

Abstract for Program

2010 Ribbons of Excellence Program

Updated March 26, 2010

ORAL PRESENTATIONS

Race and the Revolutionaries: How Racial Identity has Determined the Legacy of Nat Turner and John Brown

Chelsea Easter

Nat Turner and John Brown are both famous (and infamous) for their violent and bloody revolts against slavery. Nat Turner, a pious slave, heard from God that it was his duty to rise up and kill the white slave owners with their own weapons. John Brown, also a God-fearing man, knew that slavery was a moral abomination and felt it his duty to free slaves through leading them in a revolt against slave owners. The similarities between these men are vital in understanding their influence on American history. The hesitation to parallel John Brown and Nat Turner's actions and affects on history and American slavery is due to identity politics and each man's race. John Brown is a white fanatic, obsessed with an issue that does not affect him directly, and Nat Turner is a slave standing up for himself and his people as they dream of freedom.

Department: English

Mentor: Nathan Goetting

Ribbon: Caring for Humanity and the World

Poincare and Perelman: The Conjecture

Creedence Hoffman

What is the connection between a 19th century French mathematician and a 20-21st century Russian mathematician? A deceptively simple question called Poincare's conjecture. A short discussion of the lives of Henri Poincare, Grigori Perelman, and the question that would link them together. Basic concepts from the field of topology will be discussed, along with the "Why?" of the field.

Department: Mathematics

Mentor: Lakshmi Dalwalla

Ribbon: Developing Creativity

Wine Jelly Production and Analysis

Jeremy Carpenter

Nicholas Satterfield

Wine jellies are currently a small scale artisan product. Current methods for its production involve the addition of large amounts of sugar and boiling, which results in a modified flavor. The goal of this research was to determine how to create a more authentic tasting wine jelly by increasing ethanol content and reducing the addition of sugar. The ethanol content also plays a large role in trade regulations. Alcoholic products are taxed differently depending on their ethanol content. A method is being created to analyze the ethanol content in commercial samples as well as developed recipes. This presentation will discuss the old and new methods of wine jelly production and why it is important for the ethanol concentration to be close to the initial wine product. It will also explain the analytical techniques used to determine the ethanol content, the results of the analysis and the implications of these results in terms of their taxation.

Department: Chemistry

Mentor: Paul Rupert

Ribbon: Thinking Critically

Plantains and Coke: The Effects of the "Nutrition Transition" in Nicaragua

Anna Pasternak

This research compares the traditional diet of Nicaragua to the current “Nutrition Transition,” especially in poor communities, that is taking place as a result of availability, and affordability, of refined foods and beverages, and prepackaged items. Many times these products are deficient in nutritional value. The impact this has on health, especially chronic diseases such as diabetes and heart conditions, is becoming apparent. A Service-Learning trip to the country began this exploration of traditional diet, the spread of convenience foods, and the impact it has on health in Nicaragua.

Department: Teacher Education

Mentor: James Hanley

Ribbon: Caring for Humanity and the World

To Err is Human, to AIR Divine: Unlocking the Secrets of Wine Aerartion Using Analytical Chemistry

Gabriel Holdwick

It has long been known that aromas and flavors in red wines respond positively to aeration prior to drinking. The Vinturi™ is a device that is been marketed as an aerator for red wines, claiming to result in improved aroma and flavor. Recently, such a device has also been introduced for white wines. Since smell and taste are highly subjective, we have attempted to determine experimentally the extent to which the vapor space above red and white wines are altered by passage through these devices. Samples of wines were passed through their respective Venturi™ devices, followed by sampling of the head-space under carefully controlled conditions. Head-space samples were collected at various temperatures, as well as from a non-aerated control group. These samples were injected into a gas chromatograph to separate, identify and quantitate the chemical constituents in the vapor.

Department: Chemistry

Mentor: Paul Rupert

Ribbon: Thinking Critically

Downs Hall Ornament Project: An Entrepreneurial Venture

Joseph Hart

Ryann Eff

Lauren Fabian

Nick Siekirk

The goal of this project was to get us to focus on experimental learning. We went outside the classroom and worked on a project for the college. The steps necessary to create this project included initial funding, international sourcing, product promotion, in-store merchandising, and planning for year-long sales. Our investor was President Docking. After we received the necessary funds and were able to purchase the ornaments, we ran into a problem with breakage. Upon receiving the ornaments a large number of them were damaged. But we made the best of the situation and began selling the remainder with good success. We did this project in conjunction with the college's 150th anniversary. Our largest sales came during Homecoming earlier this year. One purpose of the for-profit project was to generate funds for future entrepreneurial projects at the college.

Department: Accounting and Business

Mentor: Jennifer Ellsworth

Ribbon: Developing Creativity

Comparative Survey of Insect Family Distribution in Three Lenawee County Plant Communities

Jeremy Sell

A survey of insect family distribution was conducted at three distinct plant communities in Lenawee County, Michigan. These locations included a mesic prairie in Dover Township, a flood plain forest in Blissfield Township, and an upland mesic forest in Rollin Township. Insects were collected with a sweep net from each of the three sites from June through September 2009. At approximately two-week intervals, each site was swept for twenty minutes. By identifying these insects to the family level it was possible to see patterns in the communities. Similarities and differences in family composition were identified between the sites. Changes were identified in family composition throughout the season. Relative diversity between the sites was also calculated. Special attention was given to the distribution of potentially pestiferous and beneficial families.

Department: Biology

Mentor: Jim Martin

Ribbon: Caring for Humanity and the World

Geochemical Analyses of the San Francisco Volcanic Field

Benjamin Kaczmarek

Volcanic activity of the San Francisco Volcanic Field began six million years ago and ended with the eruption of Sunset Crater Volcano. This volcanic field has produced over 600 volcanoes with volcanic rocks covering 500 km³. In Wupatki National Monument, located in the eastern part of the SFVF, there are nine lava flows that were produced from seven different melting events. Fifteen samples were collected from nine vents and lava flows from the area Southwest of Wupatki. Geochemical analyses of potential source vents will be compared to analyses of the individual lava flows from Wupatki. This comparison will allow for a determination of the source vents for each of the flows. This will then be used to develop a better understanding of the eruptive history of the volcanic field.

Department: Geology

Mentor: Sarah Hanson

Ribbon: Thinking Critically

Analysis of Bubble Sizes in Vesicular Basalt from the Bonito Lava Flow, Sunset Crater National Monument, Arizona

Jeremy Sell

As basaltic lava flows from a volcanic vent and cools, dissolved volatile gasses exsolve from the melt and form bubbles. After the lava cools, these bubbles remain as vesicles in the rock. Within individual lava flows, vesicle distribution is not uniform over vertical distances. Analysis of vesicle size and frequency versus depth was used to determine the mechanisms for this variation. Basalt was sampled from an approximately two-meter thick vertical section of the Bonito Lava Flow, a 900 year old lava flow from Sunset Crater Volcano in northern Arizona. Samples were cut into thin slabs and acetate peels were made for each slab. Vesicle cross-sectional areas were measured using image analysis software. Plots were made of vesicle size versus frequency. Analysis of vesicle size-frequency distribution illustrated two mechanisms for bubble growth. Over distances of several centimeters bubble growth was driven primarily by coalescence. Over larger vertical distances, reduction in hydrostatic pressure and bubble rise played a larger role. Additionally, it was found that higher viscosity near the flow margins led to the selective combination of large bubbles.

Department: Geology

Mentor: Sarah Hanson

Ribbon: Thinking Critically

Development of Calculus

Neal Mossing

While studying the History of Mathematics through the Oxford Study Abroad Program, a main topic considered was the historical development of calculus. Through further research, I explored the various problems that led to the invention of calculus. These include measurement questions, geometrical and physical attributes of curves, and maximum and minimum principles. The contributions made by Leibniz and Newton will be addressed, as well as the feud that occurred between them.

Department: Mathematics

Mentor: Elizabeth Lamprecht

Ribbon: Learning Throughout a Lifetime

Critical Analysis of Alfred Hitchcock

Robert O'Meara

I will be proposing and answering the three questions of, How Alfred Hitchcock used lighting to contribute to his films *mise en scene*, how Hitchcock used the idea of the High Angle framing technique to add to the films cinematic value, and how Hitchcock used Point-of-View editing to contribute to the films overall form. Through online research and the use of certain materials, I was able to conclude who, and what influenced Alfred Hitchcock, The production techniques Alfred Hitchcock used to add to his overall films form, the cinematography aspects which Alfred Hitchcock employed, and lastly, the editing techniques Hitchcock employed as well to add to his films overall form.

Department: Communication

Mentor: Sheri Bleam

Ribbon: Thinking Critically

"Over the Counter Drugs" Consumer Study: Baby Boomers vs. Generation X.

Ryann Eff

I conducted a study comparing the Baby Boomer generation and Generation X based on consumer consumption of over the counter pain medications. For this study, focus groups were conducted for each individual generation. Participants were asked similar questions regarding their consumer purchase process and what they looked for regarding specific over the counter pain medications. Participants discussed each step in the purchase process including need recognition, product comparison, selection criteria, and post purchase evaluation of the product. Also included in the focus group discussions were effective forms of advertising, participant research methods, and the ability to follow directions and dosage instructions. After the study was completed, a report was developed discussing findings as well as similarities and differences between each generation.

Department: Accounting and Business

Mentor: Partick Quinlan

Ribbon: Thinking Critically

Women Michigan Artists Website

Emily Domschot
Terra Campbell
Katrina Wotten
Bri Gribble

The purpose of this project is to create a website drawing attention to the work of Michigan women artists. The website provides a collection of researched information about women artists native to Michigan. Each team selected an artist, and researched sources about the artist and their medium. Students made contact with artists, gathered primary and secondary sources, and created galleries of the artists' works. This process allowed the teams to gain experience in developing their research methods. It also initiated a working world related environment through teamwork. The final product is a website that features artists' works in image and resource galleries as well as an artist's spotlight, featuring an interview with one of the artists. Conceived as an ongoing process, this site will satisfy a need for art resources for the community, both encouraging students to recognize and support the works of Michigan Women Artists. Website: <http://www.adrian.edu/academics/HIST/MIwomenartists/>

Department: Art
Mentor: Carissa Massey, cmassey@adrian.edu
Ribbon: Caring for Humanity and the World

State Farm: A Creative Marketing Campaign for 2010

Jennifer Perrin
Ryan Smolinski,
Amanda House,
Ryann Eff,
Elysia Norris,
Kody Turner-Schimmel.

The American Advertising Federation 2009/2010 National Student Advertising Case competition case is State Farm Insurance. Charged with the challenge of succeeding with the young adult segment of the market and with a \$40,000,000 budget, a comprehensive advertising plan has been developed.

Beginning with a comprehensive research initiative that included creative use of both qualitative and quantitative techniques, targets were selected, research objectives formulated and a comprehensive campaign executed. The AAF competition team is multidisciplinary and includes music, art, communication and business majors and the campaign includes original artwork, an original music score and original copy.

Department: Accounting and Business
Mentor: Patrick Quinlan
Ribbon: Developing Creativity

Adrian Sexual Opinion Survey: Gauging the Erotophilia of Students and Student Demographics.

Josh Emington

The entire Adrian College student body was solicited by email to complete a shortened and modified version of Byrne's (1977) Sexual Opinion Survey (SOS). The SOS classifies respondents on their level of erotophilia or erotophobia. Erotophilic respondents are positive and open in their sexual attitudes, whereas erotophobic ones are more negative and judgmental. The study was designed to establish baseline attitudes of the student body that could be helpful in future research, and to determine the relationships between personal characteristics and sexual opinions. 272 students completed the survey. The results indicated correlations between demographic groups and scores, specifically gender, age, class, and self assigned political ideology. Additionally, scores have been averaged to produce Adrian's mean erotophilia score and to generate scores for each demographic grouping.

Department: Psychology

Mentor: Gordon Hammerle

Ribbon: Crossing Boundaries and Disciplines

Parfit contra Hare: The Possibility of Moral Synthesis

Sean Murphy

In *On What Matters*, Derek Parfit attempts a synthesis of the three dominating ethical theories: Kantianism, contractualism, and consequentialism. Fundamental to this main project, however, are his arguments in support of moral objectivity and the account of reasons and rationality which he argues flows from it. R.M. Hare, an earlier moral philosopher, was also concerned with offering a tenable moral synthesis. Hare's work, in contrast, can be adequately summed up as an attempt to get the best of both worlds from both utilitarianism and Kantianism. Though Hare claims that his logical treatment of moral language retains moral objectivity inasmuch as any sense can be attached to the notion, his understanding of objectivity, I will argue, is at odds with Parfit's in addition to serving as a substantively barren basis on which to erect his theory. Parfit, I will argue, was right to insist that on Hare's account, nothing *really* matters.

Department: Philosophy-Religion

Mentor: James Spence

Ribbon: Thinking Critically

Health Promotion in Nicaragua

Alemena Welker

This project considers how Nicaraguans are informed about health related issues. I will be looking at the social and cultural barriers to health promotion in Nicaragua. I will research how people in the United States are informed and how health promotion and education is presented. Also I look at what is currently being done in Nicaragua. I will also be investigating firsthand, what kind of information is available to Nicaraguans. I will look for any information about health related topics that is available to general population. I will also talk to the Nicaraguans about their health system. In other settings, it has been shown that educating the general population about health related issues reduces the amount of deaths because people will know how to prevent and deal with symptoms. I believe that the same could be true in the case of Nicaragua. I will present my report in Spanish.

Department: Modern Languages and Cultures

Mentor: Don Cellini

Ribbon: Crossing Boundaries and Disciplines

Impact of Sarah Palin on the Public's Perception of Women in Politics

Catherine Griebel

The aftermath of the 2008 presidential election left political analysts and the general public wondering what to think about Sarah Palin. Palin gained both supporters and critics during the campaign, what impact did she actually have on the public's perception of women in politics? Claims have been made which state she had a negative impact based on her ditzy moments and inexperience. A survey was conducted to gain a better understanding of the topic; did she have a negative impact or was the public able to view her as an individual and not a representative for women. Upon reviewing various sources and survey results I will show that she did have a negative impact on the view of women in politics. This is relevant because women are continuing to reach for true equality, one woman being viewed an example can have devastating consequences on voters decisions about future female candidates.

Department: Political Science

Mentor: James Hanley

Ribbon: Thinking Critically

Comparison of DI and DIII pre-season physiological testing of women's basketball players' freshmen years

Nick Siekirk

Purpose: Successful performance within the elite levels of basketball requires the player to overcome the physical demands of the game. The purpose of this study examines the physiological differences between collegiate divisions in female basketball. The focus of this study is to examine the differences in VO2 max, height and weight between the Michigan State University female basketball team and the Adrian College female basketball team. With this comparison, our study will begin to illustrate the differences of collegiate levels, and the required skills necessary to compete at these levels. Physiological profiles of collegiate athletes will help lay standards for recruitment, due to knowledge of required abilities and positional demands. We will contrast body types and the position in which one can excel. Differences in physical attributes may dictate playing position and skill levels. Further to profile elite athletes predictions of performance at the college level based on measurable characteristics is of value to coaches. From literature review, studies have yet to compare collegiate levels, and we hope to begin to solve this issue.

Department: Exercise Science and Physical Education

Mentor: Adam Coughlin

Ribbon: Thinking Critically

Japanese Eroge: The Leap From Mario to Battle Raper

George Mathis

Japan is very obviously culturally connected to video games. Less commonly known, however, is the fact that a staggeringly large chunk, which some sources point towards 70% of all computer game sales, of these video games that are played in Japan are of an erotic or pornographic nature. Many of these games that feature erotic pictures are analogous to the infamous obligatory sex or breast baring scene of Hollywood cinema. Other games, however, are no holds barred pornography covering common themes of rape, pedophilia and a handful of other fetishes, including uniquely Japanese fetishes of tentacle rape or specialized urolagnia. Why is it that eroge, or erotic games, are so immensely popular in Japan? Furthermore, why have marginal or liminal fetishes become something much larger, something approaching a recognizable majority? The answers springs forth at once with the fusion of the traditional cultures of Japan's past and the concerns of modern politics. Japan began putting laws into motion to censor and regulate pornography in 1959. Pornography in Japan had to morph and adapt to stay alive. It is through Japan's own legal system that the option of having pornography void of fetishistic themes is completely eliminated.

Department: Modern Languages and Cultures

Mentor: Bryan Bott, bbott@adrian.edu

Ribbon: Crossing Boundaries and Disciplines

Johnny's Boys: One Man's Rise to Controlling Media Relations

Megan Pavlak

The purpose of this research project is to analyze and determine the amount of control one man exerts over not only his company, but all avenues of mass media within Japan.

Since 1962, Johnny Kitagawa has been producing the most popular and influential boy bands in Japan, and arguably, the world. These boys are manufactured talents that live, eat and sleep thinking about how best to serve Johnny's purpose. As these groups become more popular, so does the amount of control Kitagawa exerts over their relations with the public. He determines where and when his talents will appear to the media and how long they are allowed to be interviewed for.

The main goal is to find how deep this control goes and in what ways Kitagawa uses this control to exploit his talent and the company.

Department: Modern Languages and Cultures

Mentor: Bryan Bott

Ribbon: Thinking Critically

Comparison of Mechanically and Electromagnetically Braked Cycle Ergometers for Three Different Modes of Wingate Anaerobic Testing

Valerie Smith

Wingate anaerobic tests are used to test immediate and intermediate anaerobic energy systems. Testing is usually conducted on athletes and those who are training for high intensity performances. Traditionally, Wingate testing has been measured using a mechanically braked cycle ergometer (ME). The technology of ME's have advanced to sync with computer software, alleviating the need for hand counting of revolutions during testing. Additionally, electromagnetically braked cycle ergometers (EE) have also emerged as a mode of testing in the laboratory setting. There are limited studies comparing the hand vs. computer counted revolutions of the ME tests and no studies comparing the ME to the EE tests for the Wingate anaerobic test. Therefore, the purpose of this study is to examine the differences, if any, of Wingate anaerobic testing from three different modes of testing, ME hand counted, ME computer counted, and EE controlled. Ten participants will be recruited from a college setting. Five students will be randomly assigned to the EE test first, followed by the ME test no sooner than 48 hours after the conclusion of the EE test. The other five participants will perform the ME test first, followed by the EE test no sooner than 48 hours apart. Data from the ME test will be collected both by hand tabulation, as well as, computer monitoring, resulting in one test providing data for two different modes of testing. Comparison between ME hand tabulations, ME computer monitoring, and EE control will be examined with respect to peak power, peak power/kg body weight, mean power, mean power/kg body weight, and fatigue index.

Department: Exercise Science and Physical Education

Mentor: Adam Coughlin, acoughlin@adrian.edu

Ribbon: Thinking Critically

Health Benefits of Choosing a Physically Active Outdoor Recreation Program

Brandon Dickinson

Health, wellness, and physical fitness are all improved by increases in physical activity. Exercise is a form of physical activity, targeted specifically to improve health, wellness, and physical fitness. By choosing more physically active behaviors, specifically exercises of increased intensity or duration, one can make great improvements in physical fitness. Outdoor recreation offers an opportunity to not only choose physical activities, but to combine physical activity and exercise with playing. Play can distract those performing the physical activity, allowing the individual to either increase intensity or duration of activity beyond that of exercising. The purpose of this project is to determine the health and physical fitness benefits of choosing an outdoor recreation physiology course. Thirteen individuals traveled to Guam for three weeks in May 2009 for an outdoor recreation physiology course. Several health and fitness assessments were completed the week prior to leaving and within one week upon return. Anaerobic, aerobic, muscular, flexibility, and blood testing were conducted. Several different types of physical activities and exercises were conducted during the three week trip. Differences, if any, of pre and post-testing will be compared.

Department: Exercise Science and Physical Education

Mentor: Adam Coughlin

Ribbon: Thinking Critically

Comparison of Measured vs. Estimated Resting Metabolic Rates Using a Metabolic Cart and Bodpod Estimation

Adam Czerkes

Resting metabolic rate (RMR) is clinically important to determine caloric needs for energy balance and potentially to diagnose certain metabolic diseases. There are several estimation models used for the determination of RMR, using height, weight, age, fat mass, fat free mass, body surface area, and other anthropometric measures. These methods are extremely inexpensive and easy to use. Direct measures of RMR include expensive and time-consuming techniques. Indirect measures of RMR, such as expired gas collection, are relatively less expensive and less time-consuming, making this method more popular. There are very few studies comparing estimated RMR to measured RMR in a college-aged populations. Therefore, the purpose of this study is to compare the RMR collected via indirect measurements to an estimated RMR based on body fat analysis. Twenty (10 women, 10 men) participants will be recruited to perform RMR testing. Testing will be conducted between 6am and noon. Each participant will rest for 15 minutes upon reporting to the lab, following immediately by 30 minutes of canopy collection of expired gases. At the completion of gas collection, participants will go directly to body fat analysis via Bodpod. A dependent t-test, standard estimate of error, and correlation will be calculated to compare the estimated and measured RMR.

Department: Exercise Science and Physical Education

Mentor: Adam Coughlin, acoughlin@adrian.edu

Ribbon: Thinking Critically

Shakespeare's Characterization of Richard III

Amy Dygert

In this presentation, I will discuss various aspects of Shakespeare's character Richard in his history play Richard III, what makes this character both repelling and intriguing to audiences throughout history. The innovative use of the soliloquy allows the audience a closer relationship with the character, while enabling the character to deceive them just as he deceives the other characters in the play. Shakespeare also makes use of the somewhat legendary status Richard had acquired in the years since his rule, largely due to the spreading of historical texts such as Vergil and More, as well as to the Tudor dynasty's allowance of such a reputation to grow of their predecessors. The majority of the presentation will explore Shakespeare's characterization of Richard as one directly influenced by Machiavelli's work, *Il Principe*, as Richard demonstrates Machiavellian tactics in becoming king. Once Richard has acquired kingship, however, he begins to fail at the Machiavellian tactics which propelled him to the position, growing paranoid and fearful. Thus, his inevitable downfall is truly Shakespeare's acknowledgement of the potential in Machiavellian rule, as well as, however, an acknowledgement of its risk.

Department: English

Mentor: Robin Bott

Ribbon: Thinking Critically

The Use of the "N" Word in American Literature

Chelsea Easter

This project details the use of the word "nigger" in three pieces of American literature. These novels are *The Adventures of Huckleberry Finn*, by Mark Twain, *Passing*, by Nella Larsen, and *Native Son*, by Richard Wright. These novels are examples of a nearly century of time, with *Huckleberry Finn* taking place in 1839, and *Native Son* taking place in the 1930's. *Passing* depicts the life of an African American in the Harlem Renaissance in the 1920s. This group of authors is varied in that there is a white male, black male and black female. The authors use the "N" word in each of these novels to relay the truth of the times, hatred towards African Americans, and the difficulties that came with being a minority in Pre-Civil Rights era. This word serves an immense purpose and should not be censored in literature, and academia.

Department: English

Mentor: Idali Feliciano

Ribbon: Learning Throughout a Lifetime

Water Quality in Managua, Nicaragua

Nicholas Satterfield

Water is one of the basic necessities of life. Thus, access to a large quantity of healthy water is essential to any community. First world countries have elaborate water systems to ensure that the community gets water. Yet, this is not the case in third world countries. Many parts of third world countries rely on local sources of water. Without monitoring, these sources can become contaminated with bacteria and metals. Bacterial infections from bad water can lead to diarrhea and dehydration, which can be fatal to the young, old, malnourished, and immunocompromised. Some metals can also pose significant health issues. Large amounts of lead can lead to anemia and neurological problems. The quality of water in an area around Managua, Nicaragua will be examined by surveying households and water analysis. This presentation will discuss the data concerning water quality, as well as the availability of water to the community.

Department: Political Science

Mentor: James Hanley

Ribbon: Caring for Humanity and the World

Max Overload Training the Plasticity of the Human Body: A Case Study

Jackson Hanks

Maximum overload training (Max OT) is an intense weight training regimen that is based on the fundamental concepts of muscle development: the overload principle. This is the principle that states when a muscle is put under more stress than it is accustomed, it will adjust. Each lifting session contains 6 to 8 reps of high intensity, low repetition lifts to failure, followed by 16 to 20 minutes of intense cardiorespiratory endurance exercise on a bike or treadmill. This case study included two six-month phases: muscle building then maintenance with diet restriction. At the beginning of phase 1 the 42 year old male subject was 87.5 kg and 27% fat. At the end of phase 1, he was 84.5 kg and 20.7% fat. Phase 2 included diet control and the same Max OT workouts. At the end of phase 2 the subject was 67 kg and 6.8% fat. The subject finished second in his weight class and third in the open masters divisions following the end of his second phase in a state-wide bodybuilding tournament.

Department: Exercise Science and Physical Education

Mentor: Adam Coughlin

Ribbon: Thinking Critically

Individual Sovereignty versus Collective Action: The Problems of the League and the UN

Amanda Liske

The founding of the League of Nations and the United Nations were for the purposes of keeping the peace between nations. However, in the years that the organizations have been active, peace has not always been easy to achieve.

Following the Second World War and the collapse of the League, the United Nations was created with institutional changes to introduce greater cooperation. Many believe that the prevalence of Blue Helmets in the world today is an indication of greater commitment to the cause. Through the use of case study analysis, this research attempts to determine whether the United Nations has been an actual improvement over its failed predecessor, the League of Nations. By comparing the successes and the failures of each organization, it can be proven that the United Nations remains tied to a problem that plagued the League, the self-interest of its own members.

Department: Political Science

Mentor: Philip Howe

Ribbon: Thinking Critically

The Forgotten Aspect of World War II: The Point System of Discharge

Amanda Liske

World War Two was an immensely complicated event that engulfed the entire world in conflict. As such it has been difficult for the less obvious details about the conflict to be widely known by the public. The point system of discharge, or Adjusted Service Rating Score, was a victim of these circumstances. Created as a fair and democratic way of bringing the boys home, it was also the source of many complaints as problems arose during its implementation following the fall of Germany. The purpose of this paper is to bring this forgotten aspect of the Second World War to life with descriptions of its creation and the thoughts of the actual servicemen who had to deal with the aftermath. The history of World War Two often stops after the defeat of Germany and Japan; however, as this system of discharge proves, that was not the end of the story.

Department: History

Mentor: Stephanie Jass

Ribbon: Thinking Critically

Constitutional Limits on the Right to Free Speech During Wartime

Nicholas Hemmingsen

My presentation will consist of an analysis of major federal court cases dealing with limitations on the First Amendment right to free speech during times of war. My research will involve a thorough analysis of two theories of speech limitation established by the Supreme Court of the United States. First, I will look at the history of the clear and present danger test, first established in the opinion written by Justice Holmes in *Schenk v. United States* 249 U.S. 211 (1919), and the modifications that have been made to the test since. Second, I will examine the true threat exception to the First Amendment, established in *Virginia v. Black* 538 U.S. 343 (2003) and its association with the traditional fighting words doctrine, first established in *Chaplinsky v. New Hampshire* 315 U.S. 568 (1942). In my presentation, I will explain how these theories have continued to serve to increase government power and limit speech.

Department: Accounting and Business

Mentor: Nathan Goetting

Ribbon: Thinking Critically

Creative Execution and Perception of African American Brands

JaLisha Elaine Belle

For consumer marketers, the African- American consumer represents a large and potentially lucrative market segment dating back to the beginning of the 1960s. Academic research of advertising to the African American consumer has taken a number of paths. One path includes a line of research involving a belief that consumer consumption is more than the satisfaction of needs, but can also be seen as a process by which African-American consumers shape and transform their collective identity. This research study is aimed at filling a gap in the literature. It has been suggested by one line of research that advertising to African-American consumers helps shape the meaning of the African-American consumer for the general public. Though still an official definition has yet to be established. Using a qualitative, focus group methodology, this study will involve an exposure and measurement of the general public's image of the African American consumer resulting from five recent print ads of two contemporary brands; SeanJohn and BabyPhat. These two particular brands were selected because, although, they are brands that have historically targeted and displayed African-Americans in their creative execution, they are also reaching other market segments.

Department: Accounting and Business

Mentor: Patrick Quinlan

Ribbon: Thinking Critically

The History of Alcohol Policy at Adrian College

Gabriel Holdwick

In the life of modern college students alcohol may play a role nearly as large as academics, whether they decide to consume it or not. Despite the fact that alcohol may seem inseparable with college life today, for 115 years no alcohol was allowed on the Adrian College campus. As social changes swept the nation after World War II and into the 1960s, a growing divide developed between a student body wanting to be treated as adults and an administration resisting the death of century-old conservative values. Documents and articles obtained from the Adrian College Archives along with personal interviews from eyewitnesses and experts tell the story of how Adrian College transformed from a dry Methodist college into its current incarnation, and how it continues to reconcile a conservative heritage with a modern culture.

Department: Chemistry

Mentor: Michael Claus

Ribbon: Learning Throughout a Lifetime

Comparison of physiological responses due to varying cycle cadences at different workloads

Renae Blough

Electromagnetically braked cycle ergometers are becoming more popular in laboratory-based research. One such cycle ergometer is the Corival Lode bike. The resistance of the flywheel is controlled by an electrical impulse. The proposed advantage of these types of cycle ergometers is that researchers can set the resistance and cyclists can pedal at a cadence anywhere from 50-120 rpm, while the workload remains the same. Scientific evidence demonstrates trained cyclist and runners choosing varying cadences have differing economy and physiological responses even at the same workload. There exists no evidence for untrained cyclists, especially for college-aged participants. Therefore the purpose of this study is to determine physiological differences, if any, of cycling at different cadences while at a constant workload on an electromagnetically braked cycle ergometer. Ten participants (5 men, 5 women) will be recruited. Each will perform three randomly-ordered cycle tests at least 48 hours apart. Each test will consist of cycling at a set workload for 30 minutes. The first 10 minutes they will pedal at 50rpm, next 10 minutes at 60 rpm, and the last 10 minutes at 75 rpm. The resistance is the only variable that will change from test to test, including 50W, 75W, and 100W. Heart rate, blood lactate, and VO₂ variables will be measured throughout the testing.

Department: Exercise Science and Physical Education

Mentor: Adam Coughlin

Ribbon: Thinking Critically

Health Communication in Nicaragua

Alemena Welker

Heidi Roberts

This project will look at how Nicaraguans are informed about health issues and opportunities. Specifically we will be looking at how the Nicaraguans were informed about the clinic where we will be. We want to know how they get health information and then what they do with the information when they get it. We will conduct a survey that will ask them, how were they informed that the clinic was going to be there. Also, will they be telling others and how they will be telling others. We also will ask if they prefer one way of communication over another. With this information we will be able to conclude what is the best way to inform and educate the rural Nicaraguans about health related issues and opportunities.

Department: Modern Languages and Cultures

Mentor: James Hanley

Ribbon: Caring for Humanity and the World

Computer Graphics: An Advanced Application of Linear Algebra

Michael Fisher

Computer graphics is the field that studies the creation and manipulation of pictures with the aid of computers. It uses in research, industry, and business are vast and ever expanding. Linear algebra, the study of abstract finite-dimensional vector spaces and linear transformations, has a profound effect in the field of computer graphics. In this presentation, we will see that one of the applications of linear algebra reaches far and wide in our everyday lives.

Submitted: November 20, 2009

Department: Mathematics

Mentor: Alan Von Herrmann

Ribbon: Developing Creativity

Comparison Between Kinesio Tex Tape and Elastikon Elastic Tape on Upper Trapezius Inhibition

Jessica Grubbs

Purpose: In a pathological shoulder, the upper trapezius may become overactive causing increased scapular elevation and disrupted shoulder motion. Methods of taping claim to inhibit the upper trapezius, thereby promoting a normal scapulo-humeral rhythm. However, published techniques are controversial and lack controlled research. Therefore, the purpose of this investigation will be to test the effectiveness of upper trapezius inhibition taping techniques.

Hypothesis: There will be no difference in upper trapezius activity between taping conditions.

Methods: Thirty subjects will be blindly and randomly divided into three groups. Group A will receive a kinesiotaping application utilizing 2 Kinesio tex tape to inhibit the upper trapezius. Group B will receive the kinesiotaping application using 2 Elastikon elastic tape. Group C, the control group, will not receive a tape application. Electromyography measurements will be taken to compare upper trapezius activity at rest and during maximal and submaximal contractions. Electromyography measurements will be taken prior to tape application, immediately following, and 24 hours post-application to determine short and long term effects of treatment.

Results & Conclusions: Data collection is on-going. The results will allow for a better understanding and more effective implementation of rehabilitation for individuals with hypertonic upper trapezius muscles.

Department: Exercise Science and Physical Education

Mentor: Tina Claiborne

Ribbon: Thinking Critically

The Star Literary Society of Adrian College: Proto-Progressivism, Asa Mahan, and the Politics of Abolition, 1859-1872

Matt Stiller

Literary societies were a very common institution on American college campuses during the 19th and early 20th centuries aimed not only at improving elocutionary skills, but providing their members with entertainment. The Star Literary Society was the first organization to form at Adrian College in 1859. The research centers on the time of Adrian College President Asa Mahan (1859-1864, 1867-1872) and John McEldowney's tenure (1864-1867). Using primary source documents, the data shows a distinct shift during the McEldowney slump period, versus the Mahan I and II periods. Three hypotheses for the shifts during each presidency will be presented, with an emphasis on the influence of Asa Mahan, the issue of abolition, and the college's desire to become more moderate after the issue of slavery dissipated. In a historical sense, SLS members were the Progressive Era reformers of their day; hence, Proto-Progressivism existed among the SLS members.

Department: History

Mentor: Stephanie Jass

Ribbon: Crossing Boundaries and Disciplines

A Quantitative Look at Cherry-Infused Vodka

Amanda Arnold

Infused vodkas have increased in popularity, especially for party-goers. Cherry infused vodkas, however, have a problem caused by oxidation with the cherry pigment, anthocyanin. This results in decreased aesthetics for the product and a loss of income for the companies that produce them. Thereby determining the rate of infusion will allow the manufactures to maximize shelf life. Also by looking at the concentration and temperatures, optimal conditions for production can be assessed and brought to the attention of local distilleries, who manufacture cherry-infused vodka, allowing them to maximize shelf life and profits.

Department: Chemistry

Mentor: Michael Claus

Ribbon: Learning Throughout a Lifetime

Malnutrition in Nicaraguan Children

Jessica Saunders

Emily Engel

Joseph Oh

In Nicaragua 27% of the population is undernourished, and 10 % of children under the age of five are underweight for their age. Why are so many of the children in Nicaragua malnourished compared to the U.S. and what are the consequences of the high malnutrition rate? We propose to research the different types of malnutrition found in children in Nicaragua and compare the diets of the children in the country to that of U.S. children. While in Nicaragua we will observe the children and ask questions about their diets. We will also observe and record what medical problems the children are facing to see if the problems could be related to malnutrition. Later, additional research will be conducted to search for the causes and consequences of the high malnutrition rate. We will also come up with ideas to help decrease the malnutrition rate. Our presentation will require audio-visual equipment as it will be a PowerPoint presentation.

Department: Biology

Mentor: James Hanley

Ribbon: Caring for Humanity and the World

Eruptive History of Western Wupatki Cinder Cones, Northern Arizona

Jacob Denig

The San Francisco Volcanic Field, located in northern Arizona, is one of several late Cenozoic volcanic fields lying along the southern margin of the Colorado Plateau. This volcanic activity began roughly 6 million years ago in the western portion of the field and continued on and off, ending in the eastern portion of the field about 900 years ago. In the western portion of the San Francisco Volcanic Field there are 7 distinct lava flows. Each of these flows resulted from the partial melting of a basalt-like mantle source that underwent variable amounts of contamination by the lower continental crust. The rock types in these flows are predominantly basalt. This study will test and organize the geochemical data for each of the 7 lava flows, as well as the possible source vents. Correlations between the geochemical compositions of each of the 7 lava flows and the possible source vents will be made. This information will give us a better understanding of the history and mechanics of this currently active volcanic field.

Department: Geology

Mentor: Sarah Hanson

Ribbon: Thinking Critically

Congressional Cost of Living Adjustments

Perry Kuipers

One of the biggest conflicts of interest for congressmen is the issue of congressional pay. It places congressional economic self interest against the constituent s interest. However, since the Ethics Reform Act of 1989 Congress has had the option of annual cost of living adjustments (COLA) by simply doing nothing. This system takes some of the burden off Congress and has made it easier for congressmen to get a pay raise. Given this, why would Congress ever vote down a COLA? By analyzing data available from the Bureau of Economic Analysis, Bureau of Labor Statistics, and Gallup Polls, this paper finds that under normal circumstances Congress will accept most COLAs. The pattern that has emerged is that Congress votes down the COLA for a few years after what is termed a shock to the system, which is classified as low approval, poor economic conditions, and poor public perception of the economy.

Department: Political Science

Mentor: James Hanley

Ribbon: Thinking Critically

Game Theory in Political Science

Perry Kuipers

Many of the Political Scientists who write on Game Theory lack the background in mathematics to completely understand the material, and commit serious errors that detract from the content of their findings. By explaining some of the errors in Branislav Slantchev s paper The Principle of Convergence in Wartime Negotiations, I will illustrate the role mathematics plays in explaining political situations. While explaining the relevant concepts of Game Theory, I will revise Slantchev s thesis to be more accurate. Finally, the fact that this paper made it through the publishing process without anyone catching the errors clearly shows that a more thorough inspection of the mathematics is necessary in the publishing process for Political Science journals.

Department: Mathematics

Mentor: Alan Von Herrmann

Ribbon: Crossing Boundaries and Disciplines

Media Portrayals of Women From the 1950's

Sara Smither

This project is a Research and analysis of women's media advertisements from the 1950's. Specifically, ads concerning beauty products, ideals, and norms with emphasis on interpretation of sexist themes and motives. I will be analyzing the advertisements through a comparison to today's advertising, ideals, and norms about women and beauty.

Department: History/ Women's Studies

Mentor: Stephanie Jass

Ribbon: Thinking Critically

A Case Comparison in Domestic Terrorism: Northern Ireland and Palestine

Matt English

While the sectarian conflict in Northern Ireland has achieved relative peace in recent years, the one in Palestine seems nowhere near resolved. Because these cases are so similar, a structured comparison of them could serve to further our understanding of domestic terrorism. In this presentation I will compare these conflicts by looking at several variables; history, location of the aggrieved populations, institutional access of the aggrieved populations, international support for their cause, and how the British and Israeli governments responded to terrorist attacks. I will argue that the reason for the different outcomes of these cases is their international context. Because Northern Ireland has little strategic value to Britain, the British government was much more likely to compromise with its Catholic population, while Israel sees the Palestinian territory it holds as strategically valuable, it is less likely to compromise with its Palestinian population.

Department: Political Science

Mentor: James Hanley

Ribbon: Thinking Critically

Monitoring of Evans Creek for Enteric Bacteria

Kandice Karl

The Evan s creek branch of the River Raisin watershed is a 33 square mile area that includes portions of Washtenaw and Lenawee counties. The water quality in this stream not only affects the sub-basin it runs through, but also the River Raisin watershed downstream through to Monroe County. Water quality monitoring for levels of the enteric bacteria *Escherichia coli* and *Enterococcus faecalis* were conducted at five locations on Evan s creek. Collection and testing procedures followed the Michigan Department of Natural Resources and Environment protocol for violations of the Total Maximum Daily Load. Sampling and data collection were conducted on a bimonthly basis during a variety of weather conditions. Early data has shown that the amounts of *E. coli* present are at least occasionally above the legal allowable amount at several testing sites. One sample in downtown Tecumseh came back with *E. coli* colonies/deciliter over 10 times the legal limit.

Department: Biology

Mentor: Jim Martin

Ribbon: Caring for Humanity and the World

Critical Evaluation of John Huston

Greg Bartosch

In this presentation I will be critically evaluating the American filmmaker, John Huston, based on examples from his 1941 film *The Maltese Falcon*. The three criterion that I have chosen to evaluate Huston by are his uses of mise en scene, cinematography, and his editing choices. These three criterion will be defined and then broken down into specific areas and examples. The focus of mise en scene will be Huston s control of the setting to influence his films. The cinematographic technique that Huston used most frequently throughout *The Maltese Falcon* was the use of framing. The third and final criterion of editing will be broken down to determine how elliptical editing leads to the overall continuity of the film along with the help of continuity editing. I will finish the presentation with a specific clip from *The Maltese Falcon* that best portrays one, if not all of the criteria that I will have discussed.

Department: Communication

Mentor: Sheri Bleam

Ribbon: Thinking Critically

Psychoanalysis in Argentina: The History and Reason Behind the Trend

Sarah Jackson

As a double major in Psychology and Spanish, it is important for me to draw connections through my areas of study. This presentation encompasses both disciplines in an interesting and new way, by reviewing a common stereotype: that people to equate Argentina with psychologists and furthermore, psychoanalysis. The stereotype may be true for a majority of the population in the capital, Buenos Aires. However this investigation looks further into the reason behind the immense popularity of psychoanalysis in Argentina. The history of the nations politics, education, and societal beliefs has been examined. Also, present beliefs, current practices, and opinions have been investigated to comprehensively analyze the explanation of psychoanalysis in Argentina. The answer is complex and delves into the identity of Argentina as a nation.

Department: Modern Languages and Cultures

Mentor: John Eipper

Ribbon: Crossing Boundaries and Disciplines

POSTERS

Rehabilitation of the Anterior Cruciate Ligament

Lindsay Baic

Nicole Zynda

The anterior cruciate ligament (ACL) of the knee is crucial to knee stability, specifically preventing anterior tibial translation. A partially torn or ruptured ACL is a serious injury that generally will not heal without surgery and the rehabilitation process is long and strenuous. Appropriately applying first aid is critical in beginning the healing process. RICE (rest, ice, compression, and elevation) is the first step. Before surgery, primary goals include reducing swelling and pain, and re-establishing full range of motion. Following surgery, the aims during the first week are to decrease pain, swelling, and bleeding due to surgical trauma, regain full knee extension, increase neuromuscular control, and begin to restore knee flexion. In the subsequent weeks, objectives include maintaining full extension and improving knee flexion, cardiovascular endurance, neuromuscular control, and strength of the quadriceps and hamstrings. As time progresses, the patient

may increase strengthening exercises and add functional activities until they are able to resume their former level of activity. While ACL rehabilitation is extensive and difficult, results are generally positive and most patients are able to recommence their former activities with few limitations.

Department: Exercise Science and Physical Education

Mentor: Victor Liberi

Ribbon: Learning Throughout a Lifetime

Concussion Rehabilitation: How Soon is Too Soon?

Robyn Denney

Concussions are substantial injuries in the realm of athletics. According to the Colorado Medical Society, a concussion is the result of a traumatic impact to the head resulting in a change in orientation and/or mental status.* Therefore, being an injury to the brain and surrounding structures, it may potentially result in severe complications if not treated and rehabilitated correctly. Guidelines have been put forth by different organizations to aid in methods to successfully return an athlete sustaining this trauma to full capacity in his/her sport. However, a consistent approach to rehabilitating such an injury has not been completely developed. To further represent this topic, a poster presentation will be put together to include: a brief introduction to the anatomy of the brain and the structures involved during head trauma; a list of symptoms that may be used to recognize whether an athlete may have sustained a concussion; finally, a day to day breakdown based on basic rehabilitation principles of activities and procedures that may be used to return an athlete presenting with this injury to play.

Department: Exercise Science and Physical Education

Mentor: Victor Liberi

Ribbon: Developing Creativity

Lisfranc Injury

Mary Knudson

The Lisfranc joint consists of where the metatarsal bones and tarsal bones connect. There is also a thick banded ligament that brings the joints together called the Lisfranc ligaments. The purpose of this ligament is to maintain alignment and strength keeping the midfoot bones intact. These injuries are often mistaken as ankle sprains with some of the common symptoms of swelling, bruising, and point tenderness. A dislocation of the Lisfranc joint is when the ligaments become unstable and push the tarsal bones back and eventually out of place. If the bone is separated from the joint and ligament then surgery is required. The surgery entails of an open reduction with an internal fixation, placing screws to stabilize the joint. Although the surgery is simple, the rehab is time consuming and crucial to getting the midfoot back to normal function. Following surgery it is important to have the midfoot immobilized allowing the tissues to heal for up to 6 weeks. As partial weight bearing is allowed, range of motion comes over time with exercises done each day. Once mobilization, strength, and functional tests are passed within a time period of 13-22 weeks, the athlete should be able to participate in full activity.

Department: Exercise Science and Physical Education

Mentor: Victor Liberi

Ribbon: Developing Creativity

Influential Factors on Food Choice and Amounts Consumed in Young Adults

Bryana Dennis

Factors that influence food choices and food consumption were investigated, such as perceived body image and levels of hunger. Eleven males and 18 females participated in this study. Each participant was asked to complete the Body Attitudes Questionnaire (BAQ) and a demographic questionnaire. They were tested individually and randomly assigned to one of three conditions with a confederate of the same gender. In the first condition the confederate initiated the consumption of a healthy snack, in the second the confederate ate an unhealthy snack, and in the third there was no consumption. In the present study, the confederate's food choice did not influence the participant. This could be because of the low levels of hunger reported. In relation to the BAQ, participants who ranked themselves high on salience were more likely to eat, and those who ranked themselves high on strength and fitness were less likely to eat.

Department: Psychology

Mentor: Suzanna Helfer

Ribbon: Thinking Critically

A Comparative Investigation of Methods for Determining the Alcoholic Content of Wines

William Coy

Alcohol in wine is derived from the natural grape sugars. During fermentation approximately half the weight of sugar is converted to alcohol. U.S. regulations define "wine" as containing between 7% and 24% by volume alcohol. Accordingly, the TTB uses alcohol content as the primary basis for taxation. Beyond regulatory considerations, the physical and sensory properties are dependent, in part, on alcohol content. For all of these reasons, it is critical that the alcoholic content of wines be accurately determined. There are numerous methods for determining alcohol content in wines, some of which are based on physical characteristics of solutions and some based on the chemical properties of alcohol. In this study, we have conducted a comparative investigation of various methods for measuring alcohol content in wines. They are compared and contrasted in terms of their relative accuracy, precision and convenience of operation.

Department: Chemistry

Mentor: Paul Rupert

Ribbon: Thinking Critically

Rehabilitation of a Ruptured Achilles Tendon

Erin Laske

Eric Suttie

The Achilles tendon is the largest tendon in the human body, attaching at the gastrocnemius and soleus muscles and inserting at the calcaneus. It functions to plantar and dorsiflex the ankle. The purpose of this study is to research the rehabilitation and care of a postoperative Achilles tendon rupture. The goal is to teach and inform others about this rehabilitation process. This injury occurs by direct injury or overuse of the tendon. It's not a common injury and when ruptured, requires surgical attention. A good-quality rehabilitation program consists of eight steps; management of first aid and swelling, pain, range of motion, strength, neuromuscular control, balance, cardio, and functional tests. The optimum goal trying to be achieved is full ROM, regain previous strength, pain free activities of daily living and complete healing. With proper knowledge and techniques, one should be able to help fully rehabilitate a post-operative Achilles tendon rupture.

Department: Exercise Science and Physical Education

Mentor: Victor Liberi

Ribbon: Thinking Critically

Obesity and Mitochondrial Function in a Geriatric Filipino Population

Adam Hull

Our objective in this study was to evaluate systemic mitochondrial function in peripheral blood mononuclear cells (PBMCs) of normal, overweight, and obese Filipino individuals. Blood samples were collected from Filipinos (≥ 21 years) participating in an 8-week weight loss intervention program. BMI and PBMC measurements were obtained at baseline. MtDNA copies/cell were measured using real-time PCR. OXPHOS enzymes NADH dehydrogenase (CI) and Cytochrome c oxidase (CIV) total protein quantity and activity levels were assessed by immunoassays. Baseline analysis of volunteers (N=37) shows median MtDNA (copies/cell) of 176.0 (BMI 18.5 - 22.9), 186.5 (BMI 23 - 26.9), and 172 (BMI ≥ 27). Recent additional baseline data (N=8) shows a similar trend with medians of 155.5, 167.0, and 163.0, respectively. Our study demonstrated a general increase in MtDNA copies/cell, and Complex I and IV protein quantity and activity levels in PBMCs, suggesting that a mitochondrial function is altered based on BMI.

Department: Chemistry

Mentor: Michael Claus

Ribbon: Caring for Humanity and the World

The Basics of Hydrotherapy

Coralyn Grant

Katelyn Tuck

Aquatic therapeutic exercise is the application of therapeutic exercise that takes place in water to improve physiological and psychological functioning. It can be instituted into a rehabilitation program earlier than a typical rehabilitation exercises when the injured individual is unable to fully weight bear. Allowing for them to be able to perform cardiovascular exercises, muscular strength and balance exercises in order to progress through rehabilitation faster. Through aquatic therapy one can see improved benefits such as circulation, mobility, strength, coordination, range of motion, pulmonary function, perceptual and spatial awareness, muscular and cardio endurance, relaxation, and decreased pain and bone loss. Some psychological benefits that can also be seen are improved mood, enhanced self esteem and body image, and decreased anxiety and depression.

Department: Exercise Science and Physical Education

Mentor: Victor Liberi

Ribbon: Thinking Critically

Depreciation of Health Care in Nicaragua"

Matt Thomas

Mike Barbati

Vince Barbati

This study will be based on our time spent in the country of Nicaragua. The purpose of our study is to gain background knowledge regarding the primary sources of health care for the individual. Areas which will be studied are; previous health care which has been received the frequency in which one receives health care, and the type of health care that has been given. Information will be attained using a formulated survey, composed of questions regarding the topics stated above. Our survey will also include a free response section, where the individual may write any information or concerns not attained by our sample questions. The information will be presented on a bulletin board, which will include graphs, charts, pictures and other statistics which compare the people of Nicaragua to others throughout the world. This presentation will provide the students of Adrian College with a brief overview of the health care situation in Nicaragua compared to those throughout the world.

Department: Political Science

Mentor: James Hanley

Ribbon: Caring for Humanity and the World

Seeing the Big Picture: Art Education and the "At-Risk"

Anna Pasternak

Including visual art instruction in school curriculum has become critical in recent years, especially in relation to the economy and pressure nationally to academically compete with other countries. Some would contend that art instruction is academically deficient. Yet education in the arts pursues the aim of developing higher-order thinking skills. These cognitive processes are needed not only to become visually literate in this technological age, but also aid in the learning of disciplines outside the arts. Through an investigation of education theory, especially in terms of art education, and how the term at-risk came to be, this research project examines the areas in which education falls short, in order to apply how art education can be a solution, and benefit to students most in need of the cognitive skills afforded by arts study.

Department: Teacher Education

Mentor: Carissa Massey

Ribbon: Thinking Critically

Inversion Ankle Sprain with Medial Tibial Fracture

Alyse Exelby
Prenella Semma

Background: A 20 year old college volleyball player was participating in a preseason conditioning practice when she sustained a grade II inversion ankle sprain.

Differential Diagnosis: Fracture of the right medial malleolus.

Treatment: The athlete was initially treated with a grade II inversion ankle sprain. After three weeks of rehab she did not show signs of improvement. The Certified Athletic Trainer then referred the athlete to the team doctor. The Doctor then ordered x-rays. The x-rays showed a Medial Malleolus Fracture. The Athlete was then placed in a short leg walking cast for three weeks. Following the removal of the cast the athlete showed great improvement and was put on a rehab plan designed by a Certified Athletic Trainer.

Conclusion: Because this was a low intensity injury the odds of having a Medial Malleolus fracture were slim. The Athlete showed severe pain following the injury and during the subsequent rehab. Since the pain was present a more in depth evaluation of her injury brought to light the medial malleolus fracture. Certified Athletic Trainers should not rule out fractures, breaks, and other possible severe injury just because the nature of the injury is low impact.

Department: Exercise Science and Physical Education
Mentor: Tina Claiborne
Ribbon: Caring for Humanity and the World

Tommy John Rehabilitation

Joe Flater
Mike Tighe

The purpose of this abstract is to explain the rehabilitation after an Ulnar Collateral Ligament (UCL) rupture. This injury most commonly occurs from a repetitive valgus loading of the elbow. Surgery that follows this injury is known as Tommy John surgery. The surgery involves taking a graft and replacing the UCL in the elbow. Athletes who go through rehabilitation after Tommy John surgery often come back with an improved performance. Due to the extensive rehabilitation, many clinicians believe that baseball players come back to play improved. Although athletes may return stronger they must go through an extended period of rehabilitation. Athletes are out of play anywhere from six months to a year. Rehabilitation following a surgical repair of the UCL includes regaining full range of motion, strength, and proper functional techniques.

Department: Exercise Science and Physical Education
Mentor: Victor Liberi
Ribbon: Thinking Critically

Beliefs about Alcoholism as a Disease: A Pre-test and Post-test Study of Court-Mandated Substance Abuse Treatment Subjects.

Amanda Henderson

This study explores mandatory treatment subjects' perception and beliefs about alcoholism. Analyzing the effect of mandatory substance abuse counseling, the study explores the belief that alcoholism is a disease and whether such counseling can change beliefs. Do clients coming into the program believe alcoholism is a moral problem or a disease? Do clients leaving the program after completion believe alcoholism is a disease or a moral problem? A pre-test and post-test study is conducted. The subjects are clients of Insight Counseling and are all mandated by the Lenawee and Monroe county courts to attend treatment for a minimum of eight weeks. The subjects received counseling by staff from Insight Counseling of Tecumseh, Michigan. The study tests initial beliefs of the client prior to entry in the program and has a follow-up measure after the program of whether the subjects' beliefs about alcoholism have changed.

Department: Sociology

Mentor: William Tregea

Ribbon: Caring for Humanity and the World

The Psychological Aspect of Injury Rehabilitation

Jessica Grubbs

The psychology of rehabilitation is a study within the area of sports psychology. Specifically it is the study of the effect of injury on athletes and how to cope with psychological problems associated with injury. Certified athletic trainers and athletic training students must understand the psychological process of an injured athlete. This process includes the five stages of grief: denial, anger, bargaining, depression, and acceptance and reorganization. Additionally the athletic trainer and athletic training students must recognize their place in the athlete's social support system and how to balance this with many athletes. Return to play criteria must include a psychological aspect and therefore the rehabilitation process must include exercises to restore the appropriate psychological readiness. I plan to study the basic concepts of how injury psychologically affects the athlete. I also intend to examine how the athletic trainer can facilitate psychological readiness, encourage the athlete to ready themselves for competition, evaluate return to play criteria, and understand his or her role in the support system.

Department: Exercise Science and Physical Education

Mentor: Victor Liberi

Ribbon: Learning Throughout a Lifetime

The Effects of Training through Videos and Instruction Booklets on Attitudes Toward Task Training

Ashley Bugeja

The purpose of this study is to examine the effects of two different training styles on attitudes towards training through overall attitude, inspiration, and intellectual stimulation. Participants in this study were trained to perform a manual task using one of two training mediums, watching a video with a leader or using a photo instruction booklet. After completing the task both groups of participants completed a questionnaire on their attitudes towards the training. The results of data analyses demonstrated that participants who performed the task using the instruction booklet reported higher levels of intellectual stimulation ($t(21) = 5.16; p < .001$) and inspiration ($t(22) = 2.09; p = .05$) and overall attitude ($t(22) = 2.54; p = .02$) than those who were trained to perform the task by a leader in a video.

Department: Psychology

Mentor: Suzanna Helfer

Ribbon: Thinking Critically

Economic Policies of Presidents

Orlo Yeagley II

A major problem that America faces today is managing our economy. Our economy has been in a recession since December 2007 and the problem at hand is how to fix this recession? Presidents have faced this problem and have taken similar and different steps to fix the problem. Presidents have tried setting forth government programs that would create jobs while others have tried introducing tax policies that would make things easier for business owners. I have chosen to analyze presidents from the previous and this century who have faced some of the worst recessions. I have conducted document analysis from each president who I have chosen to see what policies that they set in place to combat these recessions and to view success rate. I have found that the presidents selected have used some similar policies and have tried to adopt similar policies of their predecessors that have seen success.

Department: Political Science

Mentor: James Hanley

Ribbon: Thinking Critically

Cryptography: The Mathematics Necessary to Keep a Secret

Nathan Cassidy

The theory of numbers long enjoyed a reputation as gorgeously useless, a creation of the mind unsullied by application. This reputation was decisively shattered in the second half of the twentieth century by the advent of modern cryptography. We will discuss the mathematics necessary to keep a secret. In particular, we will use tools from basic linear algebra, basic elementary number theory, combinatorics and finite fields to keep information away from others.

Department: Mathematics

Mentor: Alan Von Herrmann

Ribbon: Developing Creativity

Parenting Styles, Homesickness, and Perceived Control

Sarah Jackson

The present study explores the relationship between four types of parenting styles (Authoritative, Authoritarian, Uninvolved, and Permissive), homesickness, coping styles and participants' reaction to an unpleasant sound task. The participants were freshman ($n = 40$) and were subjected to a series of unpleasant noises. One group, the increased control group, had the ability to pause between unpleasant noises. The other group, the diminished control group was not allowed that sense of control. It was found that the increased control group felt that they had more control over the sound task and they found the task more agreeable than the diminished perceived control group. Correlations were also found for mental escape, and dislike of college homesickness, mental escape and attachment to home. Participants who felt homesick used the mental escape coping strategy as well. Marginal significance was also found for a three-way interaction of parental supervision, parental involvement, and the control group. Findings indicate that parenting styles have a relationship to the way participants react to control, homesickness, and coping strategies.

Department: Psychology

Mentor: Suzanne Helfer

Ribbon: Thinking Critically

Hostile Sexism in Mexico: Spanish Translation of the Ambivalent Sexism Inventory

Ashley Bugeja

Studies on sexism have shown that sexism can be differentiated into two main areas: Hostile Sexism and Benevolent Sexism, and can be measured by using the Ambivalent Sexism Inventory. To determine the rates of hostile and benevolent sexism in Mexico, a translation of this inventory was created and given to 99 Mexican natives in downtown Cuernavaca, Mexico. The results of this study suggest that Mexican men are higher in rates of hostile sexism than Mexican women. The data also showed that rates of benevolent sexism did not differ between Mexican men and women.

Department: Modern Languages and Cultures

Mentor: John Eipper

Ribbon: Crossing Boundaries and Disciplines

A Critical Reevaluation of the Six Day War

Creedence Hoffman

The Six Day War has arguably set the scene for US foreign policy in the region of the Middle East in the forty years that followed. Israel and their success in the conflict aggravated the already bitter relations with the surrounding Arab nations, and are worth continual reconsideration. Of all the text written about the Six Day War, the viewpoint has been overwhelmingly one of a historian. An analysis of the conflict from the viewpoint of rational choice has been in order. I've analyzed the possible situations between Jordan, Syria, Egypt, and Israel in games of violence initiation. The findings show that Israel had acted irrationally, but the irrationality wouldn't have affected the outcome if Israel acted differently.

Department: Political Science

Mentor: James Hanley

Ribbon: Thinking Critically

EXHIBITIONS

Sea the Last Days Exhibition

Ashley Deuschle

This presentation exemplifies what it means to live in a globally conscious community. "Sea the Last Days" is an artist's take on the current issues surrounding environmentalism and oceanic preservation. The artwork recognizes the unregulated plundering of the ocean's natural resources and the plummeting populations of its wildlife. The show will contain a selection of illustrated pages that will, at a later date, become part of a full narrative story. The pages will be accompanied by vocal narration (instead of text) and an original soundtrack developed by Brian McAlear. The goal is to enlighten the community through story, which is a great way to present information as well as emotion, that will hopefully ignite change.

Department: Art

Mentor: Catherine Royer

Ribbon: Caring for Humanity and the World

Intertwined

Alecia Garrow

The goal is to create large woven wall structures. The works are made of natural materials such as wood, canvas, wicker, twine, sticks, etc. Each piece will incorporate an interlaced surface with texture resulting from the process. If the pieces are not in their natural colors, they will be in complementary shades. One large wall piece will protrude from the wall creating movement and depth. This piece will look as though it is woven into the wall, creating visually pleasing shadows and eye movement.

Process is important to this work. The time spent painting individual panels, planning their location in a piece, and weaving everything together is enjoyable and satisfying. This body of work is more focused on the formal aspects of composition rather than the conceptual.

Department: Art

Mentor: Pi Benio

Ribbon: Developing Creativity

Portraiture of Superheroes

Jillian Brown

The objective in this current exhibition of artwork was to develop further skills in photographic portraiture, using a series of superheroes and super villains as subjects. The superheroes are wearing costumes created using common but unusual materials, such as duct tape. Computer graphics are applied to the portraits to portray super human powers. Villains are posed and photographed against a black backdrop with a more sinister style of lighting. Heroes are photographed against a white backdrop with a glowing, blissful lighting and more flowing angelic poses. Villains and heroes are exhibited in equal numbers portraying the balance of good and evil.

Department: Art

Mentor: Garin Horner, ghorner@adrian.edu

Ribbon: Developing Creativity

Life

Sarah Muylle

Collage is the process of finding materials and combing them together to create images that point to new meanings. These images explore life. The materials of photos, magazine clippings, tissue paper, and more, give a backbone to the image as a whole. The collages are made of different mediums that are scanned into the computer and can be warped into Adobe Photoshop to create a whole new image. The images combined together create surprising juxtapositions that sometimes are not anticipated. The visual surprises mirror the unpredictability of life.

Department: Art

Mentor: Garin Horner

Ribbon: Developing Creativity

Pieces and Diagrams

Ashlee Hill

The purpose of this body of artwork is to reflect the beautiful complexities and romanticized features of nature. It was inspired by the diversity found within nature, as well as, the relationship humanity has to the biological world. A wide assortment of materials and computer applications have been used, such as pencils and paper, Adobe Photoshop CS4 and porcelain/white stoneware clay. Each clay piece will correspond with a digitally created artwork to allow for multiple dimensions of visual exploration.

Department: Accounting and Business

Mentor: Garin Horner

Ribbon: Developing Creativity

Contemplating Flowers

Sarah Evans

Flowers have more meaning than to just be an object of beauty in life. What is a flower and what does it represent? This body of work confronts this compound question through an exploration of the flower form created solely by text. The words combine to represent one artist's own reflections through these forms. The flowers have been created using the program Adobe Photoshop. This creative process is a means of self discovery and expression. It is a matter of reflection and looking deeper into a subject, beyond its surface appearance. It is then up to the viewer to answer the questions in his or her own words. What images would these words create?

Department: Art

Lead Author Email:

Mentor: Garin Horner

Ribbon: Developing Creativity

Significant Moments

Anna Pasternak

In this exhibition, the importance of fleeting normal/ordinary/overlooked moments in the life of a child is explored. The 7-8 paintings are of the same size (30 x36), and hung erratically to create an installation rather than a static arrangement. Each will have a small shelf accompanying the painting holding an object that relates to the subject. For example, fall leaves may occupy the shelf next to a painting that has fully leafed trees in it. The concept is the passage of time and also the nature of reality and truthfulness of the captured moment. Subtle detail and hyper-real color are used to depict individual children from the artist's life. Emotional and story-like qualities are examined, especially in terms of the subject to his or her setting. The subjects are painted from photographs, but in a naturalistic style as opposed to photorealism, and the backgrounds are altered to emphasize the mood and situation of the subject.

Department: Art

Mentor: Catherine Royer

Ribbon: Developing Creativity

Project: Eyes of Adrian

Sarah Henry

Though there are several ways to produce a stop motion-animation, one aspect of this production always remains constant--during the animation, an object will move in small increments between shots. These shots are then put in chronological order, creating the illusion of movement when the series of frames is played as a continuous sequence. The newest stop motion animation production, which I will show and discuss, is called Project: Eyes of Adrian. This production will incorporate photographs of people's eyes from all over campus displaying a variety of emotions ranging from joy to outrage, and fear to sadness. This project was motivated by a lifelong fascination with the expressiveness of eyes. Eyes of Adrian is a study investigates the variety of emotions people can express with their eyes alone.

Department: Art

Mentor: Garin Horner

Ribbon: Caring for Humanity

Personalities

Anne Goetz

Anne Goetz's show will take place in Stubnitz Conference Room, and will be a representation of people's demeanors. Campus is abundant in students from diverse backgrounds; and with different futures in mind. Experiences truly shape who we are, so to emphasize this Ms. Goetz will be doing portraitures. The subject matter associated with the characters and the attire they wear will truly resonate their inner personalities. The application of the paintings will be done in an opaque manner, and be limited to two colors. The colors will vary in shade and intensity. The restricted pallet is to express the individual's greatest traits in a physical form. And the opaque quality is to reveal the transparency within anyone. The paintings are to provide insight into the individual and to grasp a glimpse of their future direction.

Department: Art

Mentor: Cathy Royer

Ribbon: Crossing Boundaries and Disciplines

Archipelago: A World in Miniature

Andrew Jones

The main theme driving this body of work is that of miniaturization, the idea of being miniscule in a normal-sized world, a series of nine miniature floating islands which have been titled. Archipelago being its focus. Each island will be suspended at different heights in the gallery. Roots and vines will hang from the openings between rocks and from the edges of the top. The upper section will depict a picturesque meadow in miniature, with trees and bushes growing freely. Atop the main island will stand a small house and a plot of garden being attended by a man and a woman. The goal of this piece is to portray isolation; being a tiny part of a larger world.

Department: Art

Mentor: Pauleve Benio

Ribbon: Developing Creativity

Becoming Stronger

Lora Randolph

Lora Randolph's work is a series of self-portraits that represent the different stages of healing from Sexual Assault and Abuse. When observed in correct order her personal story is revealed. The medium used is acrylic paint on canvas and hundreds of hand-built porcelain flowers that will be the framing for the paintings. These flowers represent the vast number of other fellow victims. An informational table about Domestic Violence and Sexual Assault is included with the exhibit. The series consist of six paintings and will range from 20 x 24 to 32 X 36 . Each painting will have its own corresponding color to accentuate the emotion the figure is experiencing. The paintings will be detailed on the figure itself and have a very simplistic yet symbolic background. The individual flowers will vary in size. The flowers will be fired in a variety of atmospheres including: salt and wood kilns.

Department: Art

Mentor: Pi Benio

Ribbon: Caring for Humanity and the World

"Let the Light Shine": A Nicaraguan Medical Mission Through Film

Gabriel Holdwick

Adam Hull

The motto of Adrian College is Let the Light Shine, a reference to Matthew 5:16. In the spirit of this motto, fifteen Adrian College students traveled to the Central American nation of Nicaragua for two weeks on a medical mission. While the academic interests of these students varied, their central mission was the same to provide much needed medical care to the Nicaraguan people within a context not accessible in the United States. In order to make this experience more relevant to the Adrian College community, a video documentary was filmed on location in Nicaragua. Editing of the footage was completed upon arrival back in Michigan. Many students, staff persons, and patients had a unique piece to add to the story. Our completed work will portray each of these experiences first-hand. Student testimonies, geographical landscapes, patient contact, and recreation outings have all been captured to share this incredible experience with the stakeholders within the college community.

Department: Political Science

Mentor: James Hanley

Ribbon: Caring for Humanity and the World

Unnatural Balance

Julia Peterson

Julia Peterson's sculpture is deeply rooted in nature. Peterson is a double major in Studio Art and Environmental Studies. Peterson's work challenges man's domination of the Earth by forcing the viewer to acknowledge imbalances between self and nature. Using ceramic wheel thrown forms that represent the human body, with texture created by natural materials such as bones and stones, Peterson is demonstrating the connectedness of self and nature. This work is a floor to ceiling piece that utilizes pieces of wood, pierced ceramic vessels, ceramic egg forms with salt-fired ash glazes, and numerous animal bones suspended by natural fibers. It is displayed in a feminine and harmonious manner. Peterson's inspiration comes from the two artists Jean Tinguely, a Dadaist sculptor, and Agnes Martin, a Minimalist painter. Although they may seem contradictory, they offer complimentary aspects that Peterson incorporates into her work.

Department: Art

Mentor: Pi Benio

Ribbon: Developing Creativity

Control over Chaos

Ashley Dixon

This will be a demonstration on how to create a marble style design. I will also have works of art on display as well. The base of this drawing is a paper marbling technique done with watercolor paints and shaving crème. the technique creates a sense of chaos. The optical illusion design drawn on top of this chaotic base creates a sense of control, as it has many rules of measurements and pattern.

Inspiration for this piece comes from experiences in my own life. I learned the shaving crème marbling technique in high school and loved it. I am very drawn to optical illusions and work done by Op artist Bridget Riley. This series represents the chaos of my life and how I have control over it, because only I can control how my life is lived. I will demonstrate how to create the marble effect using watercolor paints and shaving crème. I will also explain how to create an optical illusion on top of the base design. The exhibition will include many pieces in various stages of the process.

Department: Art

Mentor: Cathie Royer

Ribbon: Learning Throughout a Lifetime

Inspirations from Argentina

Bryana Dennis

I found inspiration for my series of 4 to 6 works while studying abroad in Argentina. While struggling to adapt to a new culture, I found consolation in God. However, as with all relationships in life, one with Him is a work-in-progress. Through abstraction, I attempt to explain the processes and obstacles experienced in trying to find a purpose- more so, His purpose. The art-making process is an essential facet of this search, serving as a metaphor of the commitment to a specific goal and/or the desire of attainment.

The first work produced in this series is titled I Pray. It is composed of 7 different sized canvases, assembled into a 36 square. With acrylics, I focused on brush-stroke techniques and flows of paint as a form of expression (overlying the text of the prayer). In places the text is legible, but in others, it is not, representing the difficulty of my search.

An emphasis on color, along with text in both Spanish and English, continues through the series.

Department: Art

Mentor: Cathie Royer

Ribbon: Caring for Humanity and the World

Flora

Emma Donelson

This triptych of acrylic paintings is an expression of the beauty of femininity and the underlying strength of women. Their positions are confident, and their clothing is an open declaration of their feminine traits; many times in feminism, there is a lack of respect for traditional femininity. I have also included flowers in these pieces to symbolize their Victorian meanings; another traditional accessory of women. These paintings are stylized and painterly, and have a soft feel and focus to them to externalize the feel of female pride.

Department: Art

Mentor: Cathie Royer

Ribbon: Developing Creativity

Purrrfect Persuasion

Niki Gniech

Niki Gniech's installation combines two media, painting and ceramics. The work demonstrates the relationship between felines and women and the freedom and sexuality that is reflected and shared between these two subjects. The paintings are life size female cut outs that are meant to be playful and display their feline, sexual power. While painted, ceramic cats along the floor are meant to visibly strengthen the relationship and connection of women's independence and sexuality with the feline. This installation reflects the erotic power and independence women have always had.

Department: Art

Mentor: Catherine Royer

Ribbon: Developing Creativity

Techniques used in creation of the series "Mental Illness"

Debi Batey

The exhibition Mental Illness consists of an artist's book (18 x 24) and related paintings and mixed media images.

The artist will display the related art on the walls in the room assigned, and the book on a pedestal, where attendees can view the internal pages.

In addition, she will demonstrate the procedures used for the creation of these pieces. The on-site demonstration will include text art, string art, and collage art, different styles of painting with acrylic paints, glazing, and plastic wrap as texture painting. All of these procedures have been utilized in the artist's creation of the series Mental Illness.

For instance, in "Bipolar," the first layer is newspaper collage, covered by a red glaze, and followed by the word bipolar painted in layer two. Only the bottom edges of the letters still show through the black layer on top. Not only the final layer but also the physical construction of the work suggests the illness. The artist's book "Loss," focuses on her interpretation of song lyrics, and the mixed media art related to the lyrics.

Time will be allocated for a question and answer period and/or discussion.

Department: Art

Mentor: Catherine Royer

Ribbon: Caring for Humanity and the World

The Vagina Monologues

Emma Donelson

Adrian College students will be performing poignant and moving excerpts from "The Vagina Monologues", a modern work by American playwright and feminist activist Eve Ensler. "The Vagina Monologues" was written and produced for the global non-profit V-Day campaign that has raised over \$50 million for women's anti-violence groups. A production of the play was held on campus in February as a benefit for local women's shelters via the V-Day campaign.

Department: Theater

Mentor: Carissa Massey

Ribbon: Caring for Humanity and the World