

Professional Development & Field Science to Bring Your Classroom to Life

#### **EXPAND YOUR HORIZONS IN THE HIGH COUNTRY**

On Ecology Project International's (EPI) Yellowstone Professional Development Program for Educators, you'll explore natural phenomena in the Greater Yellowstone Ecosystem (GYE), the oldest, most historic—and historically controversial—protected area in the United States. During research and conservation service projects for the Park, you'll explore strategies to help your students observe and identify phenomena, question, make claims, collect data, and analyze nature and anthropogenic impacts on ecosystems. You'll spend time with your field program community collaborating to create NGSS-based lessons that will captivate your students and kindle their passion for science using the rich, real-world phenomena of Yellowstone National Park.

#### **PROGRAM LENGTH:** 7 days

LODGING: Tent camping

PD HOURS: 40 hours

**COLLEGE CREDIT:** Optional 4 graduate credits through the University of Montana. Separate registration and tuition fees apply. Development of a full unit plan after course required.

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#### SAMPLE ITINERARY

- **Day 1:** Arrive in Bozeman, Montana. Meet your EPI instructor team, set up camp, and learn about the projects you'll be working on.
- **Days 2-4:** Track bison and other ungulates in YNP, remove invasive plants and/or fencing to improve migration corridors, monitor amphibian populations in the Custer-Gallatin National Forest.
- **Days 5-6:** Learn about and observe wolves in the Lamar Valley; visit YNP's hydrothermal features. Begin creating a framework for integrating your growing NGSS skills into the classroom.
- **Day 7:** Share resources, ideas for classroom applications, and lessons based on phenomena in the field. Raft the Yellowstone River and celebrate your contributions to the GYE.
- Day 8: Depart for home.



#### HOME (AWAY FROM HOME) ON THE RANGE

This course will give you the opportunity to assist with conservation work in and around Yellowstone's Northern Range—famously known as the "Serengeti of North America." Although only a small percentage of the Park, this area provides winter range for the largest elk herd in Yellowstone and is arguably one of the most carnivorerich areas in the lower 48 states. Here, you'll witness the incredible recovery of the bison and wolf populations while investigating how anthropogenic change is felt throughout the park, and how the long history of controversial wildlife management decisions shapes the ecosystem and the communities that depend on it.

## YELLOWSTONE IS YOUR CLASSROOM

With EPI, you'll work with Yellowstone National Park biologists and EPI staff to conduct habitat restoration and bison research. The work you do and the data you collect will help researchers answer big questions like: Why do bison move across the landscape? How do they share the landscape with other animals? How can the Park manage bison for all stakeholders involved? While helping Park scientists with research and conservation, you'll learn how to develop lessons that align with the NGSS and that will inspire your students to begin asking—and answering—their own scientific questions.

## **PROFESSIONAL GROWTH OBJECTIVES**

- Explore strategies to facilitate students' identification of phenomena, exploration of lines of inquiry, and collaboration to problem-solve through a scientific process.
- Model tools to support best educational practices while exploring environmental science, and nature in the field.
- Collaborate with colleagues and share ideas about how to integrate, modify, and use the ideas and activities shared during the field experience.
- Develop familiarity with the NGSS and how to align lessons with standards.
- Identify and collaborate with research and conservation partners available in your community.

## **KEY CONCEPTS**

- Biodiversity in critical ecosystems
- Conservation research
- Habitat restoration
- Human impact on the environment
- Scientific protocols for research in the field
- Environmental Literacy
- Restoration and mitigation of human impacts
- Phenomena to Inquiry and the NGSS





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