pattern, despite similarities in gender and age. Further analysis showed that changes in the phrase and volume, preserved waveform patterns and voice fluctuations. Evidently, every person has unique changes in frequencies and waveform patterns.

Conclusions/Discussion
Through this project I discovered that when any person speaks their waveform pattern is very different, despite similarities in age and gender. Also if a person were to say another phrase the waveform still remains relatively similar. The volume was specified to a certain extent but not accurately using instruments. At first volume appeared to have an effect upon the waveform; however research found that even with volume differences between the test subjects the waveform still followed the same pattern when they spoke at a different volume. With sophisticated algorithms to show the changes in frequencies and waveform pattern, voice spectral analysis could potentially be used to solve court cases. Possible extensions upon this experiment could be done to see whether voice spectral analysis could be used for early detection of learning disabilities like Dyslexia or Down syndrome; or whether voice spectral analysis can be used for detection of diseases like Parkinson's disease and Alzheimer's.

Summary Statement

This project is about characterizing a human voice by voice spectral analysis, to determine if it can identify a specific person.

Help Received

I discussed the idea with my father and teacher.

Name(s)	Project Number
E. Elle F. Peterson	**J0498**

Project Title

ADHD or Immaturity?

Abstract

Objectives/Goals

The objective of my project is to find out if children who are younger that the rest of their classmates being misdiagnosed with ADHD/ADD just because they are more immature.

Methods/Materials

Acquire 100-200 participants ages 7-14, have these students take a written test answering the following questions, 1) How old are you? 2) What is your birthday? 3) Are you older or younger than most of your classmates? 4) Do you have trouble paying attention in class? 5) Have you ever been tested for something called ADHD? 6) Do you have ADHD? 7) If you have ADHD, do you take medicine to help you with your ADHD? With the ADHD positive tests, compare the age of these subjects to the age of their classmates.

Materials: 100-200 participant subjects ages 7-14 and grades 1st though 8th, 100-200 testing documents with the questions listed in the procedure.

Results

From my data, I can conclude that my hypothesis is true, in that more that 92% of kids with ADHD/ADD that I tested were younger and more immature than their classmates.

Conclusions/Discussion

After following the necessary steps to complete my project, I have proved that my hypothesis was correct and discovered that in more than 92% of kids with ADHD that I tested were younger and therefore more immature than their classmates. I learned that some ADHD children are probably being diagnosed and treated for a disorder they probably don#t even have! If I had to change this project in any way, it would be that I wish I would of had more testing subjects from possibly other schools because that would have also given me more accurate results. My project helped humanity because it hopefully shed some light on the ever growing problem of over-medicating America#s kids. Western doctors today are obsessed with labelling children with anything they can, just so they can get the money for the treatment. Even if those children don#t have the disease! I have found many people have the issue with doctors trying to diagnose their children with ADHD/ADD, even when the child had no clear symptoms except for being more immature than their classmates. And what did I find? That most kids diagnosed with ADHD/ADD are those who are younger than their classmates! That means they are more immature! I believe it is the duty of the patient to themselves, their family, and their future to take charge of their health and well being, not just be told what to do and who you are by your doctor.

Summary Statement

My project is about finding out if children who are younger that the rest of their classmates being misdiagnosed with ADHD just because they are more immature and bringing awareness to the ever-growing problem of overmedication of children.

Help Received

Teacher helped me expand on my idea of having a project having to do with overmedication and ADHD ADHD.

Name(s)

Mikhaella Anne D. Napiza

Project Number

J0499

Project Title

Application of Classical Conditioning on Saltwater Fish

Abstract

Objectives/Goals
To study the behavior of the saltwater fish during feeding time with a simulation of Pavlov's bell both on the open space and isolated chamber in the aquarium.

Methods/Materials
1. Ring the bell daily for 10 days pair the sound of the bell with fish food.
2. Ring the bell daily for another 10 days but delay the giving of food.
3. Check if the fish would come when they hear the sound of the bell, and stay in the same spot for 20 days.

Results
The fish responded to the neutral stimulus for 3-5 minutes and waited. Then they were given food which made the unconditioned response. In the end, the fishes responded towards the neutral stimulus making it a conditioned stimulus therefore giving a conditioned response.

Conclusions/Discussion
My hypothesis was correct. The saltwater fish behavior in an open space and in an isolated chamber can contribute to the theory of Classical Conditioning.

Summary Statement

The project is about the training of fish behavior to eat at the sound of a certain stimulus and application of the theory of Classical Conditioning.

Help Received

My mother helped me type my report.