



ECOLOGY PROJECT
INTERNATIONAL

BELIZE

EDUCATOR TRAINING

HISTORY IS BEING MADE REAL-TIME IN BELIZE.

Cultural, environmental, and climate changes are happening on the backdrop of stunning scenery, biodiversity, and cultural richness, in a place where the human population density is low and opportunities for research and conservation are high. Belize offers an opportunity to study fragile ecosystems and astonishing phenomena in a country at the crossroads of environmental change and preservation.

Belize's biodiversity is held in its many forests and marine ecosystems. Over 60% of Belize's land is forested ecosystem that provides critical habitats for bats, birds, and the variety of life that travels the Mesoamerican corridor. EPI's Belize field experience offers education professionals a chance to delve into the issues crucial to making global connections that illuminate the importance of environmental literacy, deep understanding of anthropogenic impacts on environmentally rich ecosystems, and inspiration to empower learners to help create positive change.

Throughout your adventure, you will receive support and guidance in building lessons that will help you engage your students with topics fundamental to understanding environmental science through student inquiry and engagement with phenomena. The NGSS fundamentals will be covered and participants will work with other teachers to collaborate and exchange ideas for developing lessons. You will come away with new, novel lessons relevant to your classroom, and access to online resources from EPI to continue building your storyline.

PROGRAM LENGTH: 8 days

LODGING: Dormitory-style rooms

PD HOURS: 40 hours

COLLEGE CREDIT: 4 optional credits (registration & fees apply)

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SAMPLE ITINERARY

- Day 1:** Arrive in Belize. Meet your EPI instructor team, travel to the T.R.E.E.S. Research Station, and learn about the projects you'll be working on.
- Days 2-4:** Find phenomena in tropical ecosystems both in the field and in the lab at T.R.E.E.S. Dip your toes into freshwater stream ecology, prepare and conduct bat mist-netting surveys, and gain insight on the local amphibian and reptile species on a night walk.
- Days 5-6:** Depart T.R.E.E.S. for the spectacular Belizean cays. Explore the Mesoamerican Barrier Reef and learn about fisheries management, reef health, and the impacts of coastal erosion and climate change on the ecosystem. Monitor coral reefs, collect data on fish species, or conduct a beach cleanup (depending on the time of year).
- Day 7:** Return to the T.R.E.E.S. research station to share our lesson plans, reflect on our experience, and participate in a traditional Garifuna drumming session.
- Day 8:** Depart for home.



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FROM CANOPY TO COAST

EPI opens the door to opportunities that provoke curiosity and inspire participants through partnerships with researchers at the Toucan Ridge Ecology and Education Society (T.R.E.E.S.). There, participants will network and have an opportunity to participate in deep science and authentic research in tropical ecosystems, including neotropical bat surveys and herpetology studies. This is a prime location for finding phenomena and building lessons that entice students to make life-long connections to dynamic ecosystems undergoing dramatic changes with global implications.

We'll depart from T.R.E.E.S. and take spend the other half of our course in the spectacular Belizean cayes (pronounced "keys"). Belize is home to 400 cayes, from tiny islets covered in mangroves to larger islands with classic white sand beaches. Here we'll have a chance to explore the famous Mesoamerican Barrier Reef — second in size only to Australia's Great Barrier Reef. On snorkeling excursions or during service projects, we might spot dolphins, manatees, myriad fish species, and stunning coral reef formations. Depending on the season, our activities could include a citizen science project on fish species, conducting a beach cleanup, or participating in coral reef monitoring. All the while, we'll learn about fisheries management, reef health, and the impacts of coastal erosion and climate change on this fragile ecosystem.

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
- Species adaptation & resilience
- Equilibrium in ecological systems
- Conservation research
- Human impact on the environment
- Cultural environmental practices
- Phenomena to Inquiry and the NGSS



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