



2019-2020

## Thunder Mountain High School Career & Technical Education Highlights

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**Marine Biology** students with teacher **Kristen Wells**, Dr. Shannon Atkinson and Kendall Mashburn with UAF, and Ashwin Sreenivasan with UAS, are rearticulating two marine mammal skeletons this spring, a harbor seal, sea otter, and humpback whale flipper. The students are also involved in a training on remote monitoring of marine species using quadcopter/drones and will experience controlling a drone and taking a picture. **Applied Science-STEM** students learned coding and engineering design and engaged in project-based learning using 3D and 2D technology. Students are also engaged in the **Ocean Guardian Program** working on local projects including reducing single-use plastic items going to the landfill from the schools.

**Digital Arts** students with teachers **Kent Mearig and Kristen Wells**, are learning fundamentals of good digital design, photo manipulation in Photoshop, and layout and design in Illustrator.

**Finance and Investing** students with teacher **Svetlana Filkova** learned about personal finance and investments. All students created a financial portfolio and learned about budgets, loans, taxes, insurance, how to read their paychecks, analyze financial records, and buy and sell stocks. **Exploring Business** students are learning about basic economics.

**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.

**Human Anatomy and Physiology** students with teacher **Kathleen Galau** are looking into the process the FDA uses to approve new medications, learning about Alaska Native medicinal plants and determining how to have them approved by the FDA. The classes will be going on field trips to both Bartlett Hospital and SEARHC to learn about health careers.

**Outdoor Biology** students with teacher **Adrianna Northcutt** learned about Coast Guard careers and cold water survival and boating safety taught by active Coast Guard members. Students were introduced to the "Kids Don't Float program" and some students will receive state training to become ambassadors to teach other students about this safety. Students also worked with DIPAC and Fish and Game and raised over 100 king salmon fry in their classroom tank.

**Forensic Science** students have learned about the psychology of observation and memory and engaged with the school psychologist in how it relates to forensic science.

**Work Readiness** students with teacher **Alan Young** explored career interests, learned about taxes, time management, job search and interview skills, and engaged in projects such as learning how to buy a car. They are also doing research on college options and have frequent guest presenters to talk about real-life experiences in various career pathways.

**Ed Rising** taught by **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.

**Earth Science** students with teacher **Topaz Shryock** are learning about plate tectonics. Students recently designed models of what the Mendenhall Valley looked like through time in regards to the glacier and sea levels.

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

**Culinary** students in **Jay Watt's** classes have earned AKDEC Food Worker Cards while learning about sanitation and safety. **Contemporary Cuisine** students are learning knife skills and beginning a unit on soups. **Culinary 1** students are learning the fundamentals of classic French mother sauces. They are also working on restaurant design including researching themes, interior design, menus, and real estate transactions.

**Woods** students in **Al Tingley's** classes are learning employability skills, shop safety skills, and building small boxes and cutting boards.

**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.

TMHS **Robotics** teams took almost all of the awards at Southeast regionals: Inspire, Winning Alliance Captain, Think Award, and Connect, and four teams qualified for state in February. This year's challenge involves picking up and stacking interlocking blocks and teams have been experimenting with many different designs and are in their final stages of programming. When they are not building, teams are out in the community spreading the fun of robotics and STEM. The all-female team mentored two Girl Scout FLL robotics teams, and all the teams helped run events at the district elementary science night.