



# StarScapes

2017

Student Innovation and  
Creativity Showcase

**Program  
and  
Project Descriptions**

# Introduction

**LCC Student Innovation and Creativity Showcase  
April 19-20, 2017 in the Gannon Commons**

**StarScapes** is a student showcase of creative, imaginative, and interesting work. Presentations include projects produced for LCC classes, as well as work developed through students' own independent study and research. StarScapes is an opportunity for students to share research, capstone presentations, honors option projects or other creative, imaginative and interesting work with the LCC community.

This year, over 120 students share their science, art, music, technology, sociology, anthropology, and engineering projects in the form of live demonstrations, sculpture, film, poetry readings, fashion installation, mini seminars, and poster presentations.

Any student or group of students who pursued a research or creative project was invited to participate in StarScapes with the support of a faculty sponsor. Where possible, posters will be available for viewing throughout Wednesday and Thursday. Films and other digital projects will be presented on a rotating basis.

To all students and faculty that participated in the fourth annual StarScapes Student Showcase at Lansing Community College, we sincerely thank you for your efforts.

*The StarScapes Steering Committee:*

**Mindy Wilson  
Janis Elmore  
Anne Heutsche**

**Jeff Janowick  
Elizabeth Robison  
Patti Ayers**

**David Shane  
Cristen Mushong  
Ed Bryant**

## **Faculty Innovation Sponsors**

**We thank the following Faculty Sponsors for supporting students in their creative, imaginative, and interesting journey:**

*Kabeer Ahammad Sahib*

*Matt Bowman*

*Ed Bryant*

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*Michael Sanford*

*David Shane*

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*Peter Tascarella*

*Mindy Wilson*

*Ana Woehr*

*Anne Wojtkowski*

**We gratefully acknowledge LCC Marketing, Media Services, Materials Management, Arts and Science Division office, Science and Math Department, and Offices of the President and Provost for providing their expertise and support.**

# Program

**Wednesday**

**April 19, 10 am – 5 PM**

**The Gannon Commons and Highway**

**10 am – 5 PM**

**Poster Presentations** will be displayed throughout both days. Authors will be at their posters intermittently or at times indicated in the Project Description section of this program. – **Gannon Commons and Highway**

**Fashion Program students** will install a visual mix of garments and sketches representing various stages of the design process using unconventional materials. – **Gannon Highway**

**10-11 AM**

**Physics Demonstrations - Gannon Commons**

*Howe B, Oviedo A. Leaf Blower Powered Hovercraft and Physics*

**11 AM -12 PM**

**Demonstrations - Gannon Commons**

*Morrison J, Jenkins G. Monitoring Radioactive Particle Decay within a Cloud Chamber.*

*Pomaville A, Rios A, Vincent V. Tuning In Battery-Free.*

*Sabin D, Butler E, Stefanski J. Ruben's Tube Standing Waves.*

*Tolbert T, Rahib F, Tolbert T, DuFore D. Resonance Raft.*

*Wheeler D, Feinauer J. No Wires Needed.*

*Ardister J, Walker S. Basic Radio Construction and Physics.*

*Schulz B, Hernandez R, Salim T. Building and Demonstrating a Ruben's Tube.*

*Mangopoulos N, Shea A, Willinger J, Mangopoulos N. Relativity Time Dilation Demonstration Program.*

*Czerniakowski D, Garza R. Building a Van de Graaff Generator.*

## 12 PM

### Videos – The Center for Engaged Inclusion

*Robinson J. Laugh as not to cry, Showing of two sociopolitical short comedy sketches.*

## 12-2 PM

### Demonstrations - Gannon Student Life Alcove

*Stipanuk B. Turn your hand into a Capacitor.*

*Kester P. Multi-Cell Electric Bicycle Battery System.*

*Loe M, Sietsema M, Pennell A, Gulzar B. Exploring Electricity with a Tesla Coil.*

*Wicaksono E, Gazall N, Hailu H. Bridge Builder.*

*Ahmed S. Best Team Evr. Brachistochrone Curve.*

*Gonzalez M, Takahashi D. Ion Charge Gun.*

*Schmitz K, Keener L, Hejase Bazzi A. Primitive Electric Motor*

### Fashion Program Installation - Gannon Highway

*Students from the fashion program will be available to discuss their work.*

## 2-3 PM

### Film and PowerPoint – Gannon Student Life Alcove

*Nguyen T, Bowman A, Papandrea E, and Orrostieta S. The Evolution of Media & Technology.*

*Arszulowicz M. Thoughts from Incoming Freshman.*

### Digital Poster Demonstration – Gannon Highway

*Bath D. 3D Modeling used to Visualize Reaction Mechanics.*

## **2:30-3:30 PM**

### **Demonstrations - Gannon Student Life Alcove**

*Stipanuk B, Kester P, and the Math Club. Roboarm.*

## **3-5 pm**

### **Video– Gannon Student Life Alcove**

*Gomez G. Militantly Average.*

### **Demonstration - Gannon Student Life Alcove**

*Weatherford B, and The RailGun Extrodinairs. Demonstration of A RailGun. (Gannon Student Life Alcove)*

## **4-5 pm – Gannon Student Life Alcove**

### **Poetry readings**

*Peacock D. Poetry in Psychology.*

*Linsley T. Language Landscapes.*

### **Seminar – Gannon Student Life Alcove**

*Corbett W, Alternate Universes and Our Stories about Them.*

# ***Thursday***

***April 20, 10 am – 5 PM***  
***The Gannon Commons and Highway***

**Poster Presentations** will be displayed throughout both days. Authors will be at their posters intermittently or at times indicated in the Project Description section of this program. – **Gannon Commons and Highway**

**Fashion Program** students will install a visual mix of garments and sketches representing various stages of the design process using unconventional materials. – **Gannon Highway**

## **10 – 11 AM – Gannon Student Life Alcove**

### **Vocal Performance**

*Littleworth T. Part of your world.*

### **Demonstration**

*Stipanuk B, Kester P, and the Math Club. Roboarm*

## **10:30 AM – The Center for Engaged Inclusion**

### **PowerPoint**

*Mohnke E. Busy Bodies and Hungry Mouths.*

## **11 AM – 12 PM**

### **Digital Poster Demonstration – Gannon Highway**

*Batterson P. Comparison of Website Creation Tools.*

## 12-2 PM

### Fashion Program Installation - Gannon Highway

*Students from the fashion program will be available to discuss their work.*

## 12:30-2 PM - Gannon Commons

### Video and Artists present

*Opp K. Shellyfish.* Hanging shell sculpture, made in the likeness of a jellyfish.

*Simon D. Deep Purple Sea.* A selection of photographic prints of India ink flowing through water, creating a mystical flow of color and emotion. (Photos and video)

## 1 PM

### Videos – The Center for Engaged Inclusion

*Robinson J. Laugh as not to cry, Showing of two sociopolitical short comedy sketches.*

## 2-3 PM – The Center for Engaged Inclusion

### Film, Video, PowerPoint

*Arszulowicz M. Thoughts from Incoming Freshman.*

*Gomez G. Militantly Average.*

### Poetry readings

*Peacock D. Poetry in Psychology.*

*Linsley T. Language Landscapes.*

### Seminar

*Corbett W, Alternate Universes and Our Stories about Them.*

## 2:30 PM – The Center for Engaged Inclusion

### Demonstration

*Hatt J, Haugsby H. Music.* Demonstration of what real music is.

# Project Descriptions

Project descriptions are listed in alphabetical order of first author's last name. Times that authors will be presenting are indicated. Poster Presentations will be displayed throughout Wednesday and Thursday. Authors will be at their posters intermittently or at times indicated.

- Ahmed S. and the Best Team Evr.* **Brachistochrone Curve.** Demonstration and Derivation of the Brachistochrone. Curve (Poster and demonstration, Wed, 12-2 pm)
- Al-Alam E.* **The National Dish of the Middle East.** Presenting the origin of Kibbe in its different forms in multiple countries in the Middle East and how the ingredients are sustainable. (Poster)
- Ardister J, Walker S.* **Basic Radio Construction and Physics.** Radios involve resonant circuits that convert high frequency electromagnetic waves to audible sound waves. We will be showcasing our construction of a basic AM radio and discussing the Physics relevant to its operation. (Poster and demonstration, Wed 11am - 12 pm)
- Arszulowicz M.* **Thoughts from Incoming Freshman.** In Anthropology, an ethnography is the study of the people of a culture, and the culture itself. I interviewed numerous to-be-freshman of a university to see what has been going through their minds on their journey to college, and what they feel colleges and society could do to help future freshman better prepare for this next life experience. (PowerPoint presentation, Wed 3-5 pm)
- Bath D.* **3D Modeling used to Visualize Reaction Mechanics.** Using chemtube3d.com by the University of Liverpool we are able to see 3-dimensional animation of the inter and intramolecular exchange of electrons as a reaction progresses. These models can be rotated and viewed from any angle as well, thus giving us a cutting-edge tool to better understand stereochemistry. (Digital poster demonstration, Wed 2 pm)
- Batterson P.* **Comparison of Website Creation Tools.** Google Sites and WordPress for Searchable Student Portfolio, Multiple website creation tools exist that allow for blogs, and websites to be created without much technical knowledge this presentation will focus on a comparison of two such tools, Google Sites and Wordpress and the benefits and drawbacks of each. (Digital poster demonstration, Thurs 11-12 pm)
- Bodiford D.* **Northern Ireland's Spiritual Divide.** A chronological summarization of history surrounding the Northern Ireland Conflict. (Poster, Wed)
- Bowman A, Marhofer S.* **Solid-phase Extraction of Phenols in Grape Juice and Wine.** Polyphenols are a hot topic in research because of their roles as antioxidants, anti-mutagens, and cancer prevention. They are of special interest because they are naturally occurring in many foods and beverages, including wine and grape juice. For a research project in our organic chemistry lab, we extracted phenols from a variety of grape juices. We will be presenting our project and our findings. (Poster, Wed 11:30 am - 12:30 pm)

- Brenke A.* **Correlation between the Microbiome of the Human Gut and Cognitive Processing.** This project studies the components of the human gut and how its variances in composition can positively or negatively affect the functionality and the flexibility of the cognitive processes of the brain. (Poster, Thurs 3:30-5 pm)
- Brown D.* **Polish Catholics.** Catholicism in the Polish ethnicity. (Poster, Thurs 4:30-5:30)
- Buckner C., Kelly A., Phifer D.* **Brain & exercise.** How exercise boost memory, concentration, focus and mental clarity. (Poster, Wed 12-2 pm)
- Burns N.* **Muslims in America.** America's mistreated minority. (Poster)
- Carnahan R, Cadet J, Jeanty A, Walker A.* **Energy drinks' negative effect on hand - eye coordination & concentration.** Energy drinks may keep you awake but in our timed trial study, Monster Energy and Monster Energy Zero had significant detrimental effects on hand-eye coordination and concentration. (Poster, Thurs 12-1)
- Carpenter K.* **Minority Group Research Project.** An in-depth analysis of the history and current status of the Tutsis in Rwanda. (Poster)
- Corbett W.* **Alternate Universes and Our Stories about Them.** A fascinating theory about how every fictional story is a true story from an alternate reality. (Presentation, Thurs 2 pm)
- Coussens C.* **Social and cultural history of chicken and dumpling stew.** Social and cultural history of the ingredients in chicken and dumpling stew and current relationships of power within the production, distribution, and consumption of this dish and the ingredients on a global scale. (Poster, Wed and Thurs 11 am-12 noon)
- Czerniakowski D, Garza R.* **Building a Van de Graaff Generator.** We constructed a Van de Graaff generator, a device that collects a large charge via friction and induction. We will share our device and explain the physics of operation. (Poster and demonstration, Wed 11am - 12 pm)
- DeCory T.* **Food Research Project – Frybread.** This food research poster focuses on the significance of frybread in North American tribes, mainly focusing on the origins of the food and the impact it has had on the native people. (Poster, Wed 1-2 pm, Thurs 2-4 pm)
- Deruiter D.* **Wiener Schnitzel.** A presentation about Wiener schnitzel. (Poster)
- Dorshimer M.* **Miltenyi Biotec in Germany.** Miltenyi Biotec in Germany is a poster presentation about the German born company Miltenyi Biotec, which is a company that is dedicated to the improvement of biomedical research and cellular therapy. (Poster, Wed 1-3)
- Fassezke R.* **From the Globe to your Dinner Table: Banana Bread.** A look at how food products from around the world are brought to the U.S. and how we use them to make our own culinary creations. (Poster, 12-2 pm)
- Faulkner C.* **Kapusniak: Food Culture of Poland.** Kapusniak is a popular dish that originated in Poland but is now enjoyed by people all around the world. The importance this dish holds is significant as it preserved the culture of the Polish people despite the hundreds of years of occupation. Food culture is a large part of the Polish identity and should be recognized as so. (Poster, wed 12-2 pm, Thurs 10-1 pm)

*Friar T.* **The Burakumin.** A history of the lives of Japans "untouchables". (Poster, Wed, 12-1:45 pm)

*Gomez G.* **Militantly Average.** This is the first image in my series, "Militantly Average", about the militant pressure of media, advertising, and cultural norms funneling members of our society into an average capitalist/ consumerist mentality. Feeling frustrated with the limitations of the disingenuous Lansing art scene inspired me to create this series as a social critique. The pressure to produce for profit results in safe art, which I find disturbing. This image is an exaggeration of these limitations to the point of asphyxiation. it is a meditation on the conflict between my values and those of others. (Video, Wed 3 pm, Thurs 2 pm)

*Gonzalez M, Takahashi D.* **Ion Charge Gun.** A "gun" capable of producing a ray of electrons. (Poster and demonstration, Wed, 12-2 pm)

*Gonzalez S.* **Pesto.** Italy's gift to the world. Your new favorite dish is about to be served. (Poster)

*Hagerty A.* **Limited Lunch, Lots of Waste.** An analysis of the amount of time local first graders are given to eat at school and the waste this causes. (Poster, Wed and Thurs)

*Hagerty A.* **Lunch Time Talk.** A dissection of conversations local first graders have during their lunch time. (Poster, Wed and Thurs)

*Hansor J.* **Booyah: The Indestructible Soup.** The evolution of the Belgian soup, Booyah, from Europe to Wisconsin. (Poster, Thurs)

*Hards P.* **Curry.** Poster board for food and sustainability discuss the food dish known as curry. (Poster, Wed)

*Hatt J, Haugsby H.* **Music.** Demonstration of what real music is. (Music performance, Thurs 2:30 pm)

*Hein N.* **Protein Analysis of Canine Diets Corresponding Health Effects.** Correlations between protein quality/quantity and overall health of dogs when comparing name brand dog food, generic dog food, and a natural diet of grilled chicken via Bradford and SDS-PAGE Assays. (Poster, Wed 10:15 AM - 1 pm)

*Howe B, Howe B, Oviedo A.* **Leafblower Powered Hovercraft and Physics.** This 2017 Hovercraft was built to lift and transport you to the destination of your dreams, depending only on which way the wind blows. Floating on a small pillow of air, the 2017 Hovercraft is fun for the whole family. (Poster and demonstration, Wed 10am - 11 pm)

*Imaz B.* **The History of Lasagna.** Presenting the origins of the ingredients used in a traditional lasagna dish, and how sustainable those ingredients are, or if they are not, how they can become sustainable. (Poster, Thurs)

*Janeski B.* **Amish Culture.** Amish culture is very unique in today's society of high tech gadgetry and technology. My poster is designed to explore the Amish lifestyle and provide information about the culture. (Poster, Thurs)

*Janeski G.* **Of Tomahawks and Feathered Caps.** My poster supplements my Sociology research paper about Native Americans. It offers a visual perspective to the words on the

page and provokes thinking about some of our nation's first people. (Poster, Thurs afternoon)

*Kester P.* **Multi-Cell Electric Bicycle Battery System.** The process of building a multi-cell electric bike battery and the empirical calculation of its energy density. (Poster and demonstration, Wed, 12-2 pm)

*Khouri P, Drumheller A.* **Diels-Alder Reaction - Organic Chemistry.** The Diels–Alder reaction is an organic chemical reaction between a conjugated diene and a substituted alkene. The reaction type was named after Otto Diels and Kurt Alder, two successful German chemists who were both awarded the Nobel Prize in Chemistry in 1950. In this experiment, Andrew and I each used different yet similar reagents to create unique products. (Poster, Thurs 12-1 pm)

*Koeske J.* **The Amish.** A quick look into the life of the Amish. (Poster, Wed)

*Krumm A.* **Kurdistan Minority in Iraq.** About the history of Kurds, how they are discriminated against, as well as how they have fought to gain a state of their own. (Poster, Thurs 12:10-2 pm)

*LaFreniere J, Williamson A, Andrews S, and Wilson M.* **Tomatoland: Are Local Tomatoes Genetically Modified?** This project was inspired by the book Tomatoland by Barry Estabrook, which was the 2016-2017 One Book One LCC selection. During the fall kickoff five local tomatoes were offered for taste testing. The same five local tomatoes were then tested for genetic modification using molecular biology techniques. This project was done in collaboration with the One Book One LCC program and Molecular Biology II course students. (Poster, Wed 1-5, Thurs 10-12 pm)

*Lantz J.* **A Delightful Desert.** Turkish delight, the dish that many people remember from the story The Lion, Witch, and the Wardrobe. However, what actually is Turkish delight? This presentation seeks to answer that question. Beginning with the dish's basic ingredients, moving towards its cultural importance, and ending with an analysis of the global power struggle surrounding the ingredients of the dish, this presentation will inform viewers of this Turkish staple. (Poster)

*Lautenschlager F.* **Couvade Syndrome.** Couvade syndrome, also called sympathetic pregnancy, is a proposed condition in which a partner experiences some of the same symptoms and behavior as an expectant mother. These most often include minor weight gain, altered hormone levels, morning nausea, and disturbed sleep patterns. (Poster, Wed 11 am - 12 pm)

*Lee S.* **Travel memory in Vietnam.** Pictures taken are my precious memory. I captured Vietnam's vivid and calm atmosphere. (Photography, Thurs)

*Linsley T.* **Language Landscapes.** This reading will be a mixture of original poetry as well as poetry by both contemporary and classic poets. (Poetry reading, Wed 4 pm, Thurs 2 pm)

*Littleworth T.* **Part of your world.** I will be singing part of your world from little mermaid with just the lyrics. (Vocal performance, Thurs 10-11 am)

*Loe M, Sietsema M, Pennell A, Gulzar B.* **Exploring Electricity with a Tesla Coil.** Watch sparks fly... literally! The demonstration of a Tesla Coil will shoot lighting from a metal toroid (looks like a doughnut). There will be a presentation on the design and construction process for the Tesla Coil using house hold microwave oven parts and ingenuity. (Poster and demonstration, Wed, 12-2 pm)

*Mangopoulos N, Shea A, Willinger J, Mangopoulos N.* **Relativity Time Dilation Demonstration Program.** Relativistic physics predicts time dilation in conditions of high velocity or strong gravitational field. We have developed a program that models the situation will have an interactive GUI. (Poster and demonstration, Wed 10 am - 11 am)

*Mathie H.* **An Enchiladas History.** If you are someone who loves Mexican food and have ate the Mexican dish called an enchilada, knowing its history may be intriguing to you. The poster that I will present here at StarScapes will describe the foods social and cultural history, its ingredients and each of the ingredients history, as well as its current relationship of power within the production, distribution, and consumption on a global scale. (Poster, Wed 4-5 pm, Thurs 12-1 pm)

*McCombie C.* **The Native American Minority.** The historical relation between Native Americans and European settlers, and the issues of prejudice, discrimination, assimilation, and pluralism that entailed. Additionally, the effects of these issues on current contemporary economic, political, and educational status of Native Americans. (Poster, Wed 10-12, 4-5 pm)

*McDuffey J.* **Tutsis in Rwanda.** This poster will have pictures and short description depicting the conflicts between Tutsis in Rwanda. They will show how the minority group is the minority group and how they are reacting to being the minority group of the two. The poster will also touch on the discrimination, prejudice and violence that took place during this time. This poster board is meant to be informative and bring attention to what happened to the Tutsis in Rwanda, as a minority group. (Poster)

*Mohnke E.* **Busy Bodies and Hungry Mouths.** The Task of Serving Elementary School Lunch, The lunch lady is hard at work every day making sure elementary school children receive their lunch in a quick efficient manner. While this task may seem rather simple, I discovered how complex this task can be while conducting participant observation research for an anthropology class on food and sustainability. Using a model of efficiency, I explore potential problems that take place in the elementary school lunchroom. I also present some simple solutions an elementary school could use to make their lunchroom more efficient. When you are serving busy bodies and hungry mouths, every minute counts. (PowerPoint, Thurs 10:30 am)

*Monroe S.* **Minorities in other countries.** A factual poster about minorities in other countries compared to the United States. (Poster)

*Morey A.* **Mayas in Guatemala.** (Poster, Wed)

*Morrison J, Jenkins G.* **Monitoring Radioactive Particle Decay within a Cloud Chamber.** A cloud chamber is a controlled environment where isopropyl alcohol condenses during the transition from warm air to cold air allowing one to illuminate short-moment decays of radioactive particles. Such particles may originate from natural sources (e.g. the Sun), or

from radioactive elements placed directly inside the chamber. We will demonstrate the chamber in person. (Poster and demonstration, Wed 11am - 12 pm)

*Ngalle M.* **The History of Cornbread.** A visual presentation on the historical and cultural origins of cornbread in Southern America. (Poster, Wed, 4-5 pm)

*Nguyen T, Bowman A, Papandrea E, and Orrostieta S.* **The Evolution of Media & Technology.** This film was made for Professor Robison's Sociology class: A research project that goes over how media and technology has evolved throughout time. Do you think the younger generation uses technology more than the older generation? Find out how social media and technology has made an impact to our society and if we use it as much as we think. (Film, Wed, 2-3 pm)

*Opp K.* **Shellyfish.** Hanging shell sculpture, made in the likeness of a jellyfish. Is also a functional wind chime. (Artwork, Thurs 12:30-2 pm)

*Ostrander N, Owens M.* **ADHD in Children.** An over look on the effects of ADHD medication on children. (Poster, Thurs 1 PM)

*Peacock D.* **Poetry in Psychology.** Reading poems about mental disorders. (Poetry reading, Wed 4-4:15 PM, Thurs 2:15 pm)

*Perez D.* **Mole.** The past, present and future of Mexican Mole. (Poster 2-4 pm)

*Perry N.* **The Influence of Germany on Chemistry.** This presentation gives a brief description of how Germany has helped to expand our knowledge in the field of chemistry. Many German organizations and people have contributed to this science. Stop by to learn more! (Poster, Wed 3:30-4:30 pm)

*Pomaville A, Rios A, Vincent V.* **Tuning In Battery-Free.** We will be illustrating the inherent power of AM radio waves in the air by demonstrating a bare-bones radio we constructed powered only by the signals surrounding you every day. Relevant Physics will also be discussed. (Poster and demonstration, Wed 11am - 12 pm)

*Rathbun A.* **Kurds in Turkey.** My poster is a display that will talk about the minority group the Kurds in Turkey. (Poster)

*Robinson J.* **Laugh as not to cry. Showing of two sociopolitical short comedy sketches.** "Ghetto Grocery" which examines the poor quality of food that lower income neighborhoods are forced to resort to. Next "Racist Police Drone" pokes fun at profiling. Everything filmed on iPad. Episodes from a series written and directed by Justin Robinson. (Video and poster, Wed 12 pm, Thurs 1 pm)

*Sabin D, Butler E, Stefanski J.* **Ruben's Tube Standing Waves.** A Ruben's tube is a classic device for demonstrating standing pressure waves using flame. We built a Ruben's out of HVAC exhaust vent tubing, and will demonstrate (in person or by video) pressure nodes and antinodes for several frequencies of sound. (Poster and demonstration, Wed 11am - 12 pm)

*Schmitz K, Keener L, Hejase Bazzi A.* **Primitive Electric Motor.** A small crude electric motor, illustrating a working electrical circuit in a very simple way. (Poster and demonstration, Wed, 12-2 pm)

*Schneider B.* **Catholic Irish minorities.** A discussion on the Irish minority and its effect on the surrounding culture. (Poster, Wed)

*Schulz B, Hernandez R, Salim T.* **Building and Demonstrating a Ruben's Tube.** We will be presenting a one dimensional version of a Ruben's Tube we constructed, a device which demonstrates standing waves in flame formations. The device will be demonstrated (in person or by video) using single-frequency sound and music. (Poster and demonstration, Wed 11am - 12 pm, Thurs 2-3 pm)

*Shin J.* **Study Abroad to Mayen, Germany.** What you need to know when you go for study abroad to Mayen and Mayen tourist sites. (Poster)

*Simon D.* **Deep Purple Sea.** A selection of photographic prints of India ink flowing through water, creating a mystical flow of color and emotion. Alongside the prints, a video showing the physical process of creating these unique images. (Photography and video, Wed 12:30)

*Smith A.* **Black Women in America.** Showing the struggle of a Black woman in America and how no one is stronger than her. (Poster, Wed and Thurs 2-3 pm)

*Spaulding S.* **Let Them Know Cake.** We have come to see chocolate cake as a slightly mundane, though universally enjoyable, fixture of our diet. It has acquired an association with celebrations, particularly those of birthdays and other milestones. It is generally seen as a benign treat, one that does not obviously give way to thoughts of undesirable implications and consequences, however, this sweet confection has a far more storied and treacherous history. This history is one that many do not consider, and one that I will attempt to illustrate with my presentation. (Poster, Wed 4-5 pm, Thurs 12-2 pm)

*Stipanuk B.* **Turn your hand into a Capacitor.** Use a theremin to make musical notes electronically with your hand. (Poster and demonstration, Wed 12-2 pm)

*Stipanuk B, Kester P, and the Math Club.* **Roboarm.** Demonstration of programmable prosthetic arm. (Demonstration, Wed 2:30-3:30 pm, Thurs 10-11 am)

*Szymborski A, Cocco O.* **2-D Thin Layer Chromatography.** Colored plant material was separated from Spinach, Broccoli and Carrots using a 2-D TLC. Then the separated colored plant materials on the TLC plates were compared with each other. (Poster, Thurs 3:30-5 pm)

*Thiel A.* **Stir Fry.** A presentation on how stir fry was popularized in North America. (Poster, Wed 11-1 pm)

*Tolbert T, Rahib F, Tolbert T, DuFore D.* **Resonance Raft.** Resonance occurs when an object is stimulated to vibrate at its natural frequency. We built a resonance raft by placing plastic bottles on top of a piece of Styrofoam that floats on a tray of water. Remarkably, when audio is played at the resonance frequency of the bottles, they are propelled across the water! Relevant Physics will be discussed. (Poster and demonstration, Wed 11am - 12 pm)

*Toodzio E.* **Aborigines: Australia's Minority Group.** A research project on the Aborigine people in Australia and their struggles as a minority with examples from personal experience. (Poster)

*Whitfield K, Dunlap R.* **Handedness as it Relates to the Brain.** Our presentation will be on hand dominance and how the brain plays a huge part in the hand that people use more. We will have information regarding the different parts of the brain as well as surveys for students to complete about how much they rely on their left or right hand. (Poster, Thurs 2:10-3 pm)

*Weatherford B, and The RailGun Extrodinairs.* **Demonstration of A RailGun.** We will be showing a Rail Gun we built ourselves. A RailGun is a device that fires a projectile using electricity. After we explain the principles behind how the RailGun works, we will fire it once as a demonstration. (Demonstration, Wed 3-5 pm)

*Westcot B.* **Rwanda.** (Poster)

*Wheeler D, Feinauer J.* **No Wires Needed.** Electromagnetic induction, in which a changing magnetic field creates an electric potential, causes a current to flow. We will be presenting a Tesla coil, which wirelessly transmits electricity via a magnetic field. (Poster and demonstration, Wed 11am - 12 pm)

*Wicaksono E, Gazall N, Hailu H.* **Bridge Builder.** We are making a RC crane that helps the construction of a bridge. The crane was built from scratch by our group members. The physics concepts behind this project include forces, torque, electric wiring, radio waves, etc. (Poster and demonstration, Wed, 12-2 pm)

*Williams E.* **A Guide for Hospitals: How to Establish Staff Interpreters (and Why it's Important!).** Main Points of these Guidelines: Implementing Joint Commission, providing equal communication access for patients and clients who use English as a second language, Americans with Disabilities Act: Title III: Part 36: Subpart C: 36.303 Auxiliary Aids and Services, pros and cons of Video Remote Interpreting, one Deaf person's perspective on hospitals and their consistent lack of accommodations, basic ways to establish a department that is dedicated to providing communication access for patients and clients who use English as a second language, and how to communicate effectively with Deaf patients when an ASL Interpreter is or is not present. (Poster, 10 am-12 pm)

*Williamson A, Andrews S, LaFreniere J, and Wilson M.* **Are Genetically Modified Foods on Your Shopping List?** We explored the prevalence of genetic modifications in a sampling of everyday foods found at local grocery stores. Food items tested included produce, pantry staples, and organic products. A total of 10 food samples were tested using molecular biology techniques. Stop by the poster to find out what you're actually eating! (Poster, Wed 1-5, Thurs 10-12 pm)

*Fashion Design Process 135.* **All Hail McQueen.** Fashion will install a visual mix of garments and sketches representing various stages of the design process using unconventional materials. (Fashion installation, Wed and Thurs 12-2)

*Wu W.* **Uyghurs in China.** This presentation is about the historical relations between minority Uyghurs and dominant group in China as well as their historic & current social status. (Poster)