REACH Up Science and culture camp keeps learning local

By Karen Beranek, Science and Social Studies Facilitator, BSSD

The REACH Up Science and Culture Camp for 2017 was held August 7 through 11 at the Unalakleet Bible Camp, where eight paraeducators, eight teachers from the Bering Strait School District and nine scientists from the University of Alaska Fairbanks came together to examine issues around the theme “Changing Lifestyles.” The Outreach initiative, REACH Up, spearheaded by Sally Keeper and Sam Norlin, strives to Raise Educational Achievement Through Cultural Heritage.

While last year’s emphasis covered coastal erosion, disappearing lakes and shrub expansion, this year participants analyzed infrastructure, river ecology and subsistence impact. The project is designed to develop curricular resources tied to the area’s environment and culture, provide professional development and instructional support for staff implementing the lessons, and culminate in youth leadership and action as students work on proposing solutions to the harmful effects of climate change.

Dr. Laura Ortoleva led the educators through fieldwork that focused on energy and nutrient transfer through marine webs by testing the health of the marine environment in areas of the river. Anna Combet-Friedman from Shishmaref stated that the project “is a great way to network with scientists who study the region. It enabled me to collaborate in making my science lessons more culturally relevant and well as more ‘hands-on.’”

She added that she liked how it modelled the use of local knowledge through paraeducators providing anecdotal evidence for classrooms.

The emphasis on nutritional ecology on juvenile salmon prompted Calvin Aldeh of Shaktoolik to comment, “These hands-on activities benefit anyone teaching science and REACH Up provides the best training for what we want to teach in the BSSD.” Don Barr of Koyuk enjoyed the many hands-on activities studying the diversity of small animal life in the region and how it is being affected by temperature changes.

Energy infrastructure is a hot topic, and Jeremy Vandermeere, a research engineer with the Power Systems Integration Program at Alaska Center for Energy and Power, Vandermeere presented on his computer simulations of “microgrids” in Alaska to determine the effects of integrating different energy resources and technologies. Participants discussed the efficacy of various energy resources in their respective villages, culminating in a field trip to energy infrastructure stations in Unalakleet village proper. Abbie Takak from Shishmaref left that field trip to the NSDEC, power plants and sea wall construction “taught me things I really didn’t know before and it will be beneficial for me in the school to give feedback to the students about infrastructure opportunities.”

Takak also expressed her appreciation for the presentation by Matt Macander, a geographer for ABR, Inc., Environmental Research & Services. Macander discussed wildlife, vegetation, habitat changes and shifts in landscape ecology. The use of drones in vegetation mapping was explained to the educators, who took turns using the drone to view the landscape in the region from above. Abbie Takak stated that the session gave her answers to questions she had about erosion and vegetation changes in Shaktoolik, that the community had been unable to adequately explain.

All participants expressed their appreciation of the visuals available on the k12reach.org website, that pair local experts with scientists in discussing alterations in coastline and vegetation. Rebecca Atchak and Marie Otten-Pete, both of Stebbins, were participants in the camp who are featured in the videos. “Kids will relate to this type of learning,” said Tyler Ivanoff of Shishmaref.”

Ivanoff also praised the cultural activities presented by the paraeducators in attendance: storytelling, doll making, fish cutting and food preparation, hunting signs and sewing all brought accolades from those in attendance. Amanda Trower of Koyuk stated that she looked forward to sharing the skills she had gained making the Inuuguaq dolls and skin sewing, and added, “the videos will be amazing prompts for journaling responses.”

Scientists and videographers also in attendance were Gary Cooper, Lori Schoening and Yuri Bult-Ito, who develop the curriculum, and multimedia specialists Kelsey Gobroski and Patti Clark.