BioQuest!



PEAK students meet with Carroll College Professor Grant Hokit in the Biology Labs after his presentation on international research projects.

March 15, 2024

Dear PEAK Students, Parents, and Teachers,

NEXT WEEK there will be only one PEAK 8-12 meeting. This required session is only for Costa Rica travelers and their parents—5:00 to 6:00 PM in the Bryant School Library (located at the top of the stairs, which are on the right inside the main door.) Before the meeting, all traveling students and parents should read my March 6 email and attachments.

This week PEAK students met at Montana Wild, starting with Ken McDonald, director of the Wildlife Division at Montana Fish Wildlife and Parks. Ken provided an excellent overview of the complex considerations in how his department tracks and manages diverse species. He discussed the need to understand human values in relation to wildlife, a field called human dimensions. For example, shifting attitudes toward wolves, which is one of the species selected for a student's independent study. One of his memorable quotes was "Managing animals is easy—humans are hard!" He referred us to this page on the department's website for more information about wolf issues:

<u>https://fwp.mt.gov/conservation/wildlife-management/wolf</u> And this webpage for Montana wildlife: https://fwp.mt.gov/conservation/wildlife-management

Next, we attended the Last Chance Audubon presentation by Bo Cree, who showed slides and described researching Black Swifts, primarily in Glacier National Park. These rare birds nest behind waterfalls, where they raise only one offspring on a successful season. They fly 70 to 90

miles per hour and have been recorded to fly continuously without landing for as long as ten months! The nests are remote, requiring the survey crews to hike into the backcountry, where they observe nest sites around dawn and dusk—a very demanding research commitment. The methods for Black Swift research provide a strong model for how scientists build better understanding of an elusive species. Fortunately, one of our PEAK students has chosen to research Black Swifts, so we will all learn more about them.

On Wednesday at CR Anderson, students started to investigate jelly fish, one of the species chosen for independent study. In case you think they are insignificant creatures, just ask an 8th grader about the ecological importance of jelly fish—and look forward to our final presentations. We also discussed wolves and mountain lions, two of the Montana species students plan to research.

This is our Independent Study unit. Everyone will study a species or more than one interconnected species. Students who travel to Costa Rica will study the sea turtles as well as additional species at the Pacuare Reserve.

Throughout their years in PEAK, students have investigated these five areas of living things: 1. Habitat/range; 2. Food/diet; 3. Movement/migration; 4. Reproduction/care of young; 5. Natural history. In this unit, we ask that they study all these and more. Please investigate the role of the species in the ecosystem as well as the human dimensions. For example, for those who research Leatherback Sea Turtles need to investigate their relationship with humans: People have contributed to the decimation of their population and are now working to help it recover, an effort we will join at the Pacuare Reserve.

Check out students' assessment of our activities and final events from the first two PEAK units on Powerschool. Then, please take a few minutes to respond to the survey about our recently completed unit. This gives PEAK staff data to continue to improve.

PARENTS: This is the link for your survey: <u>https://forms.office.com/r/qrkUymFyec</u>

STUDENTS: This is the link for your survey: https://forms.office.com/r/R6CdnmQep9

Upcoming PEAK 8-12 Meetings—

5:00-6 PM, Tuesday, March 19, Bryant Elementary School Library. Required meeting for all Sea Turtle Ecology Course travelers and their parents.

Week of March 18-22: No PEAK meetings for students not traveling to Costa Rica. No meetings at CR Anderson this week.

Sunday, March 24, 8 AM: Turtle travelers depart from Bryant Elementary School.

Sunday, March 31, 11:30 PM or Midnight: Travelers return to Bryant Elementary School

Tuesday, April 2, 6 to 8 PM: All PEAK 8-12 students meet at Helena College, room 120.

Wednesday, April 3, CR Anderson 8th grade students meet during advisor and lunch.

Tuesday, April 9, 6 to 8 PM: All PEAK 8-12 students meet at Helena College, room 120.

Wednesday, April 10, CR Anderson 8th grade students meet during advisor and lunch.

BioQuest UNIT ACTIVITIES	RESEARCH— I CAN STATEMENTS
Meet with biology researchers and wildlife	I can listen actively, take effective notes, ask
managers.	deep questions, and utilize expert
	information at a professional level in my own
	work.
Study selected fauna in Montana, Costa Rica,	I can recognize, understand, and use the 5
and elsewhere.	Areas system autonomously.
Conduct research or learn about specific	I can recognize, understand, and use the
studies based on the scientific method.	scientific method autonomously.
Independent study of specific species or	
ecosystems.	
Conduct research into the human dimensions of	I can investigate and describe the ecological
the species chosen for research. Investigate the	significance of a species, as well as the
species role in a larger ecosystem.	human dimensions that influence it.
Interview research scientists.	I can autonomously generate professional-
	level interview questions tailored specifically
	to the interviewee.