



FIND YOUR VOICE. SPEAK YOUR MIND.

SENIOR PROJECTS 2019

Nathaniel Boyd-Owens

THROUGH THE SMOKE a six-track EP

Over the course of the past seven months, I have been creating an EP with six songs that I wrote, recorded, and engineered. The idea to create music for my senior project originated back during my sophomore year when I finally had my own computer. I started using the recording app Garageband to make simple recordings. Having my own computer also meant I had access to any music I wanted, and with this freedom, my knowledge and love for all sorts of songs and genres expanded. I started to listen to hip-hop more and more and the culture and sound transferred into the music I was creating.

Even before the end of my junior year I knew that I wanted to create a rap project for my senior project, as I figured making music might be something I would want to do professionally. For the first few months of the 2018-19 school year, I focused on writing music. From ten-second clips to fully thought out chord progressions, I was trying to produce as much musical material as creatively possible. After the end of the first semester, I decided to focus on narrowing down which songs I wanted to use, and started writing more lyrics. I spent whatever hours I wasn't writing songs, listening to hip-hop from mainstream to anti-rap, as I often find myself inspired by other artists' music. In early March, I started recording with an interface and a mic, and I edited the audio on Logic Pro X. My goal for this project was to go through the long process of recording and writing an EP, but as I was learning new and interesting ways to mix and master, I also found a new confidence in my musical voice. Parents are welcome to contact me (nboyd@charlemont.org) for a link to my EP. Please note that some lyrics are explicit and not appropriate for young ears.

Isadora Brenizer

Paper Scissors Glue: Creating a pop-up story book

For my senior project I created a pop-up story book called *Sweet Dreams: A Journey Through Pop-ups*. This required me to learn about paper engineering, a medium I knew very little about. With the help of video tutorials and books I was able to learn the basics of pop-up construction and design my own spreads. I wanted the story of my book to be one that already existed that I could embellish and I also wanted it to be personal to me. I had always been told the story of my great-great grandmother who stole her older sister's dowry, fled her family and journeyed to Ellis Island. I loved her story and it immediately conjured images in my head that I could turn into beautiful pop-ups. So I decided to illustrate this story. After much sketching and planning, I made white paper dummies of every pop-up. I then created the final versions and illustrated and collaged each piece.

This project was extremely rewarding in many different ways. It has allowed me to gain valuable experience in illustration, as well as learn new skills, expanding my artistic repertoire. I have thoroughly enjoyed every step of the process, but there were also very frustrating times. Pop-up construction requires a lot of planning and exactness. I'm hoping to continue with some form of art or illustration throughout my life, and this project helped me expand and refine my style in a new way. I have always

loved story books, especially pop-up ones, and it has felt like a dream come true to be able to successfully create my own with simply paper, scissors, and glue.

Ethan Brossard

Lutherie: The Making of a Violin

I have many hobbies, probably too many, but if I had to choose the two that most define me, I would have to choose music, and my love of making things. Going a bit more specifically into each of those hobbies, my love of music primarily expresses itself through my cello playing, and although I have a great time making something from just about whatever materials I get my hands on, I have the most fun when I'm in my woodshop covered in sawdust. With these two hobbies in mind, a choice for my senior project which seemed obvious to me was to study lutherie.

Lutherie, for those of you that haven't heard the term before, is the art of making musical instruments, specifically those in the stringed instrument family. A luthier can be someone who makes instruments from the guitar family, or violin family, but as I play the cello, I decided to focus on the violin family. Originally my goal was to build a cello, as it would be awesome to play an instrument of my own making. This however, I quickly found out, is a massive undertaking that would require far more effort and time than the life of a high school senior allows. In the end, I settled on making only the plates for a violin, that is, the front and back panels.

Sophia Corwin

Bouquet of Secrets

For my senior project, I created a chapbook of poems and photographs about being a teenager and growing into my sexuality. Though I originally planned to interview other students about their experiences, I felt that I could never articulate anyone else's journey. Over time, this project became a much more personal and intimate narrative of my own sexual realization. Rather than doing interviews, I dove deep into my experiences with love, heartbreak, and lust, as well as more politicized subjects such as masturbation and the emotional consequences of hook-up culture. I hope that my writing about these subjects will encourage and help others to express their feelings on them as well.

I believe that through writing the chapbook, I have become better equipped to help others work through their own experiences, especially through creative processes such as writing. The community component of my project involves visiting the Academy's tenth grade health class. I'll be facilitating a discussion with them about the taboo nature of sex in our society, particularly as it pertains to adolescents. I am eager to hear their opinions on how we can work to lessen the stigmas around teenage sexual development.

Since I'm interested in sexual development, I knew I wanted to express both the benefits and pitfalls of teenage relationships. Specifically, I delved into the emotional consequences of sexual activity outside of healthy relationships, how hook-ups have affected me personally, and the unraveling of a relationship. Publishing this book has taught me about writing poetry, as well as formatting and layout techniques. Given the subject matter, this project has been an emotional process from start to finish, which I expected, but I could never have imagined the impact it has had on me.

Lila Goleman**From Senior to Senior: A Tale of *Danny and Mudpie***

I have always valued the experience of looking into another person's eyes. I started socializing with strangers at a young age—the cute age—when my parents would pass me and my sister around to baby-loving people in restaurants and on planes. In my junior year, I knew that I wanted my senior project to be about people—looking into new pairs of eyes, making connections with people, sharing stories, and ultimately relinquishing the preconceived notions and societally-induced barriers we all tend to put up when experiencing another human being.

For instance, the judgements we have about age, race, religion and gender can cloud our view of an individual, often without us even being aware of it. I decided to base my whole senior project on old people. Senior citizens are an often marginalized demographic, but I've always harbored a respect for them, and I care about their roles in society. And, as a young person, I understand the importance of talking to someone who has lived so much longer than I have, who had been sentient decades before I even arrived here. I wanted to know what kinds of memories and stories stick with people when they are nearing the end of life, and how I could use that knowledge to enjoy the little things in my own life, as well as encourage other people to enjoy those things in their lives. I mixed this whole project with my long-time love affair with writing, sprinkled a little musical performance in there, and voila! I created a book of short stories and poems inspired by the boundless lives of the elderly, which I call "Danny and Mudpie."

It wasn't easy. Finding people to interview proved harder than I thought in the beginning of the year. I also endured a two-month-long affliction of writer's block, which I must humbly compare to constipation. But, once I found a few people to interview, I discovered just what I was looking for. This year, I had the pleasure of meeting many an elderly person, and talking with them for many, many hours, learning about their fascinating lives and the moments that made them. This project required lots of self-reflection and soul-searching, from which I learned many valuable lessons. Together, my venerable interviewees and I cultivated a little book that is a celebration of life itself.

Kayla Haskins**Greenhouse**

I started off the year with a clear vision to write an album of music for my Senior Project. During my junior year I had discovered a new passion for writing and performing music, and being blinded by this new excitement, I had thought that was the best project for me. As the beginning of senior year came along, I started to lose excitement about the idea of writing music and my thoughts began to wander to new ideas, including sustainability and farming.

Since I had moved at the age of twelve from my childhood home on a farm, I had been missing the connection between the earth, growing food, and eating it. Through building a greenhouse I was able to build a healthy connection with food again.

I hope that the school community, through having the opportunity to work in the greenhouse and eat the produce from it, will also be able to build this connection and have a resource for hands on learning. Food is such an important part of health, both mental and physical and hands on education has helped me become who I am today. I want to give those same opportunities and resources to others in the school community.

Calla Jones

Memories of the Land: Observation, Inquiry, Historical Narrative and Personal Experience

Much of my eighteen years have been spent working on my family's small farm and playing and exploring in the fields and woods behind my house. I have so many memories, so many moments on this land. Playing in the mud in our "kingdom" of speckled alder. Sitting on moss hill, eating mayflowers, listening to the tractor make slow circles around the back field. Herding the goats back to the barn on our bikes in the evenings with my siblings. Planting potatoes and corn and beans on hot summer afternoons, and picking greens for dinner in the cooling evening light. Building our solstice bonfire, then lighting it up and singing solstice songs with neighbors. I also feel connected to the town of Whately and a sort of togetherness with the people who live here.

As I contemplated ideas for my senior project, it seemed fitting to do something connected to where I live as I neared the end of my time living here. My project focuses on the relationship between people and the land they occupy. As I have seen in my own life, the places we live can have a big impact on who we are. I created two multi-layered maps. The first blends my observations from the woods, my insights from talking to Whately residents, and my own personal experiences in the woods behind my house throughout my life. I was inspired by mapmaker Molly Brown to include this mix of story and factual information. I created additional maps to overlay on the main map that tell stories about the land at various times from the mid- 1800s to the present.

The second map is online. It displays a map of the whole town of Whately. You can click on the pins and hear stories from lifelong residents of Whately about growing up in Whately, living in the same place their whole lives, and their perspectives on how the land and the town has changed. Here's the link to the map, Stories of Whately: <https://whately.netlify.com/>

Isabel Linfield

Better Equine Care

While working with Dr. Vassar, an equine veterinarian, I realized that there was a public need for equine education. Many people owned horses but did not have basic knowledge about how to care properly for them. The veterinary calls that I attended often involved situations that could have been avoided had the owners had some basic skills. Therefore, my project was aimed at helping and better educating the community of horse owners that specifically use Dr. Vassar as their vet and who also have minimal horse care knowledge. By creating a website complete with "How To" videos and a brochure, my goal was to establish a public resource accessible to any new horse owner. The idea is that by using multiple formats to reach new owners, awareness of proper horse care will rise and the incidence of unnecessary horse problems that I witnessed during my internship would decrease.

During the course of this project, I learned about the practice of equine medicine, the ethics of horse care/treatment in the community, the sometimes subtle and not so subtle ways of interacting with owners and patients, and how different people understand their responsibility to their horses. I also learned how to build a website, write complex material for a less informed audience, design and write a brochure, use Illustrator, shoot videos and use Imovie for editing. My website is here:

<https://www.betterequinecare.com/>

Liam Neeley

Making a Board Game: Fleet Assault

I have played board games almost every week since around 6th grade, when I got into playing Star Trek Attack Wing, a miniatures game of fighting Star Trek ships. Playing games is the main activity I do to relax during the week, as I get together with my gaming group almost every Sunday. I play a large variety of games, but these tend to be more strategic ones, commonly about space ship combat. One of my favorite games is Star Fleet Battles, a complicated game where you have to manage all the various

parts of your ship, and one of my main inspirations for this project. I knew I wanted it to be space combat but I did not know much more than that.

Originally, I wanted to make a game with physics-based movement, where once you start moving, you have to stop yourself. An example of a game with a similar movement system would be The Stars Our Decimation, Void Striker, a game where you have to keep the current motion of your ship in mind in order to be near your opponent. As I thought more about this design, I realised many of my ideas would not be achievable in the time period that we had, so I decided to make a simpler game. The resulting game used cards in the same way a miniatures game would use miniatures, where the exact position of the ship matters. The position and angle of the card would determine if a ship could hit targets or not. As the year went on, I continued to refine this idea and add a few new rules that I initially did not think I needed. By the end of the year I was left with a well-refined game that I will continue to play in the future. More information about my project can be found here:

<https://sites.google.com/charlemont.org/senior-project-liam-n>

Francesca Ruggiero-Corliss **A Cob Oven for The Academy at Charlemont**

For my project I decided to build a cob oven in the courtyard of the school in an effort to bring the community together through the practice of sustainable cooking and eating. A cob oven is an outdoor, dome-shaped oven made predominantly out of cob. Cob is a mixture of clay, sand, straw, and water. These ovens have been used all over the world for over 800 years. They can be used to make bread, pizza, and anything else that can be baked.

In addition, cob ovens are environmentally sustainable. I was able to source the vast majority of my building materials locally, which meant that I was able to limit the amount of emissions used in transport. Because of the locally sourced, unprocessed materials, the cob oven has little impact on its surrounding environment. When it rains, no chemicals will leach into the surrounding soil because all materials are natural and local. This also meant that I supported local businesses by buying from them, and in doing so I expanded the benefits of the cob oven to the broader community.

The cob oven is wood fired, which means that there is no electricity or gas needed to operate it, and the unique shape of dome ensures that it uses heat efficiently. It can get to temperatures as high as 800 degrees Fahrenheit with a minimal amount of wood, and is able to retain that heat because it is so well insulated. This makes it more sustainable than other methods of baking, and allows cob ovens to cook large amounts of food with minimal fuel.

I started the project in my junior year as enrichment for my environmental science class, and since then have seen my dream become a fully-functioning reality. I have researched, designed, constructed, and now integrated the cob oven into the school community, using it every week in the spring semester to teach a Studio Block class.

I was inspired by the power that food can have in drawing a community together. Food is a star element at many events and celebrations. It has the ability to not only fill us up to satisfy our hunger, but it can also be a reason for celebration within itself. I decided that building an outdoor, wood fired cob oven at the school would be a perfect way to bring the community together while mixing my love for food and baking with my passion for environmental sustainability. I am extremely proud of the results of this long-term project.

Leni Sperry Fromm***The New Normal***

When I first started thinking about what I would do for my senior project, I really only knew two things; I wanted to write something and I wanted it to be fun! I've long been a television consumer and lover, so I decided that I would write a TV script. I started working on that but eventually felt stuck in just writing one episode, when I was really most interested in show development. I ended up creating a show bible which is a presentation that includes information about the main characters, a synopsis, ideas about tone and format, and plans for several seasons. I planned five seasons for my show *The New Normal*, and I also wrote a few scenes from important moments in the show. I finished the project up by writing an essay about how TV has impacted my life and reflecting on why I chose to write the show that I did.

This project was exceptionally rewarding for me. I was able to challenge myself, writing in a new format, and start to explore answers to questions I've long wondered about. I'm extremely grateful for the opportunity to create what I did, and I'm excited to continue working from the fundamental skills I began developing this year.

Ishan Summer**It Kinda Bugs Me**

I set out looking for a better source of dense protein for nutrition bars and came across cricket protein – exactly what you'd expect. I turned towards cooking with crickets and delved into crickets as an alternative protein source. I looked into the efficiency of crickets at converting feed into protein, consuming minimal water, and producing minimal greenhouse gasses and also made and altered several recipes to include cricket powder. My project looks into the viability of incorporating crickets into the western diet and barriers to/reasons for adoption. I provided several sample treats for the community to try with open minds and neutral palates.

Tucker Zakon Anderson**Making Steel Tongue Drums**

For my senior project, I chose to explore the creation of Steel Tongue Drums, and in doing so, make an instructional website for other people interested in this beautiful instrument. As a musician, and someone interested in creating things, I knew from the start that I wanted to create a set of instruments. At first I intended to create not only the drum but also an electric bass and experiment with circuit-bent children's instruments. However, after some discussion with my teachers and advisors, I decided that it was too ambitious and instead narrowed in on the creation of the Steel Tongue Drums, making two in order to learn from the first as a prototype and make an improved final product. I filmed the whole process, and after making the drums, I spent the rest of the year putting together a "How to" video and a detailed set of step-by-step instructions. Find that video here:

<https://sites.google.com/charlemont.org/how-to-build-a-hank-drum/home>.

I was fortunate enough to work with former Academy teacher, Tom Brown, at a studio space in Hampshire College and with his aid, the entire process ran incredibly smoothly. He taught me how to safely use the tools that I needed, allowed me to bounce ideas off of him, and helped me complete some of the tasks that were better suited for two people. With the drums and the experience I garnered from them set aside, I wrote, recorded, and edited a voice-over for the video, cut down the hours of film into a digestible 15 minute video, wrote out my instructions, and 3D modeled each step of the process to add another visual aid to it all. As a future student of engineering, I'm incredibly happy with how this project turned out as it allowed me to explore some of the more fundamental skills in designing something. Specifically, I look forward to using the 3D modeling and prototyping skills I learned for future projects, and possibly even building more of these drums knowing everything I do now about this process. More information about my project can be found here:

<https://sites.google.com/charlemont.org/seniorprojecttuckerz-a/home>.