

**PROGRAM:** EDUCATOR ACADEMY IN THE AMAZON RAINFOREST

**DATES:** JULY 1–11, 2020

**LOCATION:** IQUITOS, PERU

## OVERVIEW

The *Educator Academy in the Amazon Rainforest* provides powerful professional development designed to transform student learning. Immersed for 10 days in the Peruvian Amazon, teachers learn about this key global ecosystem while building their ability to engage students in scientific research, engineering design, cross-cultural connections, and stewardship projects. Skilled Peruvian guides lead natural history exploration – in small boats, along trails, and on one of the world’s most extensive canopy walkways. Professional scientists engage educators in field research and citizen science. And villagers in remote communities demonstrate their ways of life, highlighting conservation practices with which they are aiming for long-term sustainability of the rainforest resources on which their livelihoods depend.

Program evaluation indicates that educators return to their home settings with increased confidence, knowledge, and ability to lead student-directed STEM experiences. Specialized tracks for elementary, middle school, and HS/AP educators immerse participants in activities relevant to their interests and needs, with opportunities to collaborate with colleagues on ideas for classroom applications. Field activities support NGSS 3D learning, STEM, 5E and more.

Elementary Educators	Middle School Educators	High School and AP Educators
Explore the Amazon through the lens of place-based learning and inquiry. Visit Amazon schools, conduct service projects, and learn from villagers in remote communities. <b>Cohort limited to 10 participants.</b>	Participate in research and citizen science, learning techniques directly applicable in your teaching while exploring the Amazon rainforest and connecting with local communities <b>Cohort limited to 10 participants.</b>	Take a dive deep into tropical ecology, community-based conservation and sustainable development. Learn from indigenous leaders and make connections to your teaching. <b>Cohort limited to 10 participants.</b>

## GOALS

The Academy provides a compelling context in which participants gain:

- Experience in conducting scientific investigations, design challenges, and culturally sensitive place-based learning,
- Appreciation for the Amazon rainforest as a critical global life-sustaining biome, along with understanding of our role as global citizens in global conservation issues,
- Insights into the importance of Indigenous knowledge for conservation, and
- Ability to integrate what they have learned into their teaching back home.

## STUDY SITES

The field component of the Educator Academy in the Amazon is set in the Loreto district of northeastern Peru. This area is accessible only by boat from Iquitos and provides access to some of Peru’s most untouched rainforest. Field accommodations are hosted at ExplorNapó Lodge and ACTS Field Station and Canopy Walkway which provide participants with unlimited access to both flooded and upland forest as well as a ¼ mile canopy walkway. These study sites are also located adjacent to the newly formed Maijuna-Kichwa Regional Conservation Area which protects nearly a million acres of Maijuna indigenous ancestral lands, robust Amazon biodiversity, and our partner community of Sucusari.

## RATIONALE

The Amazon Rainforest is a key global biome that offers exciting opportunities for professional and personal learning in science embedded in rich natural and cultural landscapes. Taking part in scientific investigations and design challenges in the Amazon, educators gain skills applicable with their students back home. Engaging in applied inquiry in remote rainforest settings, they also build understanding of conservation opportunities and needs both in the Amazon and in the U.S.

The future of critical global systems depends on our youth becoming informed global citizens who can critically analyze issues and multiple sources of information. Scientific knowledge and skills are paramount. We need to provide opportunities for students to investigate environmental issues, collect and analyze data, and understand the role of science in making informed decisions. However, sustainability challenges will not be resolved through scientific approaches alone – students also need opportunities to connect deeply with people from uniquely different cultures and reflect on their own lifestyles, goals, and assumptions. Before teachers can meaningfully facilitate such activities, they need to *participate* in science themselves. They need to *use* inquiry-based techniques in order to guide students in the tools and skills of research, and they need to *experience* critical ecosystems such as the rainforest in order to teach about their importance to the health.

## PROGRAM FORMAT

### Pre-Departure

Participants are provided with key background information, readings, and reflection activities prior to departure, including introductions to eBird, iNaturalist, Project Learning Tree Forests of the World, and Vernier LabQuest® 2 data collection systems. Web-based community-building activities provide opportunities to connect with fellow participants prior to arrival in the Amazon. All participants are expected to take full advantage of the resources provided, complete the pre-departure readings, and contribute to online interactions.

### In the Field

The field component takes full advantage of the learning resources only the Amazon can provide – unparalleled biodiversity, complex ecosystem structure, indigenous cultures, and a global learning environment. Each day is broken into morning and afternoon sessions that last three hours and include an introduction to the subject, a field experience in the rainforest or Amazon community, and a guided reflection activity. Classroom connections are explored, including resources provided by Pacific Education Institute, Cornell Lab of Ornithology, Project Learning Tree, Vernier Software and Technology, and Amazon faculty. Field sessions engage participants in guided natural history explorations, inquiry-based learning activities, citizen science research projects, cultural explorations, village service projects, data collection, and more. Incorporated into each session are activities in which participants deepen their understanding of best practices in inquiry-based learning, sustainability science, and STEM education. Sessions are facilitated by course instructors, guest faculty and researchers, and local naturalist guides. Grade-level content and connections are woven into each workshop.

## SAMPLE ITINERARY

**July 1 – DAY 1: Depart from US and overnight in Lima, Peru**

**July 2 – DAY 2: Lima to Iquitos and ExplorNapó Lodge**

Transfer to Lima airport • Travel by boat on the Amazon River and deepen your understanding of this important global resource • Evening orientation: Where in the World Are We?

### **July 3– DAY 3: ExplorNapo Lodge**

Birding and wildlife investigations each morning • AM field workshop: Place-based inquiry in the Amazon • Guided hike and inquiry-based explorations the rainforest ecosystem • PM field workshop: Designing Field Studies & The Tools of Inquiry • Pre-dinner round table discussions • Evening boat ride.

### **July 4– DAY 4: ExplorNapo Lodge**

AM field workshop: Amazon biodiversity: Arthropods Rule! • PM field workshop: Amazon Biodiversity – Secret Lives of Amazon Plants • Visit to ReNuPeru medicinal plant garden and shaman Guillermo Rodriguez • Pre-dinner round table discussions • Evening discussion night hike.

### **July 5 – DAY 5: Amazon Conservatory of Tropical Studies (ACTS)**

AM grade level field & curriculum workshops: Forging connections to forests and climate change • PM field workshop: Tropical Ecology 101 with guided hike and explorations en route to ACTS field station. Canopy walkway exploration and sunset viewing. • Evening Exploration: STEM design challenge.

### **July 6 – DAY 6: Amazon Conservatory of Tropical Studies (ACTS)**

AM/PM field workshops: Research in the Rainforest – Trade your Lab Coat for a Rain Poncho • Small group field studies and explorations with Academy faculty • Explore STEM applications of research protocols, investigation tools, and inquiry resources • Pre-dinner round table discussion: Science, Conservation, and Sustainability • Night hike.

### **July 7 – DAY 7: ExplorNapo Lodge**

AM field workshop: Research in the Rainforest wrap up • PM field workshop: Meet the Maijuna with visit to community of Sucusari to meet with community members and learn about their culture and history and efforts to protect nearly a million acres of the Amazon • Evening Exploration: “Have you touched a rainforest today?”

### **July 8 – DAY 8: ExplorNapo Lodge**

AM/PM field workshops: Full day in the Maijuna village of Sucusari • In-depth exploration of the creation of the Maijuna-Kichwa Regional Conservation Area • Hands-on explorations of Maijuna community conservation projects, including stingless bee honey cultivation, aguaje palm fruit harvesting, GPS animal tracking and hunting initiative, and chambira fiber workshop • Pre-dinner round table discussion: Connecting the Amazon to your NGSS Classroom • Night boat ride on the Sucusari River.

### **July 9 – DAY 9: ExplorNapo Lodge**

AM field Workshop: The Maijuna Foodshed – agriculture and water resources • Lunch at Napo • PM: Creating a collaborative action plan for integrating the Amazon into your instruction. Evening: Awards ceremony and celebration!

### **July 10 – DAY 10: Iquitos to Lima and return flights to US**

Transfer to Iquitos for return flight to Lima and international flights or overnight at hotel for Machu Picchu Extension. **Note:** Participants **not** continuing on to Machu Picchu will return to the U.S. on an overnight flight arriving home on July 11, DAY 11.

## PROGRAM CONTACT HOURS

20+ hours of pre-departure preparation include readings, discussions, and webinars. 50 hours of field work in the Amazon include experiences using resources by Pacific Education Institute, Project Learning Tree, Cornell Lab of Ornithology, and Vernier Software and Technology. Post-trip webinars and networking offer ongoing involvement and support.

## PROGRAM ASSIGNMENTS/RESPONSIBILITIES

In order to create a rich, rewarding, and maximized learning experience for all, it is imperative that each participant understands their individual role in the achievement of this goal. Participants are expected to:

- review and respond to all pre-departure readings and activities,
- share and apply what they learn pre-departure during the field experience, and
- be positive, active, engaged team members before, during, and after, the Amazon field experience.

## REQUIRED READINGS/MATERIALS/EQUIPMENT

The majority of course readings and assignments will be available online via our virtual Academy Classroom. Participants will have access to these materials upon the receipt of their registration form and deposit. On-line discussions related to the background readings and program pedagogy/instructional practices will begin approximately 6 weeks prior to departure. A comprehensive optional/suggested reading list will also be provided to participants upon registration. A recommended list of field equipment/supplies will also be supplied prior to departure.

### FEES & REGISTRATION DETAILS

[www.morphoinstitute.org/educator-academy](http://www.morphoinstitute.org/educator-academy)

### SCHOLARSHIP & FUNDING OPPORTUNITIES

[www.morphoinstitute.org/scholarships-funding](http://www.morphoinstitute.org/scholarships-funding)

## CONTACT INFORMATION

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*"Amazing. I had high expectations, but overall this experience surpassed them on so many levels. The combination of the people involved, the organization and structure, and one of the most astounding places on Earth made this incredible."*

– Joan Bachynsky, Cristo Rey High School, NY

*"Every component of the academy can be integrated into my classroom, my curriculum and my teaching philosophy. The faculty provided high quality experiences and resources to help me do this! Most professional development programs regurgitate the same resources, strategies and ideas without much inspiration. They lack the ability to connect the content to our lives! This program not only provided a life changing experience, they provided the human connection to that content. It provided the answer to, "Why should I care? What can I do? How can I get others involved?" The best program I have EVER had the privilege of attending!"*

– Melissa Jordan, Sarah Scott Middle School, Terra Haute, IN