



MIDDLE YEARS PROGRAMME

Personal Project Exhibition

Class of 2020

April 24, 2018

The Personal Project Exhibition is the culmination of a yearlong process of independent research, planning, production, and presentation. The projects run the gamut of creativity and are intended to be of personal interest and to be personally challenging for each student. This exhibition is the capstone event of the students' journeys through the Middle Years Programme.

The Grade 10 students summarized why this Personal Project was meaningful to them and what challenges they faced. Their responses are included in this brochure.

Thank you to the many advisors who were guides to our students.

Congratulations to the Class of 2020 for all your hard work!





Aya A

An Examination of a Germline Mutation of Breast Cancer

Science has been a field of interest for me since I was young. Due to a lack of resources in Syria and the consequences resulting from the crisis, my school did not have functional labs and relied on textbooks - ignoring the importance of the practical part of learning. This missing piece encouraged me to do a hands-on project for the Personal Project. My goal was to conduct an experiment that focuses on using gel electrophoresis in determining a germline mutation of breast cancer, then design a poster explaining the experiment. The yield of the experiment was accurate and the poster was visually aesthetic and included my own drawings. I realized that I am very excited about genetics and want to pursue it in college. I developed my research skills and grew in my management skills. Writing the report improved my reflection skills and helped me become a better writer. I think that the Personal Project is more than making a product and fulfilling the requirements - it improves our skills, gives us a better understanding of the IB program, in addition to a process where we pursue investigations related to our own interests.

Advisor: Samantha Cole



Junior B

Riverstone House: A Documentary

Making and editing films has been one of my hobbies since 7th grade. Additionally, many students, parents and staff of Riverstone do not know about the residential program. As an international student, I want to inform the community on what Riverstone House is and what it's like to live as an international student in Riverstone and Boise. In order to achieve my goal, I created a documentary that covers life as an international student at the dorm. This project was highly challenging because I have never made a documentary before. I interviewed three different international students about their experience in Boise and the Riverstone House. The final product is a minute-long documentary titled "Riverstone House: A Documentary." From this project, I developed my skills in film editing on Final Cut Pro and my cinematography skills. The biggest takeaway was developing my self-management skills. I learned how keeping myself on track is very important. I hope to continue making film in the future and develop more advanced skills on editing film and cinematography.

Advisor: Derek Wright

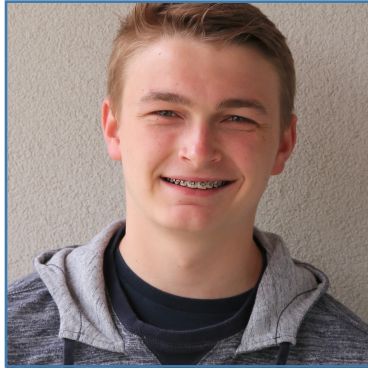


Haydee B

Drawing Howl's Moving Castle in the Form of Manga

I have had a passion for drawing ever since I was six and I have always loved manga. One of my favorite novels that I have read many times is Howl's Moving Castle. I decided to take a challenge and draw Howl's Moving Castle from my imagination in the form of manga. Humans generally communicate through images the best because there are so many different languages. So using a unique style of comic, I was able to communicate my imagination through manga. I made the introduction to Howl's Moving Castle in manga while studying the techniques used to make it resemble many Japanese artists. From this project I learned that procrastination is a great failure and that time management is the best course of action.

Advisor: Jon-Moreno Ramirez



Max C

Building an Aesthetic Prosthetic

I always loved to use 3D design technology but never took the time to understand it. Most of my projects consisted of me just messing around with the tools but never taking the time to build something. For my project I chose something challenging that would require a deep understanding of industrial design techniques. Building a prosthetic leg would require me to not only produce something that looked effective, but actually design something that would have to be mechanically functional. My original leg features a foldable technology that allows different legs to be removed and replaced. Developing my unique leg gave me a significantly deeper understanding for 3D modeling application as well as a developing skills in the application of physics to industry.

Advisor: Christine Corbin



Carter D

The Process of Anodizing

In my everyday life I'm almost constantly on a scooter or bike. What drew me to anodizing is the fact that many scooter components are anodized aluminum, which made me very interested in how it's done and if I could do it myself. I wanted to know more about the products I use every day. My goal was to be able to anodize my own aluminum parts with a homemade setup. Anodizing is typically done in multi-thousand gallon vats of each chemical and is so clean and well controlled that the results are consistent and nearly perfect. This is the challenge I outlined for myself: to reach the same results with a homemade setup operating on a lower volume. My final product was intended to be and is a component for a scooter known as a bar-end. My process consisted of stripping, desmutting, deoxidizing, anodizing and sealing. Throughout this project, I have gained general knowledge of chemistry, electrolysis, and time management (which was the most impactful). Creating a structured work schedule that forced me to work a little bit each day instead of procrastinating was a great lesson for me.

Advisor: Jenn Schmutzler



Sammi E

Writing a Fiction Book For Spanish Learners

I have been in Spanish classes since I enrolled in Riverstone when I was in the first grade. It has been one of my favorite subjects in school and language interests me a lot. I like to take every opportunity to expand my skills in Spanish so I thought that Personal Project would be a great time to practice my Spanish. During my brainstorming period I reviewed what resources I have used in the past to expand my Spanish knowledge. I know that there are authors that have written books in Spanish suitable for each level of Spanish. Therefore, I decided that for Personal Project I would write a short fiction book for those who are learning Spanish as a second language with themes suited for young-adult readers. This project helped me grow my Spanish skills. I have also learned how to properly make a plan, hold myself accountable, and effectively reach out to others and collaborate with others in my community. I plan to move forward with the skills that I have gained from this project both within Spanish and as I move forward in life and into the Diploma Programme.

Advisor: Hilda Ramirez



Tess E

The Psychology of Fashion Design and Creation

I was interested in doing my Personal Project on fashion because wearing clothes isn't just about how others see you, it's about being confident, which is something that most teens struggle with. As a very self-conscious person, I often wish I was more confident. This project allowed me to realize that clothing choices can help people feel more confident. I surveyed students about how clothing choices had an effect on their emotions and confidence. I then created 12 fashion designs to be worn by people experiencing specific emotions. I illustrated two designs for each emotion: relaxed, happy, confident, excited, and unhappy. My last two designs were ideas for clothing that I could actually create. As my final act, I created one of my clothing designs using repurposed materials. This experience was extremely beneficial to my communication skills, allowing me to interview and question students as well as a former fashion designer who lives in Boise. Although I do not want to be a clothing designer, and clothing design and creation is not my passion, my Personal Project opened my mind to the importance of how we perceive ourselves.

Advisor: Jim Harper



Maren F

Educating Children About STEM

Science, technology, engineering, and math (STEM) has always been important to me. In the Wood River Valley, there is limited access to STEM outside of school. I wondered, "how can I give back to my community, inspire interest, and provide opportunities in STEM for children?" I taught local children my own STEM curriculum through the Blaine County Recreation District (BCRD) and I help to run a multi-level Girl Scout troop each month and I teach a STEM activity. Activities have included: making a clock out of a potato, a snowglobe, and a rain cloud in a cup. Through the BCRD, I helped teach their existing curriculum and then I designed a four-hour curriculum of my own that I taught to the children. From this project, I have learned how to relate learning in a meaningful way to children, and I have been able to explore new concepts in STEM that I was not exposed to in school. I have been able to continue educating children through Girl Scouts, and I hope to inspire these girls to pursue a male-dominated field.

Advisor: Scott Slonim

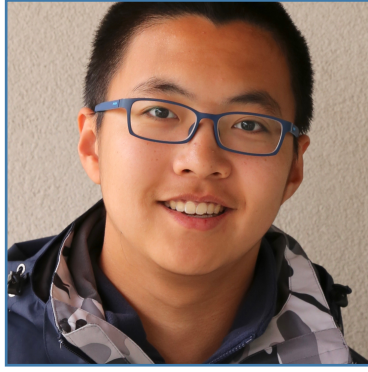


Aiden G

Writing a 60,000 Word Book and Editing It

Writing has always been a passion of mine, and I constantly seek new ways to expand my capabilities as a writer. I had practiced in a myriad of writing styles, except full length book. I have always thought that book writing was one of the most difficult forms of writing there is, as it takes technique and skill to be able to expand a complete story. When Personal Project came around, I saw the opportunity that I had been looking for to finally accomplish my dream of writing a full length book. In the end, I wrote a 60,000 word book that resulted in almost 200 pages to tell my story. I wrote a story about the Vietnam War where two brothers were lost behind enemy lines, and I couldn't be more ecstatic with how it turned out. I learned about the writing medium and the amount of work that it takes to create something of this magnitude. It takes a lot of personal restraint in order to write every day, and I learned the value of this skill. My project taught me a great amount about the creative tendencies of writers, and I hope to write more books in my future.

Advisor: Jeff Cole



Zengxiang (Tim) H

Smart Cooler

Physics plays a very important role in my life. My topic for the Personal Project is to make a smart cooler. In order to make the cooler, I need to look for information about physics and energy transportation to know how a cooler works. Also, I was interested in how a computer works, even though I have never learned computer science before. To make the cooler, I have to do mainly two parts, the cool box and the MCU controller. I put the fan on the top of the cool box and blew the hot wind inside, I put the ice box inside the cool box, so the wind will be cooled down inside the box, and went out from a hole. I made four modes in order to make the cooler only work when the temperature is high and the user is close. After this project, I learned the knowledge about physics and computer science. And I improved my research and management skills.

Advisor: Damon Brown



Edie J

Writing and Recording Original Music

I have always been interested in art and music. When I was young I was constantly drawing and soon I started playing the violin. I played the violin for over five years when I decided to try the banjo, I tried a few instruments until I started playing the guitar about one year ago. I was motivated to learn songs I liked and play in a band that played a genre like garage rock or surf rock. I chose to make original music over the summer before 10th grade. Once I had thought of the idea to make original songs with my band, I was determined to do this for my Personal Project. I wrote and recorded two songs with my band. I learned a great deal about composing music and how difficult it is to write music. The style of my pieces in preverb, or lo-fi. My hope for this project was to express myself musically, and create pieces that I was proud of and that I wanted to share. I hope to continue pursuing music throughout my lifetime, whether that is being in a band, studying music, or playing music on my own time.

Advisor: Damon Brown



Xingyan (Katrina) K

Making a Dress, Which is Based on Chinese Traditional Culture

Chinese culture has been a part of my life since I was born. I was attracted to the traditional dresses worn in a Chinese TV show about the history of Han dynasty. Additionally, my interest in sewing made me think how I could connect to Chinese culture through my project. Eventually, I realized I wanted to make a dress based on Chinese traditional features. I took sewing lessons and designed the dress. The dress is composed of a yellow top and a green skirt as the bottom. The decorations were brought from China. In the future, I wish that I could try to hand-sew all the decorations on my own. I hope to create more complex dresses with more details instead of basing them all on traditional features. This project also provided an opportunity for me to make my own dress and improve communication and thinking skills. Undoubtedly, these skills will play a helpful role in my later career.

Advisor: Christine Corbin



Alden K

Tiny House Project

I have always enjoyed the architecture of different places and cultures I have visited on my travels with my family, doodling my favorite structures I see in a sketchbook or on a napkin. Recently, I've become interested in economics and modern human environmental impact. I was drawn to focus on sustainability and improving the human impact on our planet for my Personal Project. Upon doing research, I became interested in tiny house living. Combined with my interest in architecture, I decided on the topic of investigating modern architecture and sustainability by applying it to my own tiny house design. I continued to apply my research to my elevation and floor plan designs on trace paper. As my final product, I created a blueprint including correct measurements and utilities. I hope to construct my tiny home one day. I learned how to draw traditional architecture and applied my acquired knowledge of sustainability and globalization to my tiny house designs. I learned a lot about time management and communication and will be able to apply these skills to future projects.

Advisor: Charissa Rausch

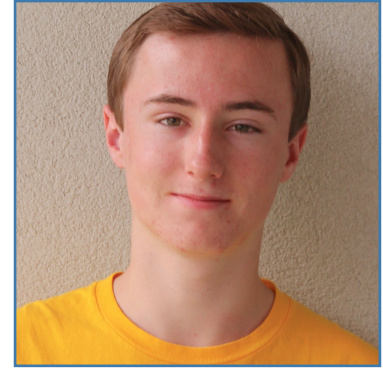


Jordan L

DIY Meditation Room

When I was 15, I spent a semester abroad in Costa Rica. This was a life-changing experience for many reasons, but one of the most important was that I realized the impact of grounding connections. In the age of technology, it's important to discover spiritual relationships and realize the true value of knowing who you are. I began to explore yoga, and stumbled on meditation: the ultimate self-realization technique. But like most teenagers surrounded by electronics, I find it difficult to focus and ignore exterior distractions. And thus, the meditation room is born. The meditation room was built in my bedroom, combining all aspects of minimalism with spiritual enhancement. My hopes were for a room that was not only a place for meditation, but also a relaxing space capable of relieving stress. Through this project, I have learned about what defines me and the things that I value in this life. Additionally, I learned a lot of craft skills such as sewing, painting, and woodworking. Overall, I believe that this project truly helped me to improve my confidence in self management and prepare me for future experiences.

Advisor: Jen Coffey



Ryan M

Getting a Boise Resident to Buy

I initially had many ideas for my Personal Project. After meeting with my advisor, I was able to narrow my focus to one topic: marketing and analytics. I knew early on that I wanted to expand my community engagement and participation as well as explore an urgent and influential global subject. After researching, I decided that I wanted to create a cohesive marketing plan for a profit and a nonprofit company. I was inspired from my many direct business-oriented family members. I knew before starting the project that I wanted to work hard and learn valuable skills and information. Having this mindset and following the Personal Project process allowed me to learn valuable skills such as marketing strategies, how to write a marketing proposal and the basics of marketing and business operations. I was also able to expand on existing skills and individually as an IB learner.

Advisor: Jeff Cole



Cole M

Variance: The Album that Changed My Life

Music has always been a foundation for my hobbies and interests in life. Whether it be attempting to play covers or simply listening to and reflecting, I always find myself being involved with music. The idea of creating personal songs was always on my mind and upon hearing about the Personal Project I knew that it would serve as an outlet for me to finally tackle the beast I'd set my mind on. I successfully composed, recorded, and produced a themed EP Album which I titled 'Variance.' The name, and cover art, comes from the notion that there will always be many different kinds of music that all vary from each other in different ways. In the four different genres of music I tackled in my album, this notion is very evident. Throughout the project I learned how to: use recording and mixing tools within Digital Audio Workstations, work multiple cable lines for microphones, and properly reflect on my experiences using the IB grading system.

Advisor: Gerardo Flores-Pacheco

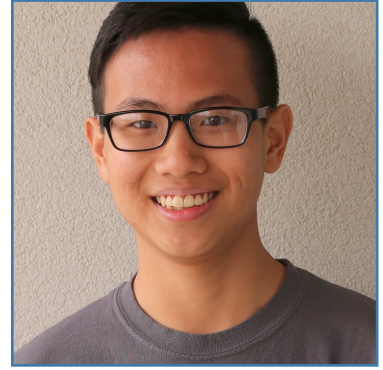


Nguyen (Harvey) N

Running a Model United Nations Conference

I only started participating in Model UN conferences last summer, but I could say MUN has changed my life in the most positive way. Now I am proud to call it my passion. My researching and public speaking skills, as well as my knowledge about history and politics, have improved dramatically through MUN. I feel connected to people who share the same passion, even though we have different backgrounds and viewpoints. There were a lot of difficulties when doing the project, but somehow I managed to overcome them all. The conference took place on February 24, 2018, at Riverstone, with 2 committees (UNESCO and UNHRC), and a total of 13 participants. It turned out to be a success. Overall, the Personal Project has been an amazing, unforgettable experience. My project has helped me understand a lot more about Model UN, as well as globalization and sustainability. It has also helped me discover things about myself that I never knew. It definitely inspires me to be more confident in myself and go further in my MUN endeavors.

Advisor: Joe Beard



Trieu (Bjersein) N

Design a Sport Hoodie as an Example/Suggestion for Riverstone Team Hoodie

Sports have been an important part of my life since I was younger. My interest in sports grew and started to influence my Personal Project. One of my Riverstone soccer teammates suggested we develop a team hoodie, as well as how I could relate it to Riverstone Spirit. I found it really interesting and reasonable. I designed the hoodie in my own way of artistic attraction. It appears as a combination of blue and white, representing the original colors of our school. Then, on the hoodie, I attached a Riverstone chant in order to show that spirit. As I finished the project, I realized that I have learned a lot from the outcome of the project. I am kind of not really satisfied with my product as it was not made as expected due to unavailable service from the shops. I learned that I need to improve my time management skills, and I should have asked my advisor for more experience since I have never done any of the negotiation. I hope to continue designing the hoodie in the future as I have already learned a lot.

Advisor: John Pedersen



Brian O

Destiny2 Redone

In ninth grade, Mr. Brown introduced us to the foley project, which ended up being my proudest piece of work. When our Personal Project topic decisions were due, I knew exactly what to pick, but the only problem was coming up with what to foley. I finally decided to challenge myself by picking multiple film sections to edit together. Going forward into the future, I would love to do more foley work whether it be for myself or for a career. My project draws from many different musical styles - mainly rock and jazz. During my project I had to always try and make my piece fit a general theme and I believe that I created a product that could be used as an advertisement. During the process of editing my film together, I had to make sections of film from different trailers made by different people look the same and to do this I used blood, sweat, iMovie, and YouTube-to-video converter technology. I hope to continue foleying different pieces of film in the future.

Advisor: Damon Brown



Zoe P

Plants to Paints

Art has been in my life since I was young. My mom is an artist, so I grew up watching her paint and take photographs. However, I never fully became interested in art until last summer. I painted one or two landscapes, which sparked my interest in learning more about making paints and creating art. My project's goal was to create six different colors of paints out of found materials, specifically plants. This meant I had to gather plants and mash them into a fine powder. Then, I had to render animal fat to get it to an oil and pour it into the powdered plants. This made a paint textured goo. Next, I started painting landscapes with my paints. I did some experimenting for practice and then painted four different pictures. Once I had painted my pictures, I started working on creating a process book for myself. This included pictures of all the steps I took and a sample of my paints. Through this project I learned to adjust my plan to make my goals more achievable and easier for myself.

Advisor: Josh Udesen



Maeve P

Humans of Boise

I grew up meeting new people a lot and became fascinated by individual personalities and how one's diversity impacts his/her environment. Additionally, I have an interest in art, exploring photography this past summer. I was determined to hone my photography skills through my Personal Project. Inspired by the popular book and photo blog, *Humans of New York*, my project combined my interest in individuals with photography as well as journalism, a new skill. My final project is composed of 30 interviews and photo portraits of Boise's community members, which are displayed both in a photo book and website. Through this project, I furthered my photography and interpersonal skills, learned new ways to build credibility quickly when talking to strangers, approach people who are alone or in groups, and overall created a Personal Project which was both meaningful and appealed to my interests. I plan to continue practicing with my camera and learning new techniques to create more professional images and am even considering pursuing a career in journalism in the future.

Advisor: Jeff Cole



Mekala S

Recreating Album Covers

Sometimes it's not the soundtrack that makes an album memorable, but the artwork that makes it memorable. Growing up listening to music, I always found it interesting how artists express their music through their album cover art. When I began my Personal Project, my goal was to create three album covers using Photoshop based on how a song or album made me feel. The three album covers I've created are titled, "Don't Touch My Hair," "The Life of Mekala," and "2018 W. Fernleaf St." Each is inspired by the artists who have created album covers for Solange Knowles, J. Cole, and Kanye West. The style of my album covers is heavily influenced by modern day Hip Hop and R&B music and include a soundtrack and brief biography on the significance of the cover in my life. I've learned how to use Photoshop and how to use all the functions and tools of multiple Photoshop softwares. If I am ever interested in web designing, the skills I've learned through this project will help me be successful in that field. In the future, I hope to create original album cover art.

Advisor: Jim Harper



Gwyneth W

Making All Natural and Organic Make-Up Products

For the past couple years, my family has progressively incorporated all natural products into our everyday life. I was very interested in how these products were made without the excessive use of chemicals. Because of the positive effect my daily organic products have made on me, I decided to create makeup using only all natural and organic ingredients. I wanted to make sure that there were no additives in any of the ingredients I used to make sure that I had the most realistic results. I chose five makeup products to make: mascara, eyeliner, eyeshadow, lip gloss and blush. I later narrowed this down, but I wanted to experiment with many different types of ingredients. Along with making the makeup products, I also recorded the making of the makeup and made them into informational videos. In the future I will continue on the path of healthy living. I hope that I will stay aware of the things that are in the daily products I use.

Advisor: Samantha Cole



Kelli W

Learning How to Use a Loop Station

When I was two years old, I wanted to play the violin, but it wasn't until I was eleven that I was able to play. I have played in orchestras and am currently a member in the Boise Philharmonic Youth Orchestra. I wanted to learn more about how technology influences composition within these different genres. Recently, I studied Bulgarian and folk music - heightening my interest. For my Personal Project, I created a three minute original composition and added technological elements using a loop station and Logic Pro X. I wanted to take elements from genres I enjoy playing and apply them to my project. Technology played a large part in the outcome of my project. I used a loop station to record my backup parts of the song and add effects, and I used the Logic Pro X system to record and edit my piece. In the future, I hope to continue composing music from different genres and add electronic elements to further extend my understanding of my topic.

Advisor: Gerardo Flores-Pacheco



Zhehao (Jack) Z

Teaching Video of Dark Matter

When I was very young, my dad gave me a scientific book as a birthday present. That was my first time reading about space. I couldn't understand much, but was fascinated by it all: black holes, flashing planets, and parallel universes. In school, I started watching scientific videos as a hobby. So, I decided to make an informational and educational video about dark matter. My goal was to share my interest with people who also love science. I hope that people can sense my happiness, and they can also learn some knowledge. In this project, I learn a new thinking skill. My teachers and my friends taught me if I want to make a quality project, I have to think about it from all angles and I have to know everyone's feeling after watching my video. So I could know the mistake and problems of my video.

Advisor: Roy Ledesma