ABSTRACTS BOOKLET 2021

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THE EFFECTS OF ALICE IN WONDERLAND SYNDROME ON PERCEPTION

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Faculty Sponsor: Dr. Gina O'Neal-Moffitt, Behavior, Social Sciences and Education

Alice in Wonderland Syndrome is a rare disorder in which a person's visual perception is warped. Very few people have been diagnosed with Alice in Wonderland Syndrome, but it is a strange phenomenon that is still being researched today. The purpose of the experiments done was to see how Alice in Wonderland Syndrome effects a person's visual perception. A team of researchers lead follow-up investigations on Alice in Wonderland Syndrome participants and track their symptoms over time through phone call interviews, provided by Liu and colleagues (2014). Another experiment was a case study using and fMRI to show the brain abnormalities of a body with Alice in Wonderland Syndrome while he experienced and episode of micropsia. The results of the longitudinal study concluded that majority of the patients tested had some sort of perception disorder that occurred during the study. The case study concluded that the child's brain was not using the usual primary and extrastriate cortical regions but used the parietal lobe cortex regions instead. This information supports that Micropsia, which is one of the main symptoms of Alice in Wonderland, disrupted the child's perception abilities.

REFLECTION ON PERFECTIONISM IN TODAY'S SOCIETY

Solana Bailey, Honor's Society (baile5a6@mymail.tcc.fl.edu)

Nicholas Vick, Honor's Society Director

This essay explores how perfectionism is displayed in today's culture, and especially focuses on young people. It describes how it is viewed by ourselves and by society, how it has changed over the years, and how it appears to be trending now and in the future. It brings up how it can negatively affect us and the three major types: socially-prescribed perfectionism, self-oriented perfectionism, and other-oriented perfectionism. Perhaps most importantly, it provides possible answers as to what we can do about it: for ourselves, for our future children. This project was done based on watching Thomas Curran's Ted Talk "Our dangerous obsession with perfectionism is getting worse" and the methods of investigation are based on a self-reported study to measure perfectionism done in the 1980's by researchers Paul Hewett and Gordon Flett. I examined the three core elements found in that study as well as suicide rates and did comparisons of all of the above to reach my conclusions stated in the paper.

MENTAL HEALTH LINKED TO GENETICS

Taylore Hamilton, Honors Division (hamil754@mymail.tcc.fl.edu)
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The purpose of this paper is to discuss mental health disorders, and how genetics can cause an individual to be more likely to develop a specific disorder. This topic is extremely important because very little is known about what causes an individual to develop a disorder. Research will be helpful for getting a better understanding of what mental health disorders are, what causes them, how to treat them, as well as if there is a possibility that they can be prevented. It will also help to educate the public, and help eliminate stigma around mental illness, and people who have a disorder. Two studies were analyzed that conducted an analysis on multiple mental illnesses including alcoholism and bipolar disorder. Both studies did genetic analysis on individuals with a specific mental illness to determine if there is a correlation. Certain genomes do in fact have a correlation to mental health disorders.

STUDY OF EVERYDAY BEHAVIOR;
OR SEVEN MINUTES WITH EMPTY SPACES

Sophie Mills, Division of Social Sciences (mills640@mymail.tcc.fl.edu)
Faculty Sponsor: Tom Waller, Department of Social Sciences

This paper examines the changes in social interaction due to the COVID-19 pandemic via a small-scale study of a coffee shop. It takes the sweeping changes that have happened globally and analyzes their effect on a microcosm, using social observation and contextualization. The data in this paper was collected over the course of just seven minutes, a fact which defines the shape, tone, and conclusion of the paper. In the analysis of the data, sociological methods of measurement and philosophical meditations were used in tandem. The paper concludes with the ultimate argument that in times like these, we are best suited to measure the world by the intangible empty spaces.

COGNITIVE AND EMOTIONAL FACTORS OF HAVING A SUBSTANCE ABUSING PARENT

Chelsea Mathis, Division of Psychology (mathi7ah@mymail.tcc.fl.edu)

Faculty Sponsor: Professor Sara Marchessault, Division of Psychology

The purpose of this research is to analyze the cognitive and emotional factors that affect a person that has a substance abusing parent. While understanding the different impacts, it will help me gain knowledge about the development of someone who has a substance abusing parent since not much research has been expounded on connected to this topic. To analyze the topic more research will be focused on peer reviewed journals, and experiments that were done with people in their adolescent stage of life that grew up with a parent who indulged in substance abusing. By picking this topic it will help me understand my close family more and it will help my fellow peers understand that everyone does not grow up the same as each other.

"HISTORY OF POLITICS: HOW UNITED STATES CULTURE HAS CHANGED POLITICS OVER THE LAST ONE HUNDRED YEARS."

Mackenzie Smart, Division of History and Social Studies, smart6a0@mymail.tcc.fl.edu

Faculty Sponsor: David Proctor, Division of History and Social Studies, proctord@tcc.fl.edu

The purpose of this study is to examine the change of society over the past one hundred years in the United States and the impact on U.S. politics. The impacts of politics can inspire and determine what the culture of United States is for generations. Both important parts of civilization develop the tone of society and effects everyone in the country. I used general research of culture and societal impacts like the civil rights and women liberation movements that took place from 1921 to 2021. I then compared these important moments to the political speeches and policies of Presidents and Presidential candidates. The results of the research will show the impression of how society impacts politics, political movements, and political parties.

WAR AND PROGRESS

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Brian Kupfer, Division of Political Science

The United States allocates 15 percent of its budget to the military. There is a great debate between those who think that this budget is fair and those who affirm that it should be reduced to increase investment in other sectors such as education or science. This work aims to find an answer to the question: Should the US billion dollar military budget be cut or increased? Through the Rogerian Argument, opposing points of view were identified and analyzed to find a fair middle ground. At the end of the research, it was found that historically, military investigations have yielded significant advances such as GPS, microwave, canned foods, or the internet. Thus, it was concluded that leaving the military budget intact can be beneficial for the country due to advances that benefit the American people and the world.

BALANCING FREEDOM, ORDER, AND EQUALITY.

Jordan Daniel Lane, Political Science, (lanex093@mymail.tcc.fl.edu)

Faculty Sponsor: Professor Stephen Powers, Division of Behavioral, Social Science and Education, (powerss@tcc.fl.edu)

The weighing of freedom, order and equality that all governments must perform is often approached qualitatively. However, in my essay "Balancing Freedom, Order, and Equality," I attempt to assess this balancing act quantitatively. To do this, I cite numerous historical and theoretical examples. The absolute freedom existing in a war-torn Zaire causing the collapse of both freedom and equality. The despotic nature of North Korea, creating order at the expense of freedom and equality. When one fundamental right increases, typically, another goes down. Despite this assessment, it seems this is not the case when assessing equality. In my essay, I posit that equality is the only right, where striving for equality of opportunity doesn't result in any real losses for freedom and order. Using quantitative analysis, I hope to find a point that results in the greatest gain for all three of the rights and the greatest good for society.

History Museum Essay

Megan Hogue (hogue847@mymail.tcc.fl.edu)
Facility Sponsor: Dr. Nicholas Vick, Honors Program Director

With the ongoing pandemic of COVID-19, I assumed that my college experiences and opportunities would be unlikely. With that being said, I have ensured that I continue to go through my college career with an open mind. For my paper in the semester of Fall 2020, I had the opportunity to experience how history adapts to this pandemic and how we can still research and learn about our past. By visiting local historical museums through virtual tours, the ability to learn and research may exist in humanity. In this paper, I was able to go to The Historic Florida state capital and the Museum of Florida. I was also able to attend an in-person historic site called The Pebble Hill Plantation, located in Thomasville Georgia.

THE DUPLICITY OF SHEEV PALPATINE'S LEADERSHIP STYLES IN STAR WARS

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Faculty Sponsor: Mr. Patrick McDermott, Behavioral, Social Sciences and Education Division

Star Wars has been a household name and dominant pop-culture "fandom" since its debut in theatres in May 1977. In all those years, only one sinister character has influenced the entirety of the cinematic stories- Sheev Palpatine. This paper analyzes the democratic and authoritarian leadership styles that effectively allow him to control the galaxy through three generations. It will also delve into the specific interpersonal and administrative skills Palpatine utilizes with characters like Anakin Skywalker or Darth Vader. Through a survey of all forms of Star Wars media- in print and film- this research explores the duality of Palpatine's leadership and identifies that adapting his leadership to easily flow on the continuum from democratic to authoritarian was essential in his takeover of the Star Wars galaxy. The paper ultimately teaches the strength and danger of leadership styles through a notorious character that can relate to real-world present and past leaders.

A Discussion of *Passing* by Nella Larsen

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My oral presentation discusses the book "Passing" by Nella Larsen. A novella published during the Harlem Renaissance, a time marked by flourishing black creativity. However, in the grand scheme of things, only a few black individuals of that period were able to fully thrive. The color of one's skin made you or broke you. Unfortunately, black individuals who had fairer complexions had a foot up on the ladder, compared to those with darker skin. Nella Larsens' Novella gives readers of this time an inside look on the complexity of race, and most importantly appearances.

My goal is to address the topics of colorism addressed in "Passing", while also further researching the impacts that colorism has on society today. In my presentation I will discuss the racist preferences of the past, and how they have managed to carry into society today. In my presentation, I will discuss how colorism has surpassed the test of time, and still manages to plague society.

PUBLIC RELATIONS, ONE OF THE WHITEST JOBS IN AMERICA?

Kaitlyn Kelley, Division Of The Honors Program, (kelle139@mymail.tcc.fl.edu)

Faculty Sponsor: Nicholas Vick, Division Of The Honors Program

The purpose of this study was to explore the levels of diversity and inclusivity in the Public Relations field. This is important to understand because by the year 2045, white citizens will be the minority in the United States. In order for the profession to adapt to these future demographics it needs to start making changes now. The study consisted of compiling data on Public Relations from the Bureau of Labor Statistics. The aim was to organize the statistics into four separate graphs that represented gender, pay gaps, ethnicity, and projected demographics. These graphs would make it easier to observe and compare the different levels of diversity in the profession. The results showed that Public Relations has large racial and ethnic disparities that could possibly be the cause of many recent PR fails of 2020.

THE IMPACT OF AFRICAN AMERICAN CULTURE ON MODERN POPULAR MUSIC

BIELKY RUIZ AFRICAN AMERICAN LITERATURE
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TERESA PALIWODA AFRICAN AMERICAN LITERATURE

The purpose of this study was to analyze how African American culture has set the foundation for many genres that dominate the Billboard charts. Given that music is the world's most popular form of art, it is important to credit the role that African Americans have played in the creation of jazz, blues, and more. This unfortunately continues to be overlooked by the public like many aspects of African American culture and history. In this research, a survey was conducted to measure people's awareness of African American influence on their favorite styles of music. The survey consisted of 20 participants that were given a time limit of 5 minutes to answer 5 multiple choice questions related to this topic. Ultimately, the survey proved that people have a limited knowledge of the impact that African Americans have had on the birth and evolution of modern popular music.

THE EFFECT OF SECOND-WAVE FEMINISM IN THE UNITED STATES

Elizabeth Gil (gilxx840@mymail.tcc.fl.edu), History

Dr. Nicholas Vick, Honors Program

The purpose of this research paper was to understand the socioeconomic and political changes in the United States that came with second-wave feminism. Fist-wave feminism gave American women the right to vote, a crucial moment for the country, after the primary goal of first-wave feminism was accomplished, second-wave feminism came to the forefront to develop what had already been gained. Second-wave feminism brought about several changes in the role of women in American society toward furthering the civil liberties, societal status, economic and political rights, ultimately changing the direction of the country. Major gains made include the landmark Supreme Court case ruling of Roe V. Wade and the passing of Title X. This movement set the stage for the conversation about feminism in the modern day; topics such as sexual and domestic abuse, slut-shaming, and the questioning of beauty standards all had their beginnings in the second wave.

STIMULATING AGING AND CARDIOPULMONARY INNOVATION THROUGH SMALL BUSINESS

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Faculty Advisor: Erika Williams, Division, Biological Science

The retrospect of this content identifies opportunities, and challenges in Stimulating Aging and Cardiopulmonary Innovation through R&D, Non-dilutive funding for Healthy Aging Innovations. A United States Department of Health & Human Service; the National Institute on Aging (NIH). Powered by SBA; SBIR/STTR set-aside programs have goals to support scientific excellence and Federal Research/Research and Development (R/R&D) in critical American priorities to build a strong national economy. The Small Business Administration (SBA) serves as the coordinating agency for the SBIR and STTR programs. The NIH coordinates the National Heart, Lung, and Blood Institute (NHLBI). STTR whereas commercialization of basic science resulting innovations require a non-profit research partner. SBIR programs stipulate PD/(PI) where Principal Investigator must be primarily employed. Objectives differ in two major ways related to the Program Director (PD)/Principal Investigator (PI)and non-profit research partner. Eleven federal agencies have SBIR programs and five of these agencies also have STTR programs.

THE NEUROPSYCHOLOGICAL EFFECTS OF MUSIC INTERVENTION ON NEUROLOGICAL PATIENTS AND OLDER ADULTS

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Faculty Sponsor: Gina O'Neal-Moffitt, Division of Behavioral, Social Sciences and Education

The purpose of this study was to analyze the effects of different forms of music intervention on the neurological and psychological health of patients and older adults and find out if they have any positive effects. In one study, researchers observed neurological patients that were exposed to various forms of music intervention over time to see how it improved their mood and brain function. The other study observed how music affects cognitive function and mood in older adults that are not neurological patients. One group of participants spent four months taking piano lessons and the second group of people did leisure activities. A neuropsychologist assessed them two weeks before and after this four month period to determine any changes in cognitive behavior or mood. Both studies showed that music therapy resulted in some improvement in the quality of life, emotional functions, and mood of the participants.

STUDYING THE INTELLECTUAL ABILITIES OF DIFFERENT PARROT SPECIES USING THE MODEL-RIVAL TECHNIQUE

Sophia Navah Amidi, Division of Science and Mathematics (amidi23j@mymail.tcc.fl.edu)
Faculty Sponsor: Mr. Johnny Petit, Division of Science and Mathematics

This presentation examines the effect of the model-rival technique used by Dr. Irene Pepperberg on other parrot species. The model-rival technique is a teaching technique that centers around having another being (animal or human) demonstrate the desired behavior. Dr. Pepperberg used this technique to research the intellectual capabilities of African Grey parrots. Her research has shown that the intelligence of an African Grey parrot is similar to that of a three to five-year-old child. The parrot learned to differentiate between colors, shapes, and sizes. In this experiment, the model-rival technique is being used with four parrot species, to test their abilities to differentiate between colors. The purpose of this is to look at if this technique is effective with other parrot species, if the results will be similar or different, and if the intelligence level of other parrots is close to that of African Greys.

CHANGING THE NICOTINE VAPING LAWS IN FLORIDA THROUGH THE IMPACT IT HAS ON TEENS

Connor Logan Couch, Division of Communications and Humanities (couch832@mymail.tcc.fl.edu)

Faculty Sponsor: Professor Tricia Rizza, Division of Communications and Humanities

The purpose of this project is educating parents and teens of today and being the catalyst in invoking a change in the current vaping nicotine laws of Florida through investigating the health impact it has on teens. As of December 20th, 2019 it became federal law that changed the age of buying nicotine/tobacco products from 18 to 21. Unfortunately, Florida never signed anything saying they were going to enforce it so it was left up to the businesses to decide. Many of them with the exceptions of corporate run gas stations chose to still sell to 18 year olds. The data was collected through personal experience and analyzing seven published works. Teens who suffer from a nicotine addiction are more inclined to go into a depression and their thinking skills are often “clouded”. Studies have also proven that an addiction started in the teenage years can also shorten life expectancy.

EPIDEMOLOGY FOR COVID-19

Shayla Edwards, Division of Science and Mathematics (Edwar812@mymail.tcc.fl.edu)

Faculty Sponsor: Dr. Renee Gordon, Division, Division of Science and Mathematics

Th epidemiology of the Coronavirus outbreak of 2020 has been greatly scrutinized. COVID-19 is a harsh strain of the Coronavirus that spread shortly after the new year in 2020. This strain of the virus has made such an impact globally that not only has it invoked a worldwide quarantine, but it has raised the number of deaths globally exponentially. This research detects the history of the virus while the politics and economical outcome surrounding the Coronavirus is examined. The analysis examines the outbreak in various ways: identification, pathway, study, societal impact, and political influence based upon CDC statistics. Data revealed that COVID-19 had a grating impact on the health and economy of the world. In addition, politics played an extremely specific role in how consequential the virus was to society.

THE LIFE OF AN ENSLAVED WOMAN

Guilandia Aristilde, Division of Communication and Humanities
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Faculty Sponsor, Dr. Donya Samara, Division of Communication and Humanities

The literacy piece "*Ain't I a Woman*" brings awareness to the hardships African American women faced during the 1800s. The speech was written by a former enslaved woman, Sojourner Truth. As a prominent activist for women's rights. She shares her personal testimony of what it was like to be an African American woman during that time. Her courage to share her story with different crowds sparked a movement across the United States. I am performing this literary piece to inform my community of the atrocities committed against black women through the history of America. In, addition to highlight the resiliency, of women who are not famous for their brave contributions. But deserve to have their voices heard.

THE PIN

Zach Boltz, Division of Communications And Humanities (boltz227@mymail.tcc.fl.edu)
Faculty Sponsor: John Shultz, Division of Communications and Humanities

My performance can easily be compared to the 2014 film “Whiplash” which showcased a toxic relationship between a talented student and a dogmatic instructor. While the movie received numerous critical accolades for its gritty depiction of such a construct, it simultaneously underscored and underacknowledged a key aspect of the dynamic: When the two players in the paradigm are family, particularly a father and a son, the inherent trauma inevitably spikes at an exponential rate, and the consequences carry from generation to generation. And that’s exactly what my performance captures. I include this description and theme of this movie because it so perfectly exemplifies the theme and description for my piece. Unlike the movie my piece doesn’t take place on a band set, but instead the common home of any young man who’s had a very rough/tough relationship with their father.

“IN THE SHED,” AN ORIGINAL JAZZ COMPOSITION

Farrah Madison Bratcher, Division of Jazz (bratc129@mymail.tcc.fl.edu)

Faculty Sponsor: Dr. Nicholas Vick, Division of Honors

This will be a performance of an original composition entitled “In the Shed.” The piece will be composed in a similar style to brass bands featuring a variety of instruments of which will include: clarinet, saxophone, trombone, trumpet, piano, jazz guitar, bass guitar, and the standard drum set. This piece was created as a way to showcase an extended knowledge of instruments as well as build a song from scratch using composition techniques I’ve learned along the way. Brass bands are the ancestors of modern jazz. Their ensemble and style of music helped establish the jazz standards we are so fond of today. This will be a pre-recorded video where I will take on the task of performing my original composition. I will have an audio tech/cameraman accompany me. Their name is Destiny Lorenzini.

SHE COMING NEXT MONTH

Savannah Snead (snead037@mymail.tcc.fl.edu)
Faculty Sponsor: Dr. Nicholas Vick, Honors Program

This essay examines some possible causes of Marilyn Monroe's untimely death. I used source documents to provide evidence of the discrepancies that occurred with her obituary.

I introduce Marilyn Monroe and her relationship with the Kennedy's and give some possible connections between them and her death. I used books and recordings to conduct this research and find evidence to explain her death, the relations she had with people of power, and those who competed against her or felt small in her presence. My research did not find concrete evidence for how she died, but, rather, it provides suggestions for the reader to make their own decision. Marilyn's death has been speculated on since day one, and theories that have been postulated. I did find discrepancies between the stories of how she died, the people she was surrounded by during her time of death, and the overall state of Marilyn's wellbeing.

PHYSICS OF A BLACK HOLE

Victoria Buchanan (bucha232@mymail.tcc.fl.edu)
Renee Gordon, STEM Center

In this poster presentation, the science and the subsection of physics behind black holes will be explained along with what they are and how they are typically formed. A black hole is a region of spacetime where gravity is so strong that nothing—no particles or even electromagnetic radiation such as light—can escape from it. The theory of general relativity predicts that a sufficiently compact mass can deform spacetime to form a black hole. Black holes have an extensive history whether it is scientists not knowing how they work or how complicated they really are. Even then black holes (of large mass) are expected to form when massive stars end up collapsing after their lifetime cycle has ended. The presentation would include commonly asked questions and answers and would thoroughly enlighten people with the incredible physics and science of black holes.

LARGE NUMEBRS: RATES OF APPLICATION

Amber Collinsworth (AmberRcollinsworth@gmail.com), Mathematics
Faculty Sponsor: Dr. Renee Gordon, STEM Program

The purpose of this trial was to explore the rates in which the Law of Large Numbers begins to apply to a data set. With the assumption that results in each trial have an equal probability, it was examined whether randomness could be eliminated as a factor in each trial. Utilizing Minitab, random data was generated based on a (six-sided) dice roll. Ten sets were procured: ten rolls, one hundred rolls, one thousand rolls, and ten thousand rolls. By comparing the standard deviation of the sets, it was found that after each increase in set size there was a decrease in variation down to less than 1% deviation. This variance displayed an exponential drop and may suggest that it is possible after a certain number of trials that randomness as a factor in results can be ruled out.

HOW CAN COLLEGE FRESHMEN VARY IN STRESS LEVELS DUE TO COVID-19?

Denisa Elena Fluturas, Division of Psychology (flutu494@mymail.tcc.fl.edu)
Faculty Sponsor: Nicholas Vick. Division of the Honors Program

In the research study conducted, How can college Freshmen vary in stress levels due to Covid-19, there were a total of 102 participants that were all from Tallahassee Community College. More than half were female and 25.3% were male. I created a questionnaire on Google Forms listening questions from the COVID stress level scale and the Perceived Vulnerability to Disease scale. The dependent variable is the stress levels that were being measured according to the different participants. The different groups that were created were: Hygiene, being exposed, leaving the house, foreigners, health care, reverse questions, and constantly searching about covid. The independent variable is the occurrence of COVID-19. The control variable is the college freshmen getting the same survey and receiving the survey at the same time. Healthcare was the biggest concern for students and that allowed us to see a different side to the stress that college students endure during this pandemic.

ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING

Justin Garcia, Division of Computer Science (garci374@mymail.tcc.fl.edu)
Faculty Sponsor: Dr. Renee Gordon, STEM Program

Artificial intelligence systems are used in everyday life, and they learn from human behaviors. With the rise of new technology with the ability to learn on its own, there are newer studies showing the science behind machine learning. Artificial intelligence is utilized in numerous industry which include transportation and law enforcement. From building the code to running the code, there is a substantial amount of time put into programming this "feature". This research will explain the techniques and logic behind the way AI systems learn on their own by examining the roles of the creator and the end user.

THE IMPORTANCE OF THE LIFE & LEGACY OF JOHN G. RILEY

Kristina Andrea Ismeron, Division of Communications and Humanities
(ismer822@my.tcc.fl.edu)
Faculty Sponsor: Teresa Paliwoda, Division of Communications and Humanities

My poster presentation will be focusing on the importance of the life and legacy of John Gilmore Riley. This poster will shed light on John G. Riley's life and significant contributions to black history and the black community of Tallahassee. The purpose of this poster presentation is to educate those who may have not been taught about John G. Riley in school or at home and most importantly to show how black people before us can shift the narrative for other generations of black people to come. I did my project by visiting the John G. Riley House/ Museum and the museums website. All in all, I anticipate that my poster presentation will be informative, impactful, and illustrate the importance of the life and legacy John Gilmore Riley to its viewers.

COVID MRNA VACCINE INFORMATION ON SOCIAL MEDIA: FACT OR FICTION

BEN JONES FRESHMAN (JONES66R@MYMAIL.TCC.FL.EDU)
ELTON WOODWARD BIOLOGY

The purpose of this study was to evaluate the accuracy of information about COVID vaccinations on social media platforms. Prior research has shown that vaccine disinformation has a negative impact on vaccination rates. During the current pandemic, it is important to evaluate the incidence of disinformation to determine if it is contributing to vaccine hesitancy. The results of this research could help organizations like the CDC and WHO allocate their resources appropriately to increase vaccination rates. Using two google accounts (one being non-biased) to log into three social media accounts each, eight hours were spent equally across media outlets. The research was conducted as follows: every time harmful content was found on the mRNA vaccine, a tally was added on that platform. The results of this research found that the amount of disinformation is very low, although it still shows up in minuscule amounts.

THE IMPACT OF MOLECULAR GENETICS ON ORAL HEALTH

Diem Nguyen, Division of Biological Sciences (ndiem1127@gmail.com)

Faculty Sponsor: Dr Renee Gordon, TCC Stem Center

As a result of our increased understanding of the human genome, and the functional interrelationships of gene products between nature and nurture, it is becoming evident that several human diseases are influenced by many uncontrollable heritable alterations. Genetic factors play an appreciable part in determining individual resistance against dental cavities. In this research, we will specifically examine the origin causes of genetics between cavities, gum disease, oral cancer, and misaligned teeth; we will investigate how nature and nurture play roles on those diseases and its long-term consequences through a survey sample of 60 adults and 30 children. The results have reflected that a significant percentage of the selected sample exhibited psychological and behavioral effects by the oral diseases. Moreover, this study revealed whether it is possible to provide treatment curing the disease permanently. If the case was successfully treated, further examination of the potential alterations individual's DNA was recorded.

HEMISPHERECTOMY: THE CAUSES, EFFECTS, AND THE VARIOUS TECHNIQUES

Samuel Jahnuna Raphael Omeke, First Year Student (omeke954@mymail.tcc.fl.edu)

Faculty Sponsor: Dr. Renee Gordon, STEM Program Director

The purpose of this study was to research the causes and effects of hemispherectomies in addition to the different techniques that are used to complete the procedure. Hemispherectomies are procedures that remove or disconnect, either the left or right hemisphere of the brain to stop an individual from having seizures. The importance of hemispherectomies can be seen by looking at individuals who are diagnosed with epilepsy or have experienced epilepsy since they were children. When undergoing the surgery, medical personnel disconnect the side of the brain that is causing the seizures. Because of this procedure, many people will not have to go through the physical and mental pain of experiencing a seizure again. I analyzed five sources, as well as panel or medical personnel who had many years of experience. The material discussed in the paper helps inform not only individuals experiencing seizures, but neurological medical personnel as well.

THE EARTHLY IMPACTS OF EXTRACTING LITHIUM

Madison Xanders, Division of Science and Mathematics (xande470@mymail.tcc.fl.edu)
Faculty Sponsor: Dr. Nicholas Vick, Director of the Learning Commons and the Honors Program

The focus of this study is to explore the impacts that increasing the extraction of lithium has on the environment. It is important for the public to understand the effects of lithium mining since lithium-ion batteries are used in nearly everything we operate from cellphones to electric cars. The popular manufacturer, Tesla, is believed to have a positive impact on our Earth with their zero carbon emission vehicles, but what people don't know is the hidden truth about their batteries. The information that is being used in this presentation consists of multiple research studies and numerous articles from trusted sources for data and background details. The anticipated result from this research is to reveal that lithium mining has a sizable negative impact on the environment that the majority of people do not know about.

A PEEK INTO OUR BRAIN PORTRAYED THROUGH THE "ART OF PERCEPTION"

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As life has its many layers, it is only fitting to try to capture its beauty in a similar manner. From the beginning of time, man and the wild have been attracted to the beauty of the world. Art is inherent in every aspect of life, and it can be traced to the first signs of human existence. It is in our genetic wiring to be drawn to the beauty around us. Aesthetics are everywhere; language, love, and life. In the last two decades, the study of neuroaesthetics has begun to explore the relationship between art and the brain. In this photographic piece, I will portray the aspects of life and art as they meet in the everyday world. I will be using a series of my own photographs, layered upon each other to represent what aesthetics we perceive and capture with our mind's eye, all in a single moment.

THE PRESSURES AND STRUGGLES IN STUDENT ATHLETES

Jenna Higbee-Tindell, Sophomore (higbe993@mymail.tcc.fl.edu)
Faculty Sponsor: Nicolas Vick, Learning Commons Director

I started this study of student athletes who suffer from pressure because I was a student athlete. I believe teachers, classmates, parents, need to understand these struggles. Many students love their sport; however, it comes at a cost. I was a student athlete, so I can understand what goes through their mind. I asked many students at a local gathering what goes through their mind on a day to day basis. I created a picture that expresses what goes through a normal student athlete's mind and I found many different factors. I want to make it clear that it's not all negative thoughts. There are positive mindsets within student athletes, but I realized that it’s a struggle to stay so positive. Overall, my artwork should express the pressures and struggle in a student athlete.

THE BEAUTY AND IMPACT OF DIVERISTY IN MEDIA

Abbigail On-Yue Huynh, Division of the Honors Program (huynh008@mymail.tcc.fl.edu)

Faculty Sponsor: Dr. Nicholas Vick, Division, Director of Learning Commons

The purpose of this film was to explain the cultural phenomenon that representation in media has had on our social norms. The world is slowly gravitating towards a future where all countries have become a melting pot of cultures – so, representation in media has never been more important. Being able to normalize and represent the struggles of many different backgrounds can help us empathize and feel heard in a world that is constantly growing. Although we can see the beginnings of this representation-renascence, it clearly should not become a dying trend in the following decades to come. This film provides several examples of diversity's effectiveness through its presentation and analysis of several films/television shows spanning over several socio-cultural themes: race, sexuality, wealth/poverty, trauma and, mental health. Based on the examples given, the impact that media has on shaping our present and future is powerful.

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