#### Work Session

Tuesday, March 30, 2021 5:30 PM NBMHS RC/Zoom, 2920 3.5 Nome-Teller Hwy, Nome, Alaska 99762

- A. Call to Order
  - B. Items for Discussion
- 1. Arctic Access Partnership Presentation
  - 2. NACTEC ANEED Grant Presentation
  - C. Upcoming Events:
    - Tuesday, April 13, Regular Meeting, 5:30 pm, NBMHS RC/Zoom
    - Tuesday, April 27, Work Session, 5:30 pm, NBMHS RC/Zoom
  - D. Adjournment

### ARCTIC ACCESS, INC

partnership





Jill Peters

March 30, 2021

#### ARCTIC ACCESS, INC: WHO ARE WE?



Independent Living Program located in Nome, Alaska, providing information and assistance to elders and people with disabilities in the North West Arctic and Norton Sound Regions.

#### PARTNERSHIP





**Discovery** 

Work study

**Summer paid internships** 

Job readiness

Local/district employment

#### DISCOVERY



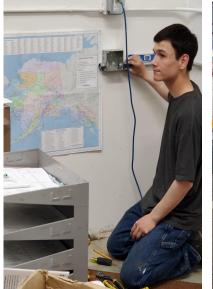




Based at Beltz, this program incorporates job readiness skills application with field trips to local employers (AC, TSR, etc.), life skills instruction, CPR, and events like Culinary Day, sponsored by NACTEC.

#### WORK STUDY













Through work study programs, students receive paid positions that include mentoring and opportunities for permanent employment or continued vocational training.

#### SUMMER PAID INTERNSHIPS











#### SUMMER PAID INTERNSHIPS

Starting our 5th year!
Ages 14-graduation

- +/-20 students
- +/- 10 local businesses
- +/- 10 local businesses



This partnership provide invaluable support for students with multiple barriers



#### LOCAL/DISTRICT EMPLOYMENT



Nome-Beltz/Arctic Alaska alumni find employment working in various sectors of our region including security, the hotel industry, our regional hospital, and Nome Public Schools!









#### THANK YOU

# Alaska Native Engineering Education Development (ANEED) Project

A Kawerak, Inc./NACTEC Partnership supported by the U.S. Department of Education's Office of Indian Education - Accessing Choices in Education (ACE) grant program.

#### ANEED Goals

■ 1. Develop and implement engineering design challenge/STEM pathway for Northwestern Alaska PreK-8 students.

(STEM: Science, Technology, Engineering, & Math)

2. Improve Alaska Native students Math and Science proficiency, with deeper conceptual understanding, through engineering-related activities and career exploratory programs in grades 8-12.

#### ANEED Objectives

- 1. Create and deliver Early Childhood Education engineering exposure experiences for Nome Public Schools and Bering Strait School District students (Grades PreK-2).
- 2. Create and deliver a series of STEM-infused, engineering-related activities to transition Northwestern Alaska students from elementary through middle school with problem solving skill sets (Grades 3-7).
- 3. Develop and infuse STEM concepts into Career and Technical Education programs in Alaska's priority industries for Northwestern Alaska high school students (Grades 8-11).
- 4. Prepare high school students for post-secondary transitioning into the University of Alaska system (Grade 12).

## PreK – Grade 12 STEM Education Pathway

- Offer 20 Engineering Education services at grade-level clusters:
  - PreK-2; 3rd-7<sup>th</sup> grade; 8th-11<sup>th</sup> grade; & 12<sup>th</sup> grade
- Services include:
  - In-school & after school programs
  - Family STEM night programs
  - Summer camp programs
  - Dual credit opportunities
  - Post-secondary preparation/assessments
  - Residential programming and Transition Camps

#### Prek: WEE Engineer

- Science Museum of Boston Engineering is Elementary (EiE) Curriculum
- (4) Design Units
- Three-Step Engineering Design Process focus
- WEE Engineer units include:
  - Designing Fans
  - Designing Wrecking Balls
  - Designing Rafts
  - Designing Noisemakers

#### EiE for Kindergarten

- (4) Unique Engineering Design Challenges
- Five-Step Engineering Design Process
- Exposure to Earth Science & Physical Science units
- Units include:
  - Raise the Roof: Designing Shelters
  - Here's the Scoop: Designing Trash Collectors
  - Go Green: Engineering Recycled Racers
  - Bubble Bonanza: Engineering Bubble Wands

#### Engineering is Elementary: Grades 1-3

- 4-6 units per year/per grade level
- Life Science, Earth Science, & Physical Science units
- Sampling of units include:
  - The Best of Bugs: Designing Hand Pollinators (Gr. 1)
  - Music to My Ears: An Acoustical Engineering Challenge (Gr. 1)
  - To Get to the Other Side: Designing Bridges (Gr. 2)
  - A Sticky Situation: Designing Walls (Gr. 2)
  - Marvelous Machines: Making Work Easier (Gr. 3)
  - Light Up the Night: An Electrical Engineering Challenge (Gr. 3).

#### Engineering is Elementary: Grades 4-5

- (4-6) units per year/per grade level
- Life Science, Earth Science, & Physical Science units
- Sampling of units include:
  - Now You're Cooking: Designing Solar Ovens (Gr. 4)
  - A Slippery Slope: Engineering an Avalanche Protection System (Gr. 4)
  - Shake Things Up: Engineering Earthquake-Resistant Buildings (Gr. 4)
  - A Slick Solution: Cleaning an Oil Spill (Gr. 5)
  - An Alarming Idea: Designing Alarm Circuits (Gr. 5)
  - Water, Water Everywhere: Designing Water Filters (Gr. 5)

#### Engineering is Elementary: Grades 6-8

- May include a limited sample of EiE units at middle school level
- Potential EiE units:
  - Here Comes the Sun: Engineering Insulated Homes
  - Plants to Plastics: Engineering Bioplastics
  - Growing Up: Engineering Vertical Farms
  - Outbreak Alert: Engineering a Pandemic Response

#### STEM Infusion in CTE: Grades 7-12

- NACTEC & ANSEP partner programming
- Science & Math infusion in CTE content
  - Aviation: <a href="https://www.nacteconline.org/aviation-program/">https://www.nacteconline.org/aviation-program/</a>
  - Small Engine Repair: <a href="https://www.nacteconline.org/small-engine-repair-program/">https://www.nacteconline.org/small-engine-repair-program/</a>
  - Flux Core Arc Welding
  - Healthcare

#### Delivery Plan

- NACTEC will hire (4) Itinerant Teachers
- Teachers will be assigned (4) primary leads
  - E.g. Nome/Golovin/Wales/White Mountain
  - Village service: 6 weeks/school year/site
- Nome service includes
  - Kawerak Head Start
  - Nome Pre-School
  - Nome Elementary School
    - K-5 Special offering (school day) & after school programming
    - Equivalent of 1.0 FTE position anticipated for NPS/NES
    - NES 6th grade classroom Room 119 -- location to host EiE program

#### Transition Camp Programs

- NACTEC/ANSEP 5<sup>th</sup> Grade STEM Ready Camp (Nome)
  - FY22 (1), FY23 (2), FY24 (3)
- ANSEP/NACTEC 6<sup>th</sup>-8<sup>th</sup> Middle School Academy (Anchorage-UAA)
  - NPS & BSSD Students; NACTEC staff chaperones
  - (1) ten-day program/year in FY22-FY24 (54 students/year)
- UAF-NWC/NACTEC Salmon Lake Field Biology Camp
  - August 2022-24, Five-day dual credit camp program
- ANSEP High School Programs

#### Performance Outcome Measures

- PEAKS data:
- Increase cumulative student Math proficiency by 5% in project years 2, 3, & 4.
- Increase cumulative student Science proficiency by 5% in project years 2, 3, & 4.
- Reduce the % of developmental Math courses for incoming Alaska Native college Freshmen by 5% in years 3 & 4.