

BioQuest!



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

Dear PEAK Students, Parents, and Teachers,

WE MUST POSTPONE THE COSTA RICA TRAVEL MEETING because Capital High School will host incoming freshman at 6 PM on March 5. Instead, our final logistics meeting for sea turtle researchers and parents will be 5:30-7 PM on March 19. See the schedule below.

Did you know that some wood frogs above the Arctic Circle have the ability to thaw out and return to normal life after spending the winter in a solidly frozen state—like an ice cube! Parents, ask your students to explain this unique adaptation. While you are at it, ask them how scientists test for the presence of West Nile Virus in Montana. See if they can tell you why some Long-toed Salamanders develop typical teeth, while others cannibalize their own species after growing much bigger teeth—phenotypic plasticity! This week, we learned how scientists study these and other fascinating creatures.

Tuesday, we launched our new unit, *BioQuest!* Carroll College Professor Dr. Grant Hokit presented many of his research projects, including several species of amphibian as well as mosquitos that carry West Nile Virus. In the case of every one of his research subjects, HABITAT security turns out to be a major determinant of the species' survival. Dr. Hokit's scientific studies on herpetofauna provided evidence that has been used to protect environments from further development or degradation. He also had some advice for protecting the students in the Costa Rican forests later this month: "Stay with your guide, go slowly and watch where you step."

This unit focuses on research and protection of vulnerable wildlife species in Montana, Costa Rica, and wherever the habitat is for the species students choose as their independent study subject. Students who travel to Costa Rica will do most of their research at the Ecology Project station in the Pacuare Reserve. Students not traveling to Costa Rica can research a species in Montana or elsewhere. Several wildlife experts have agreed to share their experiences and knowledge in the coming weeks.

Upcoming PEAK 8-12 Meetings—Please note the different venues!

6-8 PM Tuesday, March 5: Most of the 8th grade students will be at Capital High School. The rest of us will meet in room 120 at Helena College.

Wednesday, March 6, CR Anderson 8th Grade Lunch and Advisor, Room 123. Bring laptops.

6-8 PM, Tuesday, March 12: **Montana Wild**, 2668 Broadwater Avenue. Meet first with Ken McDonald, director of Wildlife at Montana Fish, Wildlife and Parks. Next will be a presentation on Swift research in Glacier National Park by Last Chance Audubon. STUDENT VOLUNTEERS NEEDED TO SET UP CHAIRS at 5:30 PM—please let me know if you can come early.

Wednesday, March 13, CR Anderson 8th Grade Lunch and Advisor, Room 123. Bring laptops.

5:30-7 PM, Tuesday, March 19, LOCATION TO BE ANNOUNCED (probably at Bryant Elementary School Library) Required meeting for all Sea Turtle Ecology Course travelers and their parents. Some attendees need to leave the meeting at 6:30 because of school concerts. This will be our final meeting before we depart for Costa Rica. I will send more detailed information about our agenda.

BioQuest UNIT ACTIVITIES	RESEARCH— I CAN STATEMENTS
Meet with biology researchers and wildlife managers.	I can listen actively, take effective notes, ask deep questions, and utilize expert information at a professional level in my own work.
Study selected fauna in Montana, Costa Rica, and elsewhere.	I can recognize, understand, and use the 5 Areas system autonomously.
Conduct or learn about specific studies based on the scientific method.	I can recognize, understand, and use the scientific method autonomously.
Interview research scientists.	I can autonomously generate professional-level interview questions tailored specifically to the interviewee.