



2019-2020

Juneau-Douglas High School: Yadaa.at Kalé Career & Technical Education Highlights

House Build students with teacher **Andy Bullick** and the UAS Construction team are working on installing flooring for House Build 1 and preparing for International Residential Code certification. Students are planning to participate in the Habitat for Humanity House Build program in March in Hawaii. **Basic Construction** students built a playhouse for a local daycare and used the Carpenters *Career Connections* curriculum applying skills to small construction projects. **Metals 1** students are learning stick welding, and **Metals 2** students are using advanced welding skills fabricating design projects.

CAD 1 students with teacher **Colin Dukes** are planning potential designs for a community project with CBJ. Last semester students developed ideas for the Cope Park Bike Park. **Woods** classes are developing employability skills, learning shop safety, and building dovetailed boxes while students in advanced woods are building furniture and skis.

Intro to Trades students are learning how to use the basic tools of woods, metals, and small engine repair in simple projects. Woods students built birdhouses. Small Engines students learned to fasten bolts, cut threads, and repair damaged bolts, and measure engine components using calipers, micrometers, and feeler gauges. They also learned how to safely lift vehicles, change tires, and inspect brakes. Metals students taught JDHS teachers basic welding at a recent staff inservice.

Auto Mechanics students with teacher **Chris Hinkley** have worked on a number of automotive systems including: changing wheels to studded tires, oil changes, replacing brake systems, replacing power steering lines, scanning for error codes, and rebuilding engines! Students learned to approach difficult jobs, keep the workplace organized and clean, and how to work through challenges. **Small Engines** students are learning the fundamentals of engines as well as basic maintenance and troubleshooting. Students completely disassembled and reassembled single cylinder lawn mower engines and were all able to get them running!

Video Production students with teacher **Lexie Razor** and industry trainer **Mikko Wilson** learned the technical skills of video production and are producing bi-weekly live 10-minute student newscasts on YouTube: <http://JDHSVideo.org>.

Fisheries Tech students with teacher **Henry Hopkins** are monitoring an instream salmon eggs incubator, engaging in salmon scale analysis, and working with Fish and Game and DIPAC learning about hatchery operations.

Oceanography students with teacher **Ben Carney** are studying tides and tsunamis and will begin assessing climate change with respect to ocean and biodiversity. **NOSB** students are preparing for the upcoming state competition through their research on “resilience in ecosystems” with a focus on kelp ecosystems.

Exploring Business students with teacher **Chris Heidemann** are learning about supply and demand, basic economics and playing the stock market game. **Contemporary Cuisine** students earned AKDEC Food Worker Cards while learning about sanitation and safety. Students are learning about careers in the hospitality industry and skills in baking and preparing complicated side dishes and whole meals. **Work Readiness** students are learning Microsoft Excel and Word, learning about their personality and career interests through research projects.

Human Anatomy and Physiology students with teacher **Jasmine James** are studying skeletal and muscular system and joint movements. The classes will be going on field trips to both Bartlett Hospital and SEARHC to learn about careers.

15 Emergency Trauma Technician students with instructor **Scott Ferguson** completed training and earned state certification.

Intro to Health Sciences students with teacher **Henry Hopkins** are learning the importance of vaccine compliance and interpreting vaccine records, researching the outbreak of the coronavirus, and job shadowing at Bartlett Hospital and local medical offices. **Outdoor Biology** students made traditional Atlatl spear throwers used for hunting, learned about the science of trajectory, and mapped Tlingit Aani Southeast Alaska Cultural Sites.

Intro to Engineering Design students with teacher **Chris Hinkley** are learning the design process, sketching, dimensioning, and CAD modeling. Students utilize the CNC, 3d printer, lathe and other tools for a series of small hands on projects, while simultaneously working on larger year-long projects. There are three teams in the class: one working to design and build an electric guitar, another creating an exoskeleton arm, and the third group building an electric bicycle.

Girls in the **IGNITE club** with teacher **Caplan Anderson** explore interests and non-traditional careers in STEM and the Trades. Students recently built a roof on a barn for Gastineau School and are in the planning phase for site prep and fencing with UAS mentor Robin Gilcrist.

JDHS Robotics is comprised of two teams, "Bots in Black" and "Accidental Volunteers." After a successful Southeast Regional competition, both teams are headed to the State competition. Team members took note at Regionals of the strengths and weaknesses of their robot and are making improvements for the state competition.

AP Computer Science Principles students working with TMHS teacher **Carol May** have learned a block-based programming platform, the basics of JAVA and digital filters, graphics, audio, cyber security, digital ethics, and handling big data. In preparation for the AP exam, students are working on their "Create Performance Task", where they will design their own app. **Introduction to Computer Science** students working with JDHS Teacher **Lexie Razor**, have been learning about the programming language Python and writing linear programs, figuring out loops and rays as well as some basic graphics.

Alaska Native Design students with teacher **Lyle James** are learning how to draw humanoid faces and Southeast Alaska animal clan designs. Students in 3D Alaska Native Design are carving grease bowls.

Ed Rising taught by TMHS teachers **Gretchen Kriegmont and Luke Gunkel**, have 11 students this semester who are learning about developmental psychology and how it can be utilized to create a more personalized learning experience for each student in the classroom. Students apply their learning through internships in elementary classrooms.