2018 QUEST EXPO

April 5, 5:30 - 8:30 PM @ BAY MEADOWS

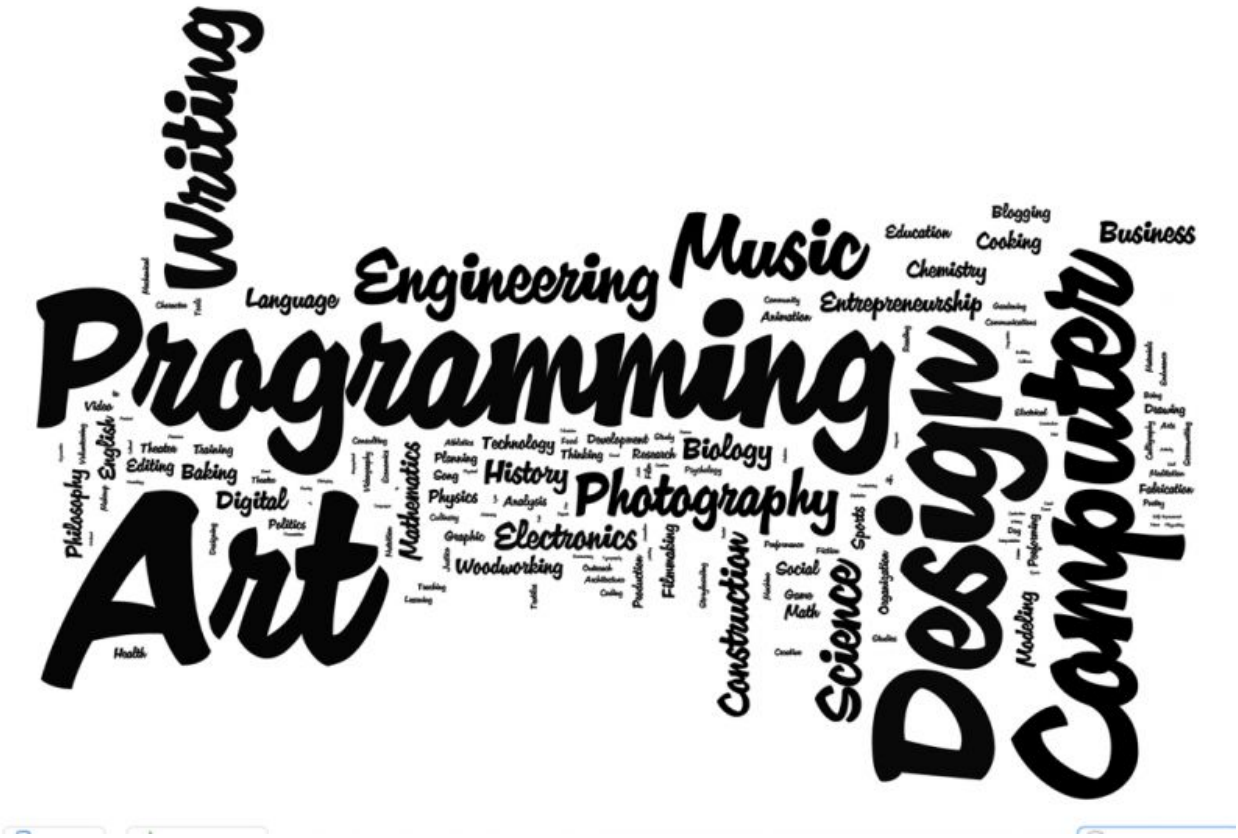
QUEST.NUEVASCHOOL.ORG

Welcome to Quest Expo 2018

Over 340 ninth, tenth, eleventh, and twelfth grade Quest Projects will be on display April 5 from 5:30 to 8:30 PM at our Bay Meadows campus!

Don't forget our searchable QUEST website! Enter a student's name or project discipline and click "Search this Site" to find what you are looking for!

http://quest.nuevaschool.org/



The "Wordle" above shows the disciplines of the Quests; there is sure to be something for everyone!

Where to Start

Student Quest Projects are on display throughout all three floors of the school so be sure to check out every nook and cranny. Exhibit maps are available in the printed program, on the Quest Expo website, and throughout the Quest Expo. These maps list the location of every student as well as the location of special themed areas like virtual reality experiences and live cooking demonstrations.

Performances will be held in the Gym on a rotating basis. The attached schedule lists exact performance times.

About Quest

Design Thinking in action, the Nueva Quest gives students the unique opportunity to pursue their own interests throughout their four years of high school.

Working with their Advisors, I-Lab Team Members, and Nueva Quest teachers, students identify and craft their own personal in-depth inquiry in a self-selected area of evolving passion or in pursuit of a deep question. They may elect to pursue one field of study for multiple years or complete a series of different Quests every year. Mentors, online resources, classes, and internships support them in their improved mastery in their areas of passion while teaching them how to recruit mentors and navigate in the real world. Quest is an extension of the eighth grade Recital Project established more than 25

years ago, and successfully completed by nearly 1,000 Nueva students.

Quest is a further sophistication and application of Design Thinking as students:

- Identify their own needs and interests through reflection, observation, exploration, and inquiry.
- Research to learn subject matter, identify experts, and locate resources/mentors.
- Immerse themselves in deep thinking and empathy, developing deeper understanding of their interest area and of themselves.
- Invent a course of study and/or action, large enough to allow for personal growth and bounded enough to enable success.
- Brainstorm potential obstacles and issues; invent and analyze courses of action.
- Prototype in a cycle that allows for incorporation of feedback on an iterative basis.
- Persevere to accomplish their personal goals.

As visitors to the Nueva School from around the world have heard about our students' Quests and seen their ownership of their projects, they have gone back to implement Quest at their schools to prepare their students for their future lives. Quest builds many crucial skills over time, such as delving into the unknown, effectively managing projects, building a thriving mentorship relationship, and developing a habit of taking action and making one's dreams come true.

Performance Schedule

All performances will take place in the gym

6:00	Anna P.
6:15	Megan W.
6:30	Isha R.
6:45	Lucy W.
7:00	Anna P.
7:15	Megan W.
7:30	Isha R.
7:45	Lucy W.
8:00	Anna P.
8:15	Megan W.
8:30	Isha R.
8:45	Lucy W.

Lucy W.
"It's Because of the Antlers:" Modern Culture Through Creative Writing.

Megan W.
From Thoughts to Motion: Contemporary Choreography

Isha R.
Choreography and Improvisation

Anna P.
Creative Endeavors: An Exploration

12th Grade Advisories

12th Arta

Don't Fret: Learning Guitar in 40 Hours

Anika K.

Learned about chord transposition and taught myself several songs on guitar, with help of vocal accompaniment from my friends.

Performance & Music

Mentorship: Dr. Arta Khakpour, Upper School History Teacher, The Nueva School

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Recovery Vlogging

Ethan W.

Used film to provide a vlog type lens into my recovery from a stress fracture.

Athletics

Mentorship: Mark Taylor, Teacher, The Nueva School

Internship at Stanford CIBSR

Jackie C.

Wrote computer code to analyze the effects of sex chromosomes on the brain by comparing brain MRIs between normal individuals and individuals with sex chromosome abnormalities.

Science, Computer Science

Mentorship: Dr. David S. Hong, Assistant Professor of Psychiatry and Behavioral Sciences, Stanford University Medical Center

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A History and Lego Diorama of the Vietnam War

Jasper A.

Studied the history of the infamous Vietnam war, and recreated a battle out of Lego.

Arts, Photography & Crafts

Mentorship: Stephanie Schuller

The Theory behind the Music

Julianna G.

Studied music theory and keyboard skills to improve overall musical ability.

Performance & Music

Mentorship: Cathy Doyle, The Nueva School

USS Hornet Tour Guide

Justin X.

Helped out with tours aboard the USS Hornet.

Languages & Literature (inc. writing), Leadership & Outreach, History

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Songwriting, Music Production, and Animation

Maddie W.

Made music; and if you want a free video game download or to view cool animations, come and visit.

Arts, Photography & Crafts

Mentorship: Cody Alan, Music Production Teacher, The Nueva School

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Designing and Fabricating an Electric Ski Winch

Markus L. & Sam D.

Built and tested an electric winch for towing skiers at high speeds for urban skiing.

Engineering, Athletics

Ferments!

Nathalie G.

Learned about fermentation process and created my own ferments.

Culinary Arts

Mentorship: Anne Marie Bonneau

Exploration of Persian Classical and Contemporary Poetry

Donya Z.

Translated Persian poems and parables, ranging from classical to contemporary pieces; acquired a comprehensive understanding of thematic elements; and strengthened my Farsi reading and writing skills.

Languages & Literature (inc. writing), Translation, History

Mentorship: Parvin Boroumand, Iranian Language and Literature Instructor, Persian American Society

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Living in my Moms Garage: an English Majors Preparations for the Future

Natalie H.

Mapped out and renovated the detached garage on our property to make it a semi-livable space, then moved in to test it out!

Arts, Photography & Crafts, Filmmaking & Videography, Home renovation

Mentorship: Andrew Belk, Apple employee, home improvement enthusiast, Apple

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Resuscitating Piano Practice

Paco P.

After two-year hiatus from piano lessons, began practicing regularly again and self-taught Rachmaninoff's Prelude in C# Minor.

Performance & Music

Mentorship: Leonard Pon, Teacher, The Nueva School

Dungeon Mastery

Quantum Z.

Used Dungeons and Dragons to learn about the intricacies and techniques behind the design of role playing games (RPGs), such as character creation, plot design, etc.

Dungeons and Dragons

Mentorship: Steven Holmes, Vice President of Smart Device Innovation, New Devices Group, Intel

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California

Ricardo G.

Explored creative writing and poetry.

Languages & Literature (inc. writing)

Mentorship: Lily Brown, Teacher, The Nueva School

Therapy Dog

Santana S.

Trained a dog to pass the Canine Good Citizen Test, enabling it to work as an outreach animal.

Leadership & Outreach

Mentorship: Michelle Martens, Dog Trainer, SF SPCA

Reading with a Perspective

Sonali S.

Collected a list of book recommendations from older people I know books that were important to them when they were my age and am in the process of reading those books.

Languages & Literature (inc. writing)

Mentorship: Claire Yeo, Teacher, The Nueva School

Wilderness First Responder Certification

Steven D.

Researched backcountry medicine and got my Wilderness First Responder Certification.

Leadership & Outreach, Wilderness Medicine

Mentorship: John Gordon Baugh VI, Wilderness Instructor, NOLS

An Exploration of Functional and Dysfunctional Programming

Tyler K.

Learned and explored using Haskell and other programming languages that were new to me, creating various programs and applications.

Computer Science

Mentorship: Jen Selby, Computer Science Teacher, The Nueva School

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Stage Managing at Nueva

Zoe L.

Stage-managed two different Nueva productions, completing various tasks to get the shows running, such as scheduling, taking blocking notes, running tech, and doing costume alterations.

Performance & Music

Fine Woodworking: Designing and Building a Desk with Secret Compartments

Anna S.

Designed and built a modular student desk with secret compartments, and other woodworking projects.

Arts, Photography & Crafts

Mentorship: Fred Sotcher, Sotcher Measurement Inc.

Nueva Model United Nations

Anthony D.

Began a MUN club at Nueva and attended our first conference as an official club with a new class and team being offered next year.

Leadership & Outreach

Mentorship: Patrick Berger, Teacher, The Nueva School

Learning Coding Basics

Elaine W.

Learned basic Python and Unity, and studied basics of computer internals.

Computer Science

Mentorship: Jen Selby, Computer Science Teacher, The Nueva School

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Building a Billiards Block

Ethan L.

Built a billiards block with 6 billiards bowls.

Arts, Photography & Crafts, Engineering

Mentorship: Harvey Rutledge, Owner, Sequoia Billiard Supply

The Gupta-Mittal Family Recipe Collection

Ishani G.

Collected and adapted recipes from relatives around the world into a recipe book.

Culinary Arts

Mentorship: Claire Yeo, English Teacher, The Nueva School

Film in a Digital Age

Kyle M.

Explored film photography; shot and processed 35mm and medium format film.

Arts, Photography & Crafts

"It's Because of the Antlers:" Modern Culture Through Creative Writing

Lucy W.

Explored the wild world of social media, adolescence, and pop culture through a series of whimsically irreverent short stories.

Languages & Literature (inc. writing)

Mentorship: Jamie Biondi, The Honorable Lord, The Nueva School; Lee Holtzman, Esteemed Jedi Master, The Nueva School

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Mathematical Art Exhibits

Michael B. & Zack C.

Designed and created pieces of art to explore and explain mathematical ideas in a visual, tactile way.

Arts, Photography & Crafts, Computer Science, Mathematics

Mentorship: Ted Theodosopoulos, US Math Teacher, The Nueva School

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The Ancient Greek Musical Odyssey of Envisioning the Iliad

Natalie F.

Experienced Homers Iliad and Odyssey through literary analysis, Homeric Greek study, ancient Greek music theory, composing character themes and musical motifs, exploring various adaptations, and designing concept art.

Languages & Literature, Performance & Music

Tennis Coaching and Analytics

Neel G.

Created my own advanced tennis statistic to assist in junior improvement.

Athletics

Mentorship: Randy Becker, Coach, Fremont Hills Country Club

12th Dell

Dear Doodles

Devon H.

Created a children's tv show and letter-writing program to make kindness and inclusiveness cool for young kids.

Entrepreneurial

Mentorship: Michealene Risdey; Mark Valenti; Tom Kalinske

#NotYoga Breaking into the Circus World with Contortion

Eli v.

Continued to study contortion as part of the San Francisco Youth Circus.

Performance & Music

Mentorship: Catie Brier, Circus Center & Physioflex

Designing and Fabricating an Electric Ski Winch

Markus L. & Sam D.

Built and tested an electric winch for towing skiers at high speeds for urban skiing.

Engineering, Athletics

From Thoughts to Motion: Contemporary Choreography

Megan W.

Choreographed a contemporary dance solo.

Performance & Music

Making T-Shirts Using Silkscreen Printing

Nat L.

Learned how to silkscreen a T-shirt, from design to the final print.

Arts, Photography & Crafts

So You Think You Can Sew?

Nina G.

Created 3 different dresses under the constraints of the latest season of Project Runway.

Arts, Photography & Crafts

The Nueva House System

Om G.

Designed, implemented, and ran a Hogwarts-style Quest system at the Nueva Upper School.

Arts, Photography & Crafts, Leadership & Outreach

Nature Documentary Filmmaking

Peter E.

Planned, interviewed experts for, filmed, and produced two nature documentaries in the wild.

Filmmaking & Videography

Mentorship: Josh Newman, Self-Employed

Choral Arrangement

Thea P.

Arranged sheet music for and directed a 13-member a cappella group.

Performance & Music, Leadership & Outreach

Mentorship: Cathy Doyle, The Nueva School

Creating a Multicourse Menu

Viraj G.

Researched and created a multicourse menu based on French, Indian, Japanese, and a smattering of other cuisines.

Culinary Arts

Mentorship: Chef Robert Donohoe, Chef, Flik/The Nueva School

12th Jen S

Creating an Exoskeleton, Part II

Andrew Z.

Designed and built a wearable "exoskeleton" robot that increases my lifting capability by more than 93lbs, using 3-D printed and easily assembled components, making it conducive to DIY and open hardware.

Engineering

Mentorship: Dr. Ken Salisbury, Professor, Stanford University

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Lights, Camera: Ashley

Ashley R.

For my final year at Nueva, I set a goal to venture into the daunting I-Lab and find my way around some of the tools and resources available within in order to make decorative EL wire signs, laser-cut Halloween decorations, and more!

Arts, Photography & Crafts

Mentorship: I-Lab Team, Nueva

Reclaiming the Old: The Lost Art of Film Photography

Effie T.

I took photos using an old analog camera and photographed subjects that could be set in the past. This exploration was to discover the remaining pockets of visual reality that still hold the past, as well as to show how to take and develop film photographs.

Arts, Photography & Crafts

Making Stuff Digitally

Emily (Duckie) W.

Explored digital art and CAD.

Arts, Photography & Crafts, Engineering

Redesigning a Haggadah, from Plagada to Chad Gadya

Emily S.

Redesigned my family's Haggadah, incorporating elements that are more meaningful for our current Seder.

Languages & Literature (inc. writing), Religion

Flying a Plane

Evan S.

Learned to some fly small propeller planes.

Flight

Learning Glassblowing

Laela J.

Learned the basics of glassblowing through group classes and 3-person practice sessions, ultimately making at least 1 finished piece per session.

Arts, Photography & Crafts

Mentorship: Anthony Scorza and others, Glassblowing Instructors, Bay Area Glass Institute

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Schedulizer Dev Team

Leif J.

Helped develop Schedulizer, a Telegram bot used by over 200 members of the Nueva community to easily access their class schedules, homework, and more.

Science, Computer Science

Mentorship: Jen Selby, Computer Science Teacher, Nueva

Suicide Research

Leo R.

Worked as part of a research team doing a project on suicide and mental health in Santa Clara.

Science, Statistics

Mentorship: Tom Tharsis, Head of Bay Area Children's Association, Bay Area Children's Association

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Beyond Borders: Immigration and Photography

Sydney S.

Created a series of photographs and stories highlighting the positive impact that immigrants have on society.

Arts, Photography & Crafts

Mentorship: Paul Gargaliano, Photographer

12th Jen P

Making a Short Film

Aiden H.

Created a short film, from concept to editing.

Arts, Photography & Crafts, Filmmaking & Videography

Mentorship: Ronald Chase, Teacher, SF Art and Film

Par for the Course... +4

Austin C.

Learned to improve my golf game through practicing balance, alignment, tempo, and other techniques which contributed to the overall improvement of my scores (goal: to shoot 40 strokes or less through 9 holes).

Science, Athletics

Mentorship: Ronald Driscoll, Coach, Retired (Assistant Golf Coach at the Nueva School)

The Development of Python Projects and Games

Chip T.

Learned the Python programming language and developed a set of programs.

Computer Science

Mentorship: Jen Selby, Computer Science Teacher, The Nueva Upper School

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Preparing Nueva for Communication in Emergencies

Jack M.

Researched and designed an amateur radio communications system connecting the Hillsborough and Bay Meadows campuses of Nueva to be used in the event of an emergency when normal methods of communication are overwhelmed.

Engineering, Amateur Radio, Emergency Preparedness

Mentorship: George Golda, RDS Inc.

Stage Management

Jessa M.

Stage-managed several productions and created a portfolio to showcase my work and experience.

Arts, Photography & Crafts, Performance & Music

Mentorship: Dan Shaindlin, The Refuge

Robotic Drums

Nachi G.

Created a robotic drum kit that can play itself.

Performance & Music, Engineering, Computer Science

An Exploration of Contemporary Science Writing

Rebecca S.

Analyzed popular-science articles and wrote original scientific pieces.

Languages & Literature (inc. writing), Science

Mentorship: Jeremy Jacquot, US Science Teacher, The Nueva School

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An Exploration of New Art Mediums in Portraiture

Robin S.

Explored three art mediums for the first time, primarily oil paint, collage, and mixed media, to add different emotional and visual effects to portraits.

Arts, Photography & Crafts

Sharing Knowledge with Young Activists

Sol M.

Taught activism workshops to Nueva students, based on lessons from the Student Diversity Leadership Conference, a national conference for high-school students to learn about issues of identity, power, privilege, and allyship.

Leadership & Outreach

Mentorship: Alegria Barclay, Equity & Social Justice Coordinator, The Nueva School

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ed-YOU-sex: A Sex Education YouTube Channel

Talia S.

Made a sexual education YouTube channel to highlight and fill the gaps in most of the sexual education curriculum in the United States.

Arts, Photography & Crafts, Leadership & Outreach, Filmmaking & Videography

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Exploring Porogenesis in PCL Microfilms for Drug Delivery Devices

Adam K.

Conducted experiments to determine methods for creating microporous, biodegradable films for drug delivery applications.

Science

Mentorship: Dr. Jean Kim, Postdoctoral Student in Bioengineering, UCSF Desai Laboratory

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The Exploration of Piano Duets

Adithi G.

Found a piano piece that is performed as a duet, specifically learning how to optimize the synergy between two musicians.

Performance & Music

Mentorship: Leonard Pon, Teacher, The Nueva School

Self-Expression in Art

Adrianna D.

Created works of art using different media (photo, film, fashion, painting) for the purpose of self-expression.

Arts, Photography & Crafts

Synthesizing an Aldehyde & Attaching It to a Peptide

Alex L.

Synthesized an aldehyde similar to a molecule found in the brain and attached it to a peptide in hopes it would pass the blood-brain barrier.

Science

Mentorship: Dr. Krishna Kumar, Head of Chemistry Department, Tufts University; Dr. Vittorio Montanari, Senior Chemistry Researcher, Tufts University

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Piano Exploration

Hilary N.

Studied piano, focusing on technique and skill in several genres.

Performance & Music

Mentorship: Kennth Prendergast, Piano Instructor

Learning French

Lila M.

Began learning French through movies, songs, and textbook independent study.

Languages & Literature (inc. writing)

Mentorship: Aude Martin Coulet, Ms. Aude Martin Coulet, Stanford University

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In the Footsteps of Mythbusters

Neeraj S.

Tested a myth like the Discovery Channel show!

Science, Engineering

The Nueva Current

Scott B.

Worked as editor-in-chief of the Nueva Current and set a schedule to come out with first three print editions this year.

Languages & Literature (inc. writing), Leadership & Management

Mentorship: LiAnn Yim, Journalism Teacher, The Nueva School

Costume Design

Sinead C.

Designed costumes for Upstage Theater shows and interned with the San Francisco Shakespeare Festival.

Arts, Photography & Crafts

Building a Pool Table

Xander H.

Built a working pool table from scratch.

Arts, Photography & Crafts, Engineering

Mentorship: Harvey Rutledge, Owner, Sequoia Billiard Supply

12th Patrick & Ted

Building Patient-Facing Software for Clinic Use

AJ N.

Implemented recent research on factors affecting surgery outcomes to build (with a team) software for older adults to use in advance of their operation.

Computer Science

The Nueva House System

Ari N.

Designed, implemented, and ran a Hogwarts-style "House System" at the Nueva Upper School.

Arts, Photography & Crafts, Leadership & Outreach

Unwind

Emma D.

Created a smart stress ball to help alleviate social anxiety using design engineering techniques.

Engineering

Mentorship: Connie Liu, Design Engineering Teacher, The Nueva School

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Choreography and Improvisation

Isha R.

Choreographed and filmed dances.

Arts, Photography & Crafts, Performance & Music, Filmmaking & Videography

Mentorship: Ronald Chase, Chase Art and Film

Storytelling in Graphic Mediums

Jo Q.

Explored storytelling in graphic mediums.

Arts, Photography & Crafts

Mentorship: Vivian Nikolich

Starting the Conversation about Mental Health

Julia R.

Created a display about how mental health at Nueva affects our community in conjunction with my work on the SafeSpace Youth Advisory Board.

Leadership & Outreach

Mentorship: Lesley Martin, Managing Director, SafeSpace

Mathematical Art Exhibits

Michael B. & Zack C.

Designed and created pieces of art to explore and explain mathematical ideas in a visual, tactile way.

Arts, Photography & Crafts, Computer Science, Mathematics

Mentorship: Theodore Theodosopoulos, US Math Teacher, The Nueva School

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Learning to Make a Video Game

Sean G.

Explored game development in the Unity engine.

Computer Science

Volunteering at a Day Worker Center

Sophie P.

Made and answered phones, collected reviews, helped in the kitchen, translated presentations, and digitized filing at the Day Worker Center of Mountain View.

Community Service

Mentorship: Mara Marroqun, Executive Director, Day Worker Center of Mountain View

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11th Grade Advisories

11th Allen

Hand-Throwing Pots on a Wheel

Angus Z.

Created pottery with an electric wheel.

Arts, Photography & Crafts

Mentorship: Robert T. Smith, Professor, Kaela

A Personal and Community-Based Exploration of Creative Writing

Audrey Chi.

Taught 2nd7th grade students at 826 Valencia in the Tenderloin and explored my own voice through creative writing.

Languages & Literature (inc. writing), Leadership & Outreach

Mentorship: Michael Franklin

WILDE Magazine

Beatrice S.

Curated and published an LGBT arts magazine to increase visibility and normalization of the community.

Arts, Photography & Crafts, Languages & Literature (inc. writing)

Mentorship: Michelle Pujals, Facebook

An Exploration into Navajo Culture and Animal Rights

Celia M.

Raised awareness and money for an animal shelter in New Mexico and began learning Navajo.

Languages & Literature (inc. writing), Leadership & Outreach

Mentorship: Cosy Balok, Gallup Humane Society; Kris Garuda, Gallup Humane Society

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Exploring the Intersection of Machine Learning and Cognitive Neuroscience

Ethan K.

Interned at Stanford SCSNL, where I applied machine learning and deep learning techniques to fMRI time-series data for phenotypic classification.

Science, Computer Science

Mentorship: Weidong Cai, Doctor, Stanford SCSNL

Building a Board Game

Leo V.

Designed and built a board game.

Arts, Photography & Crafts, Design

Mentorship: Bobby Reichle, Designer, Orange Machine Games

The Art of Acting: Training and Performance

Louis B.

Honed acting skills in a variety of training settings and performed in three productions.

Arts, Photography & Crafts, Performance & Music

Mentorship: W.D. Keith, Director, American Conservatory Theater

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Urban Navigation: The Art of the Rip-Stik

Osher L.

Rip-Stik'ed extensively in different environments, learned tricks and techniques, taught others to ride, and fostered an exploratory culture of Rip-Stik.

Athletics

Mentorship: Bahr Nadav, Rider, The streets of Tel Aviv

11th Barry & LiAnn

Music Production

Aidan S.

Produced music in Ableton Live.

Performance & Music

Creative Endeavors: An Exploration

Anna P.

Explored various mediums of art (including sculpture, photography, writing, and culinary art), and conducted a public-process art project with Nueva families and staff.

Arts, Photography & Crafts

Mentorship: Tricia Teason, Volunteer

Automatic Arrythmia Detection Device

Arya G.

Designed an built automatic arrhythmia detection device.

Engineering

Mentorship: Cameron Schaeffer, Engineer, Tesla

Painting with "Saudade"

Audrey Cho.

Learned to paint both freely and in the style of artist Filipe Matias da Costa, while incorporating a variety of media.

Arts, Photography & Crafts

Mentorship: Filipe Matias da Costa, Traveling artist

Learning to Fly

Chris R.

Learned to properly operate a single-engine aircraft in accordance with FAA procedures.

Aviation

Mentorship: Derick Day, Advantage Avation

Cloud

Greg B.

Created a continuously sensitive cloud chamber using isopropyl alcohol and Peltier elements, added lighting, various sensors, and a system to generate various electric and magnetic fields in order to better identify the particles.

Science, Engineering

Mentorship: Mark Convery, SLAC

Woodworking

Henry D.

Learned how to make bowls on the lathe, cut with the CNC machine, and carve wood.

Woodworking

An Exploration of Musical Recording

Julienne H.

Wrote and recorded different types of music.

Performance & Music

Mentorship: Alexandra Gilman, Music Teacher, Bard College; Caio Victor Sardinha, Music Teacher, Goucher College

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Exploring Industrial Arts

Maya L.

Created functional and aesthetic pieces of furniture using industrial tools.

Arts, Photography & Crafts, Engineering

Learning Hebrew

Tom S.

Learned the Hebrew alphabet and practiced speaking skills.

Languages & Literature (inc. writing)

Mentorship: Merav Buch, The Hebrew University

11th Ben

An Exploration of Cryptocurrency

Alex Y.

Explored the history of cryptocurrency and the basics of trading.

Finance

Mentorship: Reagan Chen, Reagan Chen, Reagan Chen

Meditation: Exploration and Instruction

Gavin R.

Continued researching and developing meditation habit and practice, culminating in teaching peers meditation and explaining the science of building effective habits.

Leadership & Outreach, Hobbies

Mentorship: Dawn Scott, Spirit Rock

An Exploration of Machine Learning

Kyle M.

Explored machine learning and other programming ideas.

Computer Science

Mentorship: Keshav Saharia, Founder of TechLab Education

Exploration in Fine Art and Sculpture

Leona D.

Created works of art using traditional media and experimented with sculpture.

Arts, Photography & Crafts

Mentorship: Erik Sanko, RISD

An Art Exploration: Drawing, Metalworking, and Video Editing

Maddie C.

Created different art pieces as an exploration of different media and general creative outlets, with hands and countries (as depicted on maps) as special form focuses.

Arts, Photography & Crafts

Board Game Generation (Based on AlphaZero)

Max D.

Engineering, Computer Science

Mentorship: Max Pumperla

Gardening

Olivia A.

Gardened.

Arts, Photography & Crafts

Learning to Cook

Peter A.

Learned to cook some complete meals to gain some basic cooking skills.

Culinary Arts

Mentorship: Elaine Utley

Analysis of the Modern Football Player Market

Charles L.

Analyzed all market transactions in the previous five years in Europe's top 5 football leagues, and predicted where the market will be in one, five, and ten years.

Computer Science

Race in Theater and Media

Eton S.

Created essays based on current events covering race issues in media and theater.

Arts, Photography & Crafts, Computer Science

Mentorship: Saya Jenks, Teacher, The Nueva School

Film Score Analysis

Kameron D.

Analyzed film scores, distilled compositional motifs and corresponding emotional cues, synthesized compositional trends, and designed possible psychological experiment to see how they affect peoples perceptions of films.

Performance & Music, Psychology

Designing a Custom Midi Keyboard

Kolby H.

Designed a custom midi keyboard for music production.

Design, Music

Calling CQ: An Exploration of Amateur Radio

Laurel M.

Explored amateur radio as a hobby and for emergency communications by earning highest civilian class of radio license (Amateur Extra, call sign AJ6AS); building single sideband transceiver (radio), antennas, and SWR bridge (tuning equipment); becoming a member of the ARRL (national radio association) and SC4ARC (local radio club); and participating in community radio activities.

Engineering

Mentorship: Erik Meike; Peter Chupity

Creating an Interwar Fleet Builder Board Game

Robby V.

Created a board game based on fleet construction in the period between World Wars One and Two.

Arts, Photography & Crafts

Mentorship: Eduardo Baraf

Running a Public Speaking Class for Middle Schoolers

Sanam Y.

Created and worked to implement a public speaking course for middle schoolers at the Boys and Girls Club of the Peninsula (BGCP).

Leadership & Outreach

Mentorship: Simon Olavarria, League of Creative Minds; Catarina Williams, League of Creative Minds

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Building a Board Game

Shaheen C-B.

Designed and playtested a board game, and began the process of publishing it.

Board game design

Mentorship: Bobby Reichle, Designer, Orange Machine Games

Plant World

Sophia H.

Built a planter sphere with an internal relaxation space.

Engineering

Mentorship: Employees of The Scarlet Sage Herb Co.

Controlling a Drone through an Interactive Webpage

Vanessa C.

Created an interactive webpage that forces a drone to share my computer's wifi so that I can click buttons to control it from my computer.

Computer Science, Engineering

Mentorship: Philipp Wu, Berkeley EECS student

11th Les & Lindsey

Boxing and Journalism

Arman M.

Researched and wrote about boxing journalism and the intersections of boxing and prizefighting culture in the United States and abroad.

Languages & Literature (inc. writing), Athletics

Learning Arabic

Audrey K.

Continued my studies of the Arabic language through study abroad and local classes.

Languages & Literature (inc. writing)

Mentorship: Matt Westman, Global Online Academy

Amalgamation of Things I Did

Cameron W.

Did stuff, mostly math, that I was interested in at the time.

Mostly Math

Mentorship: Jon Lo Kim Lin

Essays for Personal Activism

Elise M.

Based on the style of professional personal essays in the realm of feminism and activism, I wrote "glorified rants" on topics I am passionate about.

Languages & Literature (inc. writing)

Mentorship: Jennifer Reese; Caroline Grant

Friendwatch

Gitika P.

Designed a safety app for undergraduate women as a submission for the 2018 Technovation Challenge.

Computer Science, Design

Mentorship: Jen Selby, Teacher, The Nueva School; Connie Liu, Teacher, The Nueva School

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An Exploration into Building Websites for Touchpad Keyboards

Lucas W.

Created a touchpad keyboard for nonverbal autistic students.

Computer Science

Mentorship: Timothy Elling, Google

Teach Youth Tech

Noah R.

Taught youth with limited access to technology how to repair Mac computers.

Engineering, Leadership & Outreach

Mentorship: Michaela Danek, Teacher, The Nueva School

An Exploration of Photography

Shiley E.

Learned about all aspects of digital photography, how cameras work, and also organized photos from trips around the world from the past few years.

Arts, Photography & Crafts, Engineering

Mentorship: Naomi Friedman

Building an Easily Reusable Cloud-chamber

Tobias B.

Researched and built a cloud chamber.

Science, Engineering

Mentorship: Mark Convery, Staff Physicist, SLAC

Speculative Biology

Alex H.

Explored theoretical ecology and the nonexistent species within.

Arts, Photography & Crafts, Science

Community Service: Working with Bay Area Children

Anjali S.

Volunteered for various organizations that specifically help children in the Bay Area, including Lucille Packard Children's Hospital and Cake 4 Kids.

Leadership & Outreach

Increasing Viability of In-Vivo CRISPR-Cas9 Treatment through Augmenting Cas9 Expression

Ben C.

Augmented SaCas9 protein expression by 3.5-fold in human HepG2 liver cells through codon optimization of the gene sequence, potentially enabling in-vivo CRISPR-Cas9 treatments.

Molecular Biology

Internship at the Genomics Research Center, Academia Sinica, Taiwan

Caleb D.

Learned research skills during an internship at the Academia Sinica in Taiwan.

Science

Mentorship: Ying Chang, Academia Sinica

A Collection of Free Verse Poetry

Jenna L.

Wrote and edited a collection of free verse poems titled Becoming Whole.

Languages & Literature (inc. writing)

Mentorship: David Susman

Exploring the Connection Between Religious Beliefs and Environmentalism

Kayla W.

Interviewed a variety of candidates; inquired about their religious beliefs and how much they care about nature and the environment; and analyzed data to determine if there is a connection between the extent of ones religiosity/spirituality and one's passion/care about the environment and climate change.

Religious Studies, Environmental Studies

Mentorship: Zach Brown; Sharon Hartley

Lidar Shenanigans

Liam M.

Leveraged VR-based binaural audio technology to represent real-time lidar data in 3D space.

Computer Science

An Exploration of Biolistic Tranfection

Luca F.

Built and tested gene gun for plant transfection.

Engineering

Mentorship: Trip Sweeney, Teacher, The Nueva School

Three Asthmatic Mice: Research on Smooth Muscle Hyperplasia and Mispatterning

Madeleine M.

Interned and researched at Stanford University's Sean N. Parker Center for Allergy and Asthma Research in the Nadeau lab under the mentorship of Dr. Maya Kumar, PhD.

Science, Research

Mentorship: Dr. Maya Kumar, PhD, Stanford University

11th Mark

A New Form of Hydrogen

Arun J.

Created a series of instruments to attempt to synthesize and detect a new form of hydrogen with many potential applications.

Science, Engineering

Mentorship: Professor Leif Holmlid, Professor Leif Holmlid, University of Gothenburg; Dr. Tom Glanzmann, Dr. Tom Glanzmann, National Accelerator Center; Spencer Axani, Spencer Axani, MIT

Multitudes: An Exploration of Writing in All Its Forms

Cameron C.

Wrote and edited dozens of poems and several short-form screenplays in an exploration of writing in all its forms.

Languages & Literature (inc. writing)

Becoming a Baking Aficionadough

Dylan J.

Explored the art of baking (which has always been my bread and butter) at a whole new level.

Culinary Arts

Mentorship: Gene Davis

Debate and Sexism

Grace W.

Competed at national debate tournaments and interviewed female debaters about their experiences.

Communication

Mentorship: Rhona Tanenbaum, Feminist literature expert

A Modern Airship

Jaden T.

Designed a modern airship for humanitarian missions and intercontinental sailing using Autodesk Fusion and Autodesk Flow Design.

Science, Engineering

Mentorship: Justin Camp

Poetry of Writing and Voice

Kaitlyn P.

Explored a wide scope of poetry including poems, spoken word, songs, and rap both by reading and listening as well as writing and speaking.

Performance & Music, Languages & Literature (inc. writing)

Mentorship: Naomi Kinsman, Executive Director, The Society of Young Inklings

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Connected Treks: Hiking for Connections with Friends, Family, Nature, and Myself

Lauren H.

Detailed and documented a series of hikes around the Bay Area to a) discover the native wildlife and b) form connections with friends and family.

Athletics, Leadership & Outreach

Mentorship: Dana Nichols, Bay Area Hike Connoisseur

Screenplay Writing

Nehmat V.

Developed and wrote a screenplay with Cameron C. set about a decade from now.

Languages & Literature (inc. writing)

Mentorship: Phil Donlay, Author

Friendwatch

Sophia Y.

Coded an app called Friendwatch, which seeks to prevent unsafe situations for college-aged women.

Computer Science

Mentorship: Brandon Walsh, Medical Device Engineer, JC Medical

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Music Battlestation: Converting My Room into a Music Studio

Will K.

Transformed my bedroom into a functional music studio by researching optimal acoustic layouts, and composed a number of songs.

Performance & Music

11th Veena & Ali

Debate Statistics

Ben S.

Gathered and analyzed statistics related to competitive debate, in particular developing a national ranking system with significant predictive power and doing the first quantitative analysis of gender bias in Public Forum Debate.

Mathematics, Debate, Computer Programming

Mentorship: Allen Abbott, Quarry Lane

OCEAN and Social Media

Eric J.

Examined and measured how people might present themselves differently depending on the social media they are using.

Psychology

Mentorship: Lee Taber, UCSC

SuperPoncho

Grace H.

Designed a portable shelter/garment for a variety of landscapes and situations.

Engineering, Leadership & Outreach

3-D Character Modeling

Leo IM.

Modeled human heads in 3-D using various software packages, explored photogrammetry techniques.

Arts, Photography & Crafts, Computer Science

Mentorship: Anders JL Beer, Animation director, California Institute of the Arts

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Researching the Gender Gap

Libby M.

Researched the gender gap in investment for female entrepreneurs and worked with a nonprofit aiming to close this gap.

Arts, Photography & Crafts, Venture Capital & Social Justice (not sure if that is what outreach meant)

Mentorship: Yuka Nagashima, President, Astia

Building the Fastest Iterated Prisoner's Dilemma Tournament

Mickey D.

Programmed and hyperoptimized software to manage the execution of Iterated Prisoner's Dilemma programs.

Computer Science

Mentorship: Jen Selby, Teacher, The Nueva School; Patrick Berger, Teacher, The Nueva School

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Directing

Nicolas P.

Directed a show with Upstage Theater.

Performance & Music

Mentorship: Dan Shaindlin, Artistic Director, The Refuge Theater

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Space Mysteries: Primordial Black Holes

Noelle F.

Explored black hole properties and characteristics, and delved into the theories surrounding black holes, supermassive and primordial black holes, and dark matter.

Science

Mentorship: Robert W. Floyd, Physicist, Retired, last employed at Space and Naval Warfare Systems Center, Department of Defense

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Experiments in Painting

Sarah H.

Played with paint and mixed media to create a variety of work and explore color schemes.

Arts, Photography & Crafts

Mentorship: Kenney Mencher, Ohlone College

The Temperature-Dependency of the Fungus Histoplasma Capuslatum

Toby F.

Analyzed the temperature dependency of certain genes in the fungus histoplasma capusulatum through transcriptome sequencing and predictive quantitative PCR.

Science

Mentorship: Anita Sil, PhD, UCSF

10th Grade Advisories

10th Grant & Alice

Vocal Expression

Anjali R.

Learned a set of jazz and other easy listening vocals.

Performance & Music

Mentorship: Roco Guitard, Owner and lead instructor, The Roco Guitard Vocal Studio

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Hopes and Fears among Greek Adolescents Eight Years after the Onset of Economic Crisis

Anna K.

Analyzed and conducted interviews of teenage students and psychiatrists in order to better understand how the Greek crisis has affected the future of the new generation.

Languages & Literature (inc. writing), Leadership & Outreach

Mentorship: Liz Alderman, Chief European Business Correspondent, The New York Times

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Mechanical Keyboards

Ben Y.

Created my own keyboard and learned how keyboards work.

Technology

Mentorship: Josh DeWitt, College Student

Polish and Literary Translation

Bran B.

Researched literary translation and began learning the Polish language.

Languages & Literature (inc. writing)

Mentorship: David French, Self-employed

3-D modeling in Blender

Casey M.

Created 3-D models of various objects using the program Blender.

Arts, Photography & Crafts

Mentorship: Drew Perttula, Software Engineer, Google

Introduction to Jazz Presentation

Cory T.

Researched and explored the history of jazz and rhythm in order to create an interactive presentation that I presented to a class of students at a local school.

Performance & Music

Mentorship: Debbie Heiman, John Muir Elementary

Tumbo

Grace L.

Home-crafted juices inspired by Andean cuisine.

Culinary Arts

Mentorship: Forest Smith, Business Owner

Communication Curiosities: Learning Hawaiian and Studying Sandpiper Communication

Max G.

Learned Hawaiian, studied animal communication systems, and started learning some native languages of the Americas and Africa.

Languages & Literature (inc. writing), Science

Mentorship: Kepa Maly, Founder, Kumu Pono Associates LLC

Formulating Natural Cosmetics

Megan F.

Formulated cosmetics out of natural, household ingredients.

Arts, Photography & Crafts, Science

Mentorship: Susie Wang, Founder and Chief Creative, 100% Pure Cosmetics

---

Jazz Singing

Nivi G.

Learned and sang jazz standards and songs.

Performance & Music

Mentorship: Ellen Shea, Self-Employed

Running Public Speaking Course for Low-Income Middle Schoolers

Aleeha B.

Created and worked to implement a public speaking course for middle schoolers at the Boys and Girls Club of the Peninsula (BGCP).

Leadership & Outreach

Mentorship: Simon Olavarria, Educational Director and Co-founder, League of Creative Minds; Catarina Williams, Executive Director and Co-founder, League of Creative Minds

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Stage Makeup / Building a Chair

Alice E.

Began the year by working on a production as a makeup artist, and in the latter half of the year designed a chair.

Arts, Photography & Crafts, Engineering

Arc Furnace and Green Sand

Atharv C.

Made arc furnace to melt metal and made green sand to mold it.

Engineering

Exploration into Technical Drawing

Austin Z.

Learned how to draw.

Arts, Photography & Crafts

Archery: East vs West

Calista H.

Learned kyudo (Japanese archery; Eastern) and compared it with olympic recurve archery (Western).

Athletics, Culture

Mentorship: Lucy Halverson

The Art of Black and White

Camille G.

Learned how to use a film camera and do darkroom exposures.

Arts, Photography & Crafts

The Science of the Vertical Jump

David S.

Analyzed and created workouts to maximize my vertical leap.

Science, Athletics

Mentorship: Sherry Madding, Physical Therapist, Sherry Madding RPT

Exploring the Intersection of Medicine and Music

Grace R.

Collected heart rate data and translated it into music.

Science

Mentorship: Dr. Anne Dubin, Director of Pediatric Arrhythmia at Stanford, Stanford Hospital

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Behind the Scenes of Website/App Design

Jeremy D.

Learned how to program websites and design mobile apps.

Computer Science

Mentorship: Jen Selby, Computer Science Teacher, The Nueva School; Carl Shan, Computer Science Teacher, The Nueva School

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DebateScraping : Using Web Scraping for Debate Sources

Pranav R.

Explored and learned Python and web scraping to pull specific information from a variety of different websites.

Computer Science

Mentorship: Carl Shan, Computer Science Teacher, The Nueva School

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10th Connie

Soul-Carved, Dream-Killer, Wish-Weaver, and Five Other Novels Whose Titles Don't Sound as Cool

Elizabeth B-P.

Wrote, edited, submitted to agents and competitions, and printed/self-published a five-book series following a group of soldiers as they go through life with unusual powers, as well as three stand-alone novels following the theft and trade of dreams, souls, and miracles.

Languages & Literature (inc. writing)

Creating a Language

Finley F.

Created my own language for a fictional society.

Languages & Literature (inc. writing)

Mentorship: Scott Borgeson, Grad student at Stanford

Crocheting Amigurumi Dolls

Hannah C.

Learned and practiced new crocheting skills to make hand-sized animals.

Arts, Photography & Crafts

Mentorship: Ana Paula Rimoli, Martingale

Mechanical Keyboards: A Modern Throwback

Luciano M.

Pursued my interest in custom mechanical keyboards by attending a day long meetup/convention in November, building my own split ergonomic keyboard, and designing and selling my own keycaps and PCB for a custom keyboard.

Engineering

Artifact Detection in fMRI

Parker W.

Learned to analyze fMRI data using the ART and CONN software, then applied these skills to analyzing the data for a research project that looks at new techniques to detect and prevent errors in this type of analysis.

Science

Mentorship: Dr. Susan Whitfield-Gabrieli, Research Scientist, MIT Gabrieli Neuroscience Lab

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Exploring and Creating a Cryptocurrency

Quincy A.

Researched new cryptocurrency and computer science innovations and designed a new cryptocurrency based on the most promising technologies.

Computer Science

Friendwatch: Exploring Graphic & UI Design for an App

Rachel D.

Designed and co-created a safety app for women in college.

Arts, Photography & Crafts, Engineering

Mentorship: Briana Das, College student, Brown University

Commercial Filmmaking for Local Organizations

Tyler G.

Worked one-on-one with local Silicon Valley businesses and organizations to create commercial and promotional films to be used as part of marketing campaigns and/or websites.

Filmmaking & Videography

Mentorship: Kimberley Wadycki, Dragon Theatre

Making a Food Replacement

Tyler P.

Made a full nutrient food replacement along the lines of Soylent.

Science, Nutrition

Building an Arc Furnace

Zachary S.

Built an arc furnace to melt metal and made green sand to mold it.

Engineering

10th Jan & Jamie

Product Photography

Anya G.

Learned how to take photos based on someone else's visions.

Arts, Photography & Crafts

Mentorship: Natalia Smith, Nomad Skincare

Consolidate: A Chrome Extension

Benjamin L.

Created an extension for Google Chrome designed to display content feeds from user-selected sources.

Computer Science

Drones for Good: Starting a Robotics Competition

Billy P.

Created a drone competition for middle schoolers from the ground up, lowering the bar for entry into STEM fields.

Engineering, Leadership & Outreach

Mentorship: Michelle Grau, Robotics Team 4904 Mentor, Robotics Team 4904; Gardner Chambliss, Robotics Team 1648 Mentor, Robotics Team 1648; Daniel Mehay, Business Development Manager, Horizon Educational

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The Mandelbrot Set: An Intersection of Computer Science and Math

Clay A.

Wrote Python script to do a lot of math and generate pretty pictures of fractals.

Computer Science, Math

Family Recipes

JJ M.

Made a cookbook filled with personal recipes and the stories behind them to appreciate our roots and celebrate diversity.

Culinary Arts

Mentorship: Erika Schillinger, M.D., Stanford University School of Medicine

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Making a Modern Enigma Machine

Molly K.

Created a functioning encryption mechanism using a repaired typewriter.

Engineering, History

Mentorship: John Sansone, Typewriter Repairman, Los Altos Typewriters and Business Machines

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Charcoal Sisters: An Activated Lifestyle

Morgan T.

Created a lifestyle guide for charity based on Activated Charcoal that combined our knowledge of art, design, business, marketing, and culinary skills.

Arts, Photography & Crafts, Culinary Arts, Business & Marketing

Mentorship: Willa Doss, Founder

Dauphin

Noah T.

Created the first gallery on clothes to promote urban art.

Arts, Photography & Crafts, Leadership & Outreach

Mentorship: Jason Mayden, CEO, Super Heroic

Music Genre Preferences

Ryan G.

Collected data on music preference from 100 people and wrote code to predict music preference based on a variety of factors.

Performance & Music, Computer Science

Mentorship: David Shane, Tech Lead Manager, Google

Building a Guitar in Two Weeks

Stanley W.

Built an acoustic guitar from scratch, using only sandpaper, rasps, handsaws, and glue.

Engineering

Mentorship: Jean Pierret, Guitar Luthier, Retired

Education in Menlo Park: Belle Haven Elementary School

Zoe H.

Volunteered at Belle Haven Elementary School in Menlo Park as a tutor.

Leadership & Outreach, Education

Mentorship: Athena Chavarria, CZI

Violin Performance

Amelia M.

Learned violin pieces and performed solo, in quartets, and orchestras, including performing in two orchestras at Davies Symphony Hall.

Performance & Music

Mentorship: Jason Totzke, Golden Gate Philharmonic Orchestra

An Animation Portfolio

Amit S.

Animated stick figure representations of various scenes.

Arts, Photography & Crafts

Playing with Rocks

Amy C.

Researched rock gardens and built a rock arrangement for a remodeled garden.

Landscaping, Gardening

Mentorship: Emma Shelton, Self Employed

Path Generation Algorithms

Chris M.

Used mapping APIs to create paths for running or walking on a loop.

Computer Science

The Construction of Agricultural Tools for Self-Defense

Evan S.

Researched and constructed custom agricultural tools for use in self-defense using woods chosen for their properties.

Arts, Photography & Crafts, Engineering

Mentorship: Fred Sotcher, Sotcher Measurement Inc.

Audio Visualizers

Jack B.

Created multiple audio visualizing programs that use the frequency of music to create images.

Arts, Photography & Crafts, Performance & Music, Computer Science

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The Creation of Disney Animatronics

Max S.

Researched and explored the methods by which companies in the entertainment industry create advanced, lifelike animatronics, and created a couple of my own simple animatronics using the same theories and movements.

Engineering

Mentorship: Garrett Parrish, Creative Development, Walt Disney Imagineering

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An Exploration of Historic Computers

Merritt V.

Worked with the restoration team at the Computer History Museum and learned about the history of computers; worked on building a replica Apple I computer.

Engineering, Computer Science

Mentorship: Carl Claunch, Computer History Museum; Michael Lu

---

A Dive into the Profession of Neuroscience

Naila W.

Explored the field of neuroscience through spending time in a UCSF lab called Neuroscape.

Science

Mentorship: Joaquin Anguera, Neuroscape

Bringing Mars Back to Earth

Steven K.

Designed and fabricated part of a working scale model of NASA's Curiosity Rover.

Science, Engineering

Mentorship: Rob Zomber, The Nueva School

Co-Directing and Starring in a Full Film

Eliot C.

Starred in and co-directed a full screenplay of William Golding's Lord of the Flies.

Filmmaking & Videography

Streetwear Meets Art Programs

Ethan F.

Produced hoodies with business model aiming to contribute to school's art programs.

Arts, Photography & Crafts

Mentorship: Jason Mayden

Islet Cell Transplantation A Cure For Diabetes

Eugenia T.

Researched regenerative stem cell research, focusing on islet cell treatments for type 1 diabetes.

Science

Mentorship: Dr. Peter Stock, UCSF Department of Surgery

Meditation and Neuroscience

Irene M.

Explored the connection between meditation and changes in the brain though reading research papers and self-experimentation.

Science

Mentorship: Haley Cropper, Stanford

Learning the ACS Chemistry Olympiad

Jacob L.

Participated in the local and national Chemistry Olympiad.

Science

Mentorship: Jerry Sun, International Chemistry Olympiad Gold Medalist 2014, Stanford

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Building a Guitar Amplifier

Jason H.

Built an electric guitar amplifier head beginning with a kit and added modifications. Built cabinets for the head and built a 1x12 speaker cabinet for amplifier.

Performance & Music, Engineering

Mentorship: Bruce Clement, BC Audio

Brainwave Exploration

Katya P.

Explored EEG by analyzing and understanding real-time brainwave data from different regions of the brain.

Science

Mentorship: Melissa Moss, University of Oregon PhD Graduate Student

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Effect of Inhibitors in HR-Deficient CRC cell Lines

Luke P.

Analyzed the effect of different inhibitors in different CRC cell lines that lack homologous recombination DSB and SSB pathways.

Biology

Mentorship: Dr. Ethan Emberley, Calithera Biosciences

Natural Dyes

Max R.

Experimented with a variety of naturally occurring dyes and dyeing techniques.

Arts, Photography & Crafts

Mentorship: Brooke Sinnes, Fiber Artist & Proprietor, Sincere Sheep

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Working with Sugar

Sophia M. & Sanjana V.

Looked at chemical workings of sugar/gelatin and made candy mainly involving sugar and gelatin.

Culinary Arts, Science

Mentorship: Cheryl Weise, Sugar Artist, Frosted Memories

10th Mandy

Drones for Good

Cevi B.

Helped create the instructions for teams starting in a drone competition.

Engineering, Computer Science, Leadership & Outreach

Mentorship: Michelle Grau, I-Lab Engineer, The Nueva School

What Lies beyond the Cities: A Photography Documentation

Dylan T.

Hiked in various California locations and took, edited, and compiled various photographs representing natural landscapes.

Arts, Photography & Crafts, Athletics

Mentorship: Gregory Cooper, Instructor, National Outdoor Leadership School; Anna Stevens, Where There Be Dragons

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Making a Modern Enigma Machine

Isa A.

Created a functioning encryption mechanism using a repaired typewriter.

Engineering, History

Mentorship: John Sansone, Typewriter Repairman, Los Altos Typewriter & Business Machines

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Painting

Isabel C.

Practiced painting in acrylics, experimented with watercolors, and painted on different mediums such as canvas and shoes.

Arts, Photography & Crafts

Matthew Millea A Desktop CNC Mill

Justin Z.

Designed and made desktop CNC mill capable of cutting aluminum.

Engineering

Mentorship: Matthew Mellea, Alumnus, The Nueva School

Friendship Braceleting

Maya M.

Explored different patterns and improved my speed and knot-tying skills.

Arts, Photography & Crafts

Mentorship: Heather Paul, Hillel International Seattle

Heads Up: Walk with Confidence

Nico L.

Designed and created a device that helps the blind and visually impaired detect and therefore avoid overhead objects such as branches and doorways.

Engineering, Computer Science

Mentorship: Mr. Mark Vaughan

Orbit Simulator

Nikhil S.

Created a simulation that uses constants such as eccentricity, longitude of ascending node, and argument of periapsis to plot the orbit of celestial bodies around the sun.

Computer Science

Exploring Analog Photography and Darkroom Printing

Noah H.

Learned color and black-and-white analog photography techniques and created prints using darkroom printing.

Arts, Photography & Crafts

Digital Drawing

Sydney G.

Continued teaching myself digital and traditional drawing techniques.

Arts, Photography & Crafts

Building a Juggling Machine

Gabriel M.

Designed and built a machine capable of passing and receiving juggling clubs.

Engineering, Design

Mentorship: Mr. Nathan Peterson, Samsung

Arranging Music

Laura S.

Arranged and made sheet music for a variety of songs with vocals.

Performance & Music

3-D Modeling Synthetic Insulin for the Developing World

Madeline P.

Analyzed current diabetes research and picked the best designed synthetic insulin. The structure was 3-D printed and I will be presenting a poster at the annual American Society for Biochemistry and Molecular Biology conference in late April.

Science: Structural Biology

Mentorship: Dr. Diane Munzenmaier, Program Director, MSOE Center for BioMolecular Modeling; Mr. Luke De, Teacher, The Nueva School; Dr. Jeremy Jacquot, Teacher, The Nueva School

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Graphic Design

Meg C.

Spent the year creating a large array of digital artwork, exploring new skills and styles of graphic design, and justifying the unfathomable amount of time I've dedicated to working on this by telling myself it's for Quest.

Arts, Photography & Crafts, Design, Digital Art

Concept Art

Miles G.

Made concept art for a hypothetical Cirque du Soleiltype show.

Arts, Photography & Crafts

Charcoal Sisters: An Activated Lifestyle

Natalie A.

Created a lifestyle guide for charity based on Activated Charcoal that combined our knowledge of art, design, business, marketing, and culinary skills.

Arts, Photography & Crafts, Culinary Arts, Business & Marketing

Mentorship: Willa Doss, Founder

Indian Slum Development

Nikhil P.

Researched slums in India and designed interventions that bring resources such as clean water, plumbing, and electricity to slum colonies.

Arts, Photography & Crafts, Engineering, Architecture

Mentorship: Derek Ouyang, City Systems, Cloud Arch Studio, Stanford University

---

Exploring Etching

Sky S.

Explored etching and a monolith/monotype project that expanded my artistic toolset.

Arts, Photography & Crafts

Mentorship: Mark Jonsen, CCA Oakland

Exploration of Juggling

Steven R.

Explored and practiced juggling with a variety of props.

Performance & Music

Mentorship: Dave Pawson, Facebook

Come Fly With Me :)

Wesley S.

Started the challenging but rewarding process of earning a pilot's license by taking flying lessons in a small Cessna.

Aviation

Mentorship: Wes Irish, ATP, CFI, CFII, West Valley Flying Club

---

10th Stephanie & Rob

Writing a Novel

Aidan W.

Continued work on and revised the novel I started writing last year.

Languages & Literature (inc. writing)

Mentorship: Rahul Kanakia, Author

Technicality: Creating and Sharing Engaging Educational Videos

Alex N.

Created numerous new episodes of the YouTube web series "Technicality" exploring science, humanities, and everything interesting.

Science, Filmmaking & Videography

Mentorship: Dianna Cowern, Creator of the YouTube channel Physics Girl, PBS Digital Studios

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Rethinking Nature

Chloe K.

Wrote and recorded a podcast about modern environmentalism.

Languages & Literature (inc. writing)

Mentorship: Naomi Barr, Journalist, Freelance

Half-Marathon for Alzheimers

Hanna Z.

Trained to run a half marathon on April 8, while also spreading awareness and fundraising for the Alzheimers Society.

Athletics, Fundraising

Mentorship: Demi Chizgi, The John Maxwell Team

A Comparison of Life in Toulouse and San Francisco

Ina L.

Created an interactive e-book comparing life during a semester in Toulouse, France, and life in San Francisco.

Arts, Photography & Crafts, Languages & Literature (inc. writing), Leadership & Outreach

Mentorship: Aurore Forest

IoT Platform Design for Analog Industrial Peripherals

Izzy S.

Researched and developed solutions for a connected platform allowing integration of a variety of critical industrial sensor data in a single processing- and analysis- oriented application.

Engineering, Computer Science

Exploring Chinese Cuisine

Jake V.

Explored the history of and practiced traditional and modern Chinese cooking.

Culinary Arts

Music Transcription Software

Josh F.

Created a program to automatically transcribe audio files into sheet music.

Performance & Music, Computer Science

Mentorship: Jon Drukman, Google

Converting a 1978 Jeep to an Electric Car

Piper H.

Converted a cj7 1978 Jeep into an electric car.

Engineering

Mentorship: James Vaught

Working with Sugar

Sophia M. & Sanjana V.

Looked at chemical workings of sugar/gelatin and made candy mainly involving sugar and gelatin.

Culinary Arts, Science

Mentorship: Cheryl Weise, Sugar Artist, Frosted Memories

9th Grade Advisories

9th Carlo & David

Renewable Phone Charging Stations

Aidan P.

Created different sources of energy for the phone that do not contribute to global warming.

Science, Engineering

Mentorship: Marc Tarpenning, Partner, Wardenclyffe Partners, LLC

Constructing a Dot-Matrix Water Fountain

Alex C.

Designed and built a dot-matrix water fountain that displays numbers.

Engineering

Mentorship: Karen Tung, Aerospace Engineer, NASA

The Perfect Nut-Free Macaron

Amanda W.

Found the perfect nut-free macaron recipe by trying many different almond substitutes.

Culinary Arts

Mentorship: Celine Malvoisin, Baker

Automated Cryptocurrency Arbitrage

Brian P.

Created a program that displays price gaps between exchanges on currency pairs.

Computer Science

Mentorship: Nick Sullivan, Ex VP of Engineering; Alex Poon, Ex Director of Engineering

---

Making a Retro-Direct Bike

Gavi G.

Modified a used bike into a retro-direct bike with the ability to pedal forwards or backwards and still move forwards.

Engineering

Mentorship: John Caletti, Bike frame builder, Caletti Cycles; Nick Hom

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Building an RC Plane

Gus W.

Built and learned about remote control planes.

Arts, Photography & Crafts, Science, Engineering

Mentorship: Joseph Donahue, MD, SOAR

Teen Mental Health: A Short Film

Maya C.

Filmed and created a short film narrative that illustrates the reality of teen mental health, a topic that affects a large population worldwide.

Filmmaking & Videography, Mental Health

Mentorship: Christine Wang, Project Director, Children's Health Council; Mitzi Mock, The Nueva School; Samantha Kotmel

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Making an Electric Bicycle

Molly D.

Transformed a regular bike into an electric bike.

Engineering

Mentorship: John Caletti, Bicycle Frame Builder, Caletti Cycles

---

Learning How to Play Chess

Shinyi O.

Worked on getting better at playing chess.

Chess

Mentorship: Ata Suren, Student

Forensics anad Criminal Profiling

Valerie B.

Researched different forensics techniques and history of criminal profiling.

Science

Mentorship: Cordelia Willis, Criminalist, Santa Clara County Laboratory

---

9th Chris

An Exploration in Digital Art

Alyssa L.

Created art through a computer and experimented with multiple aspects such as shading and the color palette to improve.

Arts, Photography & Crafts

Mentorship: Maureen St. Vincent, Fine Artist

Doctors and Health Insurance

Bahar J.

Interviewed doctors about the effects of different insurances on their work and the quality of care patients receive based on the insurance they have.

Science

Mentorship: Nazanin Rafsanjani, Creative Director, Gimlet Media

---

Video Making and Editing

Eli W.

Learned more about the filmmaking process and how to edit and create informational videos.

Filmmaking & Videography

Do Nation: An iOS App For Good

Lauren W.

Created an iOS app to help people help other people by connecting donors with nonprofit organizations.

Computer Science

Mentorship: Moshen Chan, Indie App Developer, Independently Employed

---

Cake or Cheeseburger? Adventures in Extreme Cake Art

Lucy B.

Explored art and sculpture through cake decorating; created and decorated cakes to look like other foods using fondant, frosting, and everything in between.

Arts, Photography & Crafts, Culinary Arts

Mentorship: Nick Makrides, Self-employed

A Device to Wake People Up

Quinn A.

Found the best noises to wake up my sister and then made a device to play them.

Engineering

Mentorship: Sara Mednick, Associate Professor, University of California, Irvine

---

Welding/Building a Bicycle

Samuel S.

Designed and built a bicycle frame using third-party sources for parts.

Engineering

Mentorship: Sean O'Mahony, North American Operations Manager, Precision Hydration

---

Designing and Modeling an Eco-House

Shalin Z.

Designed and built a very small-scale model of an environmentally friendly house.

Arts, Photography & Crafts

Mentorship: Stefan Eder, Owner, Mosaic Architects

Exploring Arduino by Making a Self-Counting Jump Rope

Trevor G.

Made a self-counting jump rope using Hall effect sensors.

Engineering

Mentorship: Nathan Peterson, Samsung

An Exploration in Fan-Based Writing

Afton L.

Wrote a story that deviates from the main plot of the real story it's based on an example of fan fiction.

Languages & Literature (inc. writing)

Mentorship: Jesse Discon, Fanfiction Writer, Home

Cake Making and Decorating

Anna C.

Created cakes and learned different decorating techniques and styles.

Culinary Arts

Mentorship: Melissa Murata, Cake decorating

A Conscious Journey to Optimal Mental Health

Caroline S.

Searched for the most effective means of improving my mental well-being through five different daily rituals, completed separately over five weeks.

Self-care

Virtual Creation of Real-World Architecture

Evan S.

Investigated and created real-life architecture using the computer program Unreal Engine 4.

Engineering

Mentorship: Ryan Lee, Associate, Woods Bagot

Special-Effects Makeup

Lily M.

Created works of body art using different materials.

Arts, Photography & Crafts

Mentorship: Gina Burrus

Making Pretzels

Luke M.

Made pretzels, new recipes for pretzels, and new pretzel flavors.

Culinary Arts

Mentorship: Monika Schoenhoff, PhD, Pharmacodynamics scientist, Genentech

---

Some Stuff I Wrote

Nicholas H.

A chronologically ordered collection of writng (creative writing, political discourse, essays) that were contemplated over the course of the project.

Languages & Literature (inc. writing)

Mentorship: David Susman, Poet, Writing Teacher, Tutor, Self Employed Tutor

---

Hydrographics

Paige M.

Worked on and studied hydrographics; learned techniques, practice, and application.

Arts, Photography & Crafts

Mentorship: Russ Hedgepeth, Semi-Retired Serial Entrepreneur., GadgetKing

---

3-D Printed Robot Arm

Sean C.

Designed and printed a functional robot arm to do daily tasks.

Engineering

She Made It (*Note not part of the actual title: subject to change)

Willow Taylor CY.

Interviewed female leaders and converted into a podcast to be published online.

Leadership & Outreach, Podcasting

Mentorship: Vicky Que, Correspondent, NPR; Ashley Westerman, Producer, NPR

Indoor Self-Guided Robot

Avirath S.

Built a self-guided indoor robot with a variable source and a fixed destination using IndoorAtlas indoor positioning system.

Engineering

Mentorship: Stanley Liu, Software Engineer, AxleHire

Jungle Quest: Creating a Virtual Reality Game

Cal W.

Designed and constructed virtual reality video game levels using climbing mechanics.

Arts, Photography & Crafts, Computer Science

Mentorship: Lee Vermeulen, Developer, Modbox

Homebuilt Autonomous Small Unmanned Aircraft

Daniel B.

Designed and built model aircraft prototypes, and wired and installed first-person view, telemetry, and autopilot systems.

Engineering

Mentorship: Rick Schertle, Maker Lab Teacher, Steindorf K-8 STEAM School

---

A Short Story

Eleanor H.

Wrote a short story in exploration of writing style and anthropomorphism.

Languages & Literature (inc. writing)

Meditative Art and Mindfulness

Eleanor M.

Drew as a way of practicing mindfulness and meditated.

Arts, Photography & Crafts

Mentorship: Danielle Debrier, Self-employed

Exploring Political Theory through Writing

Eugenia X.

Read and learned about several political and economic models and wrote a novel set in a world of countries that reflected traits of communism and feminist international relations.

Languages & Literature (inc. writing), Politics

Mentorship: Rebecca Watkins, School Teacher

This Little Light of Mine

Jordan M.

Created DIY neon signs that are cheaper to make than real ones but look just as nice.

Arts, Photography & Crafts

Mentorship: Nathan Chan, Graphic Designer, Stellartech Research Corporation

---

Carbon Sequestration via Iron Fertilization to Mitigate Climate Change

Mirielle W.

Analyzed and identified ocean regions where iron fertilization, a geoengineering process proposed as a method to mitigate climate change from carbon dioxide emissions, would be most efficient.

Science

Mentorship: Dr. Kenneth Coale, Professor of Marine Biogeochemistry, Moss Landing Marine Laboratories

---

Quadcopter

Sebastian S.

Created and customized a small FPV quadcopter.

Engineering

Mentorship: Bill Waytena

An Exploration in Wearable Electronic Sensors

Tara S.

Designed and built various wearable fabric devices and sensors to improve different aspects of my everyday life.

Arts, Photography & Crafts, Engineering, Computer Science

Mentorship: Meredith Scheff-King and Dan McAnulty, Product developer and Head of Hardware Engineering, Bebop Sensors

---

Herbal Medicine

Amalia K.

Learned various examples of herbal medicine and created remedies / treatments using plants.

Science, Botany

Mentorship: Marilyn Barret PhD, Pharmacognosy Consultant, Pharmacognosy Consulting

---

Exploring Exercise

Amelia A.

Tracked the effects of different types of exercise on my mood, muscles, and energy.

Athletics

Mentorship: Torrey Delaplane, Art and Physical Education Teacher, The Girls' Middle School

---

Designing and Fabricating a Stirling Engine

Austin J.

Designed and created a beta-type Stirling engine.

Engineering

Mentorship: Eli Marlin, ArtecFAB

Oil Painting

Carmen M.

Learned about and experimented with different types and techniques of oil painting, and created oil paintings of all different subjects.

Arts, Photography & Crafts

Mentorship: Asami Akinaga, Artist and Instructor, Community School of Music and Arts

---

Layered Laser Cut Art

Connie H.

Created art using Adobe Illustrator, then cut the layers with the laser cutter.

Arts, Photography & Crafts

Mentorship: Gabriel Schama, Self-Employed

Writing a Video Game Story

Gabi B.

Wrote out the story for a multiple-choice RPG video game.

Languages & Literature (inc. writing), Video Games

Mentorship: Trip Hawkins, Founder of Electronic Arts, Professor of Practice, UCSB

Picking Things Off the Ground and Sticking Them Together

Isabelle A.

Collected salvaged objects and trash to create art from them, and learned how to weld metal sculptures.

Arts, Photography & Crafts; Engineering

Mentorship: Maureen St. Vincent, Fine Artist

Baking Desserts

Ishir G.

Baked different desserts, learning new techniques.

Culinary Arts

Mentorship: Madhumita Jain Gupta

Writing a Fantasy Novel

Spencer B.

Planned, outlined, and began to write a full-length fantasy novel.

Languages & Literature (inc. writing)

Mentorship: Jess Millman, Managing Editor, StoryNews Magazine

---

Making a Hoverboard Stage 1

Stefan S.

Created a work-in-progress hoverboard prototype and some designs, including a blueprint and an art piece.

Arts, Photography & Crafts; Science, Engineering

Mentorship: Jeremy Trilling, Alumnus, The Nueva School

9th Lee & Barak

Setting the Stage: Designing a Movie Set

Alex P.

Created a set for theater or film based on the book and movie Hugo and set on Coney Island.

Filmmaking, Craft, Set Design

Mentorship: Nina Ball, Set Designer, Self Employed

An Animation of "The Death of a Civil Servant"

Annie E.

Animated the Anton Chekov story The Death of a Civil Servant.

Filmmaking & Videography

Mentorship: Mr. Xing Yue, Chief Editor, ManHua Hui

Prose into Pictures: Turning Literature into Comic Form

Claire G.

Turned a short story by Ray Bradbury into comic form.

Arts, Photography & Crafts, Languages & Literature (inc. writing)

Mentorship: David Horsey, Political Commentator, Los Angeles Times

---

Children's Illustrated Book

Michelle W.

Created a children's illustrated book using watercolor.

Arts, Photography & Crafts

Mentorship: Vinny Chan, Art Director, Tencent; Asha, Senior Designer, Tencent

---

An Agility Course for Dogs

Nirek G.

Constructed an agility course for dogs based on research gathered by visiting an agility training facility and testing with my dog.

Engineering

Mentorship: David Difuntorum, Dog Whisperer and Rescuer, Benji's Backyard

---

A Stateless Dart Library for Interacting with the Discord API

Rohan V.

Designed and programmed an open source library for interfacing statelessly with the Discord API.

Computer Science

Mentorship: Zeyla Hellyer, Systems Administrator and Backend Developer, Self-employed

---

Programming a Virtual Reality Game

Ryan C.

Programmed a virtual reality basketball game.

Computer Science

Mentorship: Nathan Kaplan, College Student

Go-Kart

Teli P.

Built a go-kart that drives.

Engineering

Mentorship: Tad Pinkerton, Retired Engineer

The Chronological Progression of Christian Architecture

Vienna G.

Analyzed the progression of Christian architecture and formed it into an interactive timeline.

Architecture, Religion

Mentorship: Aisha Sheikh, International Educator, Designer, and Entrepreneur, Stanford ChangeLabs

---

9th Michaela

1944: A Plastic Odyssey

Alexander R.

Wrote a script for a historical fiction set in World War II and began to film it in stop motion using Lego.

Languages & Literature (inc. writing), Filmmaking & Videography

Mentorship: Mr. David Lazarus, Writer, Freelance Writer

Programming a Web App to Help Artists Find Stolen Work Online

Alice G.

Learned how to code and explored web development, created the beginnings of a web application that helps artists find their stolen work online.

Computer Science

Downsizing: An Urban Garden

Annie Z.

Started plants from seed to plant in a small-space container garden.

Gardening :)

Mentorship: Lauren Fieberg, Garden Coordinator and Science Specialist, Nueva Lower School

---

Boom Shoes

James T.

Created a shoe with bluetooth speakers and an LED light strip that flashes to the music.

Engineering

Mentorship: Mark Scheeff, VP of Product Development, Neptune Medical

---

Exploring the Subculture of Streetwear and Sneakers

Joseph K.

I looked into the world of streetwear and sneakers to see what drives a culture many don't even know exists.

Filmmaking & Videography

Mentorship: David Hoffman, Documentary Filmmaker, Self Employed

---

Rebuilding a Bike

Liam D.

Rebuilt an old, broken bike.

Engineering

Mentorship: John Caletti, Caletti Cycles

Breaking Immigrant Stereotypes through Film

Mariya V.

Created a documentary highlighting the intersectionality of immigrants in our country.

Filmmaking & Videography

Mentorship: Grace Khang, Investigative Journalist, Documentary Filmmaker, Santoki Productions

---

The Mavericks Map App

Stephanie S.

Researched indoor location trackers called beacons and developed and iOS app using Swift similar to the Marauders Map from Harry Potter.

Computer Science

Mentorship: Jessica Tsoong, Entrepreneur in Residence, Relay Ventures

---

Symbolism through Acrylic Painting

Zulie M.

Explored meaning behind different shapes, colors, brush techniques, and patterns in paintings.

Arts, Photography & Crafts

Mentorship: Rose Hagan, Independent Artist, Independent

9th Min & Davion

Creative Nonfiction Short Stories

Aliya G.

Wrote short stories based on anecdotes from the lives of elderly people.

Languages & Literature (inc. writing)

Mentorship: Cole Govin, Graduate Teaching Assistant, University of Texas at Austin

---

Exploring Photography

Anam T.

Explored the art of creating, capturing, and editing images.

Arts, Photography & Crafts

Mentorship: Hannah Dyson, Cal Poly SLO

Zer0: A Bigger Number Than You

Casey G.

Created a cosplay of Zer0 (Borderlands 2 main playable character), including light-up prop sword; also accidentally cosplayed Ciri (Witcher III) for Halloween.

Arts, Photography & Crafts, Engineering

Mentorship: Casey Sanders, Professional Cosplayer, Labinnak & Mangoloo Cosplays

---

Building Remote-Controlled Soccer Robots

Daniel A.

Built the electronics and programming for remote soccer robots.

Engineering, Computer Science

Mentorship: Danny Eizips, VP of Engineering, Tigo Energy

Learning to Play Piano

Daniel H.

Learned how to play piano and played a couple of difficult pieces, learned basic music theory, and participated in the Level 3 Certificate of Merit piano program.

Performance & Music

Mentorship: John Metz, Pianist and Piano Teacher, Vice President of Marin's Music Teacher's Association of California. Faculty music teacher of GATE Academy for gifted students.

Fantastical Anarchist World

Jojo W.

Created and designed a map of a fantasy world, looking into political thought, specifically the feasibility of anarchy.

Arts, Photography & Crafts, Languages & Literature (inc. writing)

Mentorship: Eunseong Oh, Student, Stanford

Music Theory

Julie R.

Learned how music theory plays a critical role in all music, regardless of genre.

Arts, Photography & Crafts, Performance & Music

Mentorship: Danny Clay, Music Teacher, Zion Lutheran Church and School

---

Coaxial Piston Launcher

Kevin W.

Designed a coaxial piston using Fusion 360.

Engineering

Mentorship: John F.C. Cheong, Co Founder, Space Machine

Creating Sculptures From Trash

Noah V.

Created sculptures from recycled materials.

Arts, Photography & Crafts

Mentorship: Maureen St. Vincent, Fine Artist

Electronic Theramin

Vir S.

Created a musical instrument that doesn't require your touching it.

Performance & Music, Computer Science

Mentorship: Aviv Siegel, Blackberry

9th Paul & Anthony

Laser-Cut Earrings

Abby P.

Designed, laser cut, and painted earrings.

Arts, Photography & Crafts

Mentorship: Winnie van der Rijn, Artist, Eccentric Designs

Breaking a Fairytale

Ananya I.

Transformed Sleeping Beauty into a new story with more modern complexities, illustrating it with photography.

Arts, Photography & Crafts, Languages & Literature (inc. writing)

Mentorship: Jade Jones; Gabby Terrasi, 2 Girls 20 Cameras

Redesigning an RC Car

Brian U.

Redesigned an RC car using CAD and 3-D printing.

Engineering

Mentorship: Kevin B., Educator

Exploring CAD through Solidworks, Robotics, and Modeling

Elliot C.

Explored CAD by learning Solidworks, creating various parts, and learning how to fabricate designed objects.

Engineering

Mentorship: Michelle Warner, Mechanical Engineer, Mindtribe Product Engineering

---

Stock Market Algorithm

Etaash P.

Analyzed trends in prices of stocks and created algorithms based on those trends.

Computer Science, Statistics

Mentorship: Erik Hawkins, Data Scientist, Spring Tech.

Learning Guitar

Jonah R.

Learned to play acoustic guitar basics and a few songs.

Performance & Music

Mentorship: Jason Muscat, Teacher, The Nueva School

A Creative Take On Mental Illness

Kaia S.

Analyzed patterns in published books that I admire and studied mental illnesses in teens to write a story in magical realism.

Languages & Literature (inc. writing)

Mentorship: Susan Hamlin, MFT, Private Practices; Dana Reinhardt, YA Novelist, Private Practices

---

Using Python to Simulate Blackjack

Matthew S.

Learned Python and then used it to simulate blackjack against a computer, and came up with the best algorithm for the player.

Computer Science

Mentorship: Chloe Lim

The Art of Block Printing

Sama Z.

Designed patterns and drawings and printed them as painting stamps on the CNC mill.

Arts, Photography & Crafts

Mentorship: Brit Kleinman, avoavo

Music Design and Production

Tomo G.

Learned the basics of music production and music theory using the Logic Pro X software to create and design sounds, synths, and electronic music.

Performance & Music

Mentorship: Mike Gewehr, Self Employed

9th Sushu & Veronique

Writing a Feminist Children's Book

Antonetta T.

Drafted a children's book designed to give young girls their first sense of feminism and a brief history of a few influential women in history.

Languages & Literature (inc. writing)

Mentorship: Shirley Gaston, University Heights Montessori Preschool

---

Ethereum Mining

Bayan S.

Created a mining rig to mine Ethereum, and monitored its value and made transactions.

Computer Science

Mentorship: Dan Charbonneau, CBT Nuggets

An Exploration of Molecular Gastronomy

Catherine C.

Attempted a variety of recipes in the forms of spheres, foams, gels, and powders while learning the basic chemistry behind the dishes.

Culinary Arts, Science

Mentorship: Monika Schoenhoff, PhD, Genentech

Sawdust and Patience: My Woodworking Quest

Gaelen C.

Created a wooden sculpture of a tree using hand tools and power tools.

Arts, Photography & Crafts

Mentorship: Fred Sotcher, Sotcher Measurement Inc.

Making Bread

Kate E.

Iterated different bread recipes and took notes and photos for each one.

Culinary Arts

Mentorship: Clare Bannon, Cabot Corporation

A Beginner Learning Machine Learning

Leo CS.

Learned the basics of machine learning, focusing on general concepts and reinforcement learning.

Computer Science

The Designing and Creation of a Desk

Nikhil T.

Built a desk in a wood shop using various tools.

Woodworking

Mentorship: Fred Sotcher, Sotcher Measurement Inc.

The Making of a Video Game, an Art Project?

Quetz M.

Created a 2-D platform using the unity engine and made all of the artwork in the game.

Computer Science

Mentorship: Walt Destler, Entertainment Programmer and Designer, Independent Programmer

---

An Exploration of Ableton and Speakers

Sian B.

Created multiple songs within Ableton and Musescore, and also designed speakers.

Performance & Music, Engineering

Mentorship: Colin Jemmot, Acoustical Engineer; Marc Yu, Music Composer and Concert Pianist

---

Thank Yous!

Quest takes a village!

Many thanks to Diane Rosenberg for envisioning Quest and for her consistent belief in the importance of this program for our students.

Many thanks to Kim Saxe for supporting the Quest program and for making it what it is today.

Many thanks to Stephen, Mike, Dan, and our Grade Level Deans: Hillary, Alexa, Barry, Jen Paull and Danielle for their huge support of Quest.

Thank you to all of the upper school advisors for coaching and supporting students through their Quest journey.

Thank you to Rob Zomber for teaching, supporting, and mentoring the entire 9th grade in Quest and for setting them up to succeed in Quest for years to come!

Thank you to Drew and the Facilities Team for the tremendous support in all the behind-the-scenes pre-work to transform a functioning high school into a showplace for the simultaneous viewing of hundreds of Quest projects!

Thank you to Chef Robert and his crew for their hard work in designing, creating, and setting up such beautiful and delicious food and beverages for Quest Expo (and for enthusiastically agreeing to have several “Food Quests” serve out of the kitchen!).

Thank you to Meghan and the admin team for their cheerful and invaluable support with all kinds of logistics, printing, and general attention to details that make Quest Expo flow well. Much appreciated!

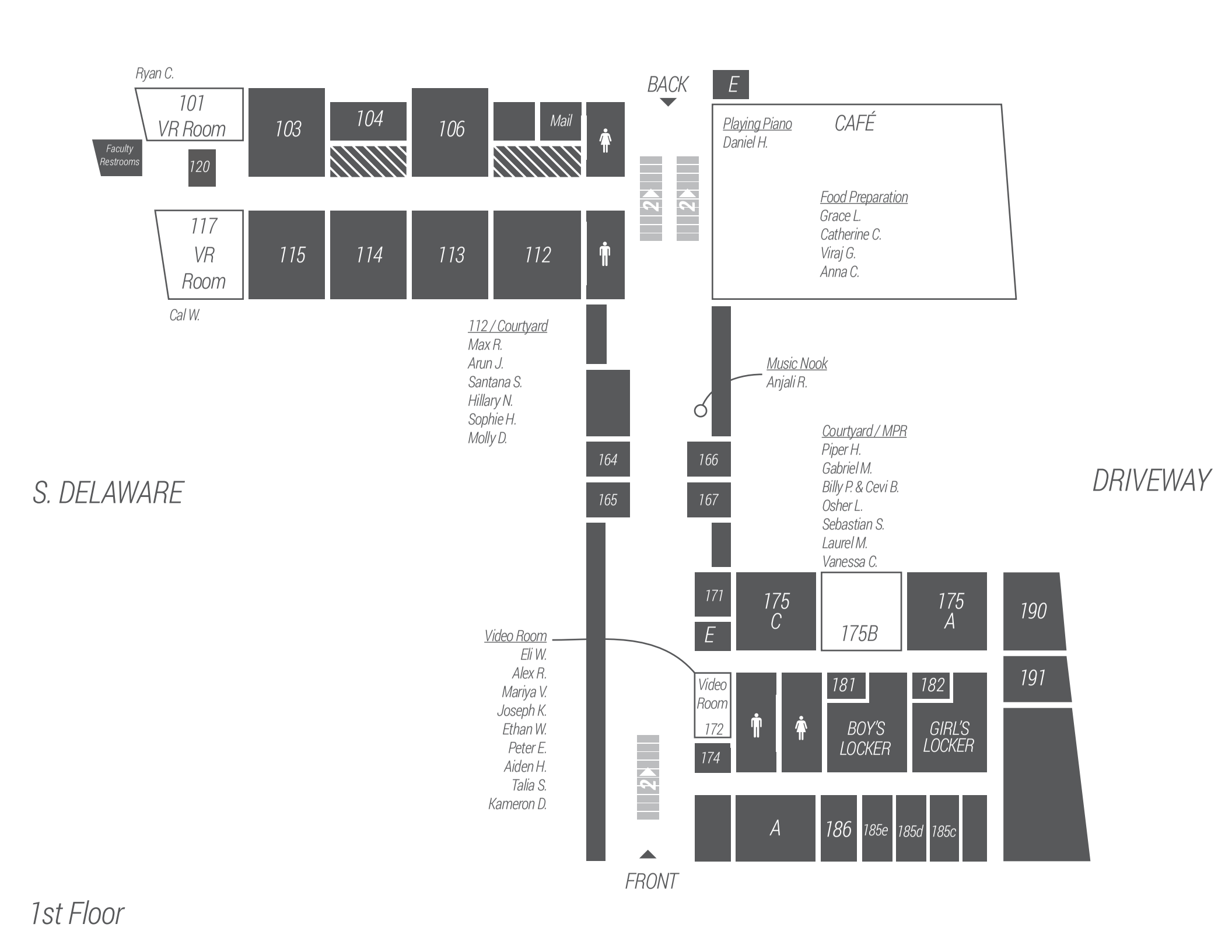
Thank you to Bryan and his Tech Team for being so easy to work with and for making sure each student has the electrical power and other needed equipment to be able to best present their Quests.

Thank you to Zoe for her work on the Quest Expo website!

Thank you to the I-Lab team for their work preparing for this event and for the myriad of preparations that make this night work.

Finally, thank you, to all of our 9th, 10th, 11th, and 12th graders who navigated the unknown and followed their hearts, as they realized their Quests and inspire others to greater heights! We want to thank each and every one of you for taking the risks, making the difficult decisions, persistently tracking down what was needed to maintain forward momentum, and for sharing your process with all of us. You are all more inspiring than you even may realize to the rest of us!

With Gratitude,
The Upper School Team


Ryan C.
101
VR Room
Faculty Restrooms
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Mail
BACK
E
Playing Piano
Daniel H.
CAFÉ
Food Preparation
Grace L.
Catherine C.
Viraj G.
Anna C.
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VR
Room
Cal W.
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112 / Courtyard
Max R.
Arun J.
Santana S.
Hillary N.
Sophie H.
Molly D.
Music Nook
Anjali R.
Courtyard / MPR
Piper H.
Gabriel M.
Billy P. & Cevi B.
Osher L.
Sebastian S.
Laurel M.
Vanessa C.
S. DELAWARE
DRIVEWAY
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E
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Video Room
Eli W.
Alex R.
Mariya V.
Joseph K.
Ethan W.
Peter E.
Aiden H.
Talia S.
Kameron D.
Video
Room
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BOY'S
LOCKER
GIRL'S
LOCKER
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FRONT
1st Floor

Carlo & David
Valerie B.
Maya C.
Alex C.
Gavi G.
Shinyi O.
Brian P.
Aidan P.
Gus W.
Amanda W.
Health 201
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IT
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243 WRITING & RESEARCH
Dylan T.
247
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Misc.
Sophia M. & Sanjana V.
Noah T. & Ethan F.
Zach S. & Atharv C.
Morgan T. & Natalie A.
Julietta
Isabelle A.
Amelia A.
Spencer B.
Gabi B.
Ishir G.
Connie H.
Austin J.
Amalia K.
Carmen M.
Stefan S.
Jeremy
Daniel B.
Eleanor H.
Jordan M.
Eleanor M.
Tara S.
Avi S.
Cal W.
Mirielle W.
Eugenia X.
Lee
Ryan C.
Annie E.
Vienna G.
Nirek G.
Claire G.
Teli P.
Alex Pl.
Rohan V.
Michelle W.
Min & Davion
Daniel A.
Casey G.
Aliya G.
Daniel H.
Julie R.
Vir S.
Anam T.
Noah V.H.
Kevin W.
JoJo W.
Michaela
Liam D.
Alice G.
Joseph K.
Zulie M.
JP P.
Alexander R.
Stephanie S.
James T.
Mariya V.
Annie Z.
Dark Nook
Ashley R.
Hillary Freeman
Sean C.
Nicholas H.
Sadie K.
Afton L.
Luke M.
Lily M.
Paige M.
Evan S.
Willow Y.
Chris Scott
Quinn Ar.
Trevor G.
Merix G.
Malianna J.
Alyssa L.
Sam S.
Eli W.
Lauren W.
Shalin Z.
Lucy B.
Sushu X. & Veronique M.
Sian B.
Gaelen C.
Leo C.
Kate E.
Quetz M.
Bayan S.
Nikhil T.
Antonetta T.
Paul & Anthony
Elliot C.
Tomo G.
Ana I.
Abby P.
Etaash P.
Jonah R.
Matthew S.
Kaia S.
Brian-Miguel U.
Sama Z.
ROOF GARDEN
E
GYM
(See Detail Page)

2rd Floor

Luke & Wesley
Eliot C.
Jason H.
Jacob .
Irene M.
Katya P.
Luke P.
Max R.
Eugenia T.
Business Office 301
302
304
306
307
309
E
340
341
342
346 Writing & Research Center
346
345
320
319
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317
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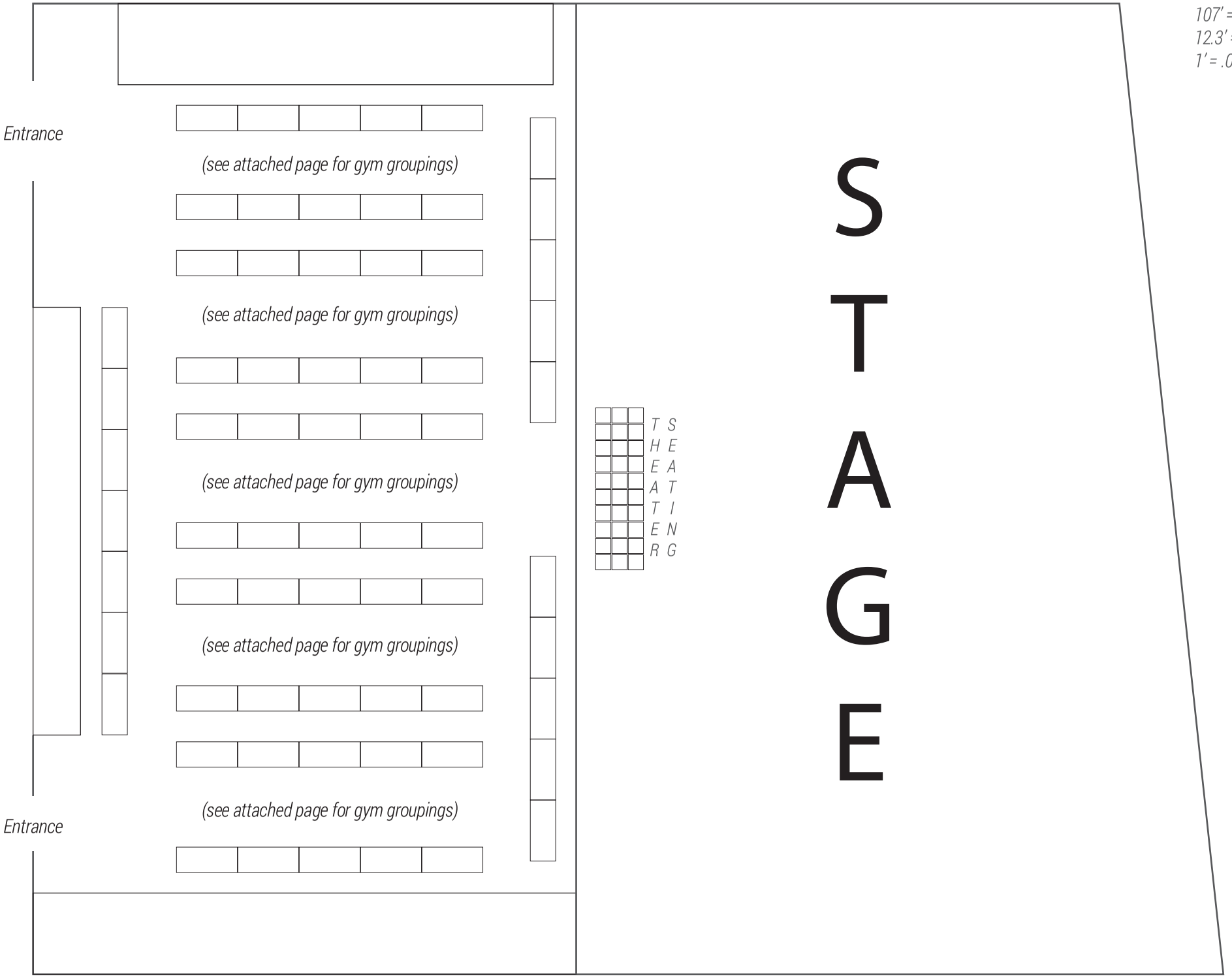
Mandy
Isa A.
Isabel C.
Noah H.
Nico L.
Maya M.
Nikhil S.
Justin Z.
Molly K.
Stephanie & Rob
Josh F.
Chloe K.
Ina L.
Alex N.
Izzy S.
Jake V
Aidan W.
Hanna Z.
Jo
Jack B.
Amy C.
Steven K.
Christopher M.
Amelia M.
Evan S.
Max S.
Amit S.
Merritt V.
Naila W.
Jan &Jamie
Clay A.
Ryan G.
Anya G.
Zoe H.
Ben L.
JJ M.
Stanley W.
Alica & Grant
Bran B.
Megan F.
Nivedita G.
Max G.
Anna K.
Grace L.
Casey M.
Cory T.
Ben Y.
Connie Liu
Quincy A.
Elizabeth B.
Hannah C.
Rachel D.
Finley F.
Tyler G.
Luciano M.
Tyler P.
Parker W.
Trip & Alexa
Jeremy D.
Alice E.
Calista H.
Caroline K.
Pranav R.
Grace R.
David S.
Austin Z.
Camille G.
Mike & Phillip
Meg C.
Zoe G.
Gabriel M.
Madeline P.
Nikhil P.
Steven R.
Laura S.
Sky S.
Wesley S.
S. DELAWARE
DRIVEWAY
3rd Floor


107' = 8.67"
12.3' = 1"
1' = .081"
Entrance
(see attached page for gym groupings)
(see attached page for gym groupings)
(see attached page for gym groupings)
(see attached page for gym groupings)
(see attached page for gym groupings)
Entrance
STAGE
SHEATTIENRG

Gym Detail

GYM GROUPINGS

Patrick & Ted
Emma D.
Sean G.
AJ N.
Ari N.
Sophie P.
Joseph Q.
Isha R.
Julia R.

Yuliya & Carl
Steven D.
Ricardo G.
Natalie H.
Tyler K.
Zoe L.
Paco P.
Sonali S.
Santana S.
Donya Z.
Quantum Z.

Danielle
Peter E.
Viraj G.
Om G.
Nina G.
Devon H.
Markus L.
Natalie L.
Thea P.
Eli van der R.
Megan W.

Arta
Jasper A.
Jackie C.
Sam D.
Julianna G.
Nathalie G.
Anika K.
Justin S.L.B.
Ethan W.
Maddie W.
Justin X.

Jen
Austin C.
Aiden H.
Sol M.
Jack M.
Jessa M.
Robin S.
Talia S.
Rebecca S.
Chip T.

Claire
Ethan D.
Natalie F.
Neel G.
Ishani G.
Ethan L.
Kyle M.
Anna S.
Lucy W.
Elaine W.

Leonard
Scott B.
Sinead C.
Adrianna D.
Adithi G.
Xander H.
Adam K.
Alex L.
Lila M.
Hilary N.
Neeraj S.

Jen
Laela J.
Ashley R.
Leo R.
Sydney S.
Emily S.
Evan S.
Effie T.
Emily W.
Andrew Z.

Mark
Cameron C.
Lauren H.
Dylan J.
William K.
Kaitlyn P.
Jaden T.
Nehmat V.
Grace W.
Sophia Y.

Les & Lindsey
Shiley E.
Audrey K.
Elise M.
Arman M.Z.
Gitika P.
Noah R.F.
Cameron W.
Lucas W.

Barry & LiAnn
Audrey C.
Henry D.
Arya G.
Julienne H.
Maya L.
Anna P.
Christopher R.
Tom S.
Aidan S.

Allen
Louis B.
Audrey C.
Ethan K.
Celia M.
Cooper M.
Beatrice S.
Angus Z.

Ali & Veena
Mickey D.
Noelle F.
Toby F.
Grace H.
Sarah H.
Leo I.M.
Eric J.
Libby M.
Nico P.
Ben S.

Lily
Benjamin C.
Caleb Di.
Luca F.
Alex H.
Jenna L.
Liam M.
Madeleine M.
Anjali S.
Kayla W.

Francine
Kolby H.
Charlie L.
Eton S.
Robby V.

Ben
Peter A.
Olivia A.
Maddie C.
Leona D.
Max D.
Kyle M.
Gavin R.
Kristina S.
Alex Y.

Group Quest
Tobias & Greg
Sanam & Aleeha
Shaheen & Leo
Leif & Nachi
Zack C. & Michael B.

Performance
Lucy W.
Megan W.
Isha R.
Anna P.

Gym Detail