



ARENAL VOLCANO BY CHRISTOPHE MENEBOEUF



COSTA RICA

Volcanoes and GEOSTem - Perfect Together!

7 days | July 6 - 12, 2019

Costa Rica sits astride a jagged series of volcanoes and mountains, part of the great Andes-Sierra Madre chain, which runs the length of the western littoral of the Americas. Join NESTA for a discovery of a multitude of volcanic formations, ranging from major stratovolcanoes to hydrothermal vents and fumaroles. Explore the treasures of Costa Rica's geologically rich terrain, combined with its diverse tropical ecosystems, on this comprehensive journey. Easily connect your students to this experience through a plethora of STEM applications found throughout the trip.

CEUs or Graduate Credits are Available

ABOUT NESTA

The Earth is our home. National Earth Science Teachers Association (NESTA) believes that to teach our planet, one needs to know our planet. NESTA supports international professional development as it unites teachers with all aspects of our home planet so they can in turn connect and engage their students with the Earth.

PROGRAM HIGHLIGHTS

- Meet with experts and policy advisors to discuss current research and public safety measures.
- Visit Poás Volcano with a University of Costa Rica geologist to understand the unique attributes of this volcanic system.
- Discover Arenal Volcano, an active Andesitic stratovolcano in northwestern Costa Rica.
- Witness the use of volcanic energy to generate power at Miravalles Geothermal Power Plant.
- Experience Rincón de la Vieja, one of Costa Rica's most diverse ecological parks, known for its stunning diversity of flora and fauna and home to two volcanoes.
- Identify compelling GeoSTEM phenomena to transfer this experience into your NGSS classroom.

WHAT'S INCLUDED?

- Expert guides
- Private transportation
- All gratuities
- Accommodations
- Activities
- Meals
- Beverages with meals
- Carbon offset



POÁS VOLCANO BY PETER ANDERSON

ITINERARY

BLD = BREAKFAST, LUNCH, DINNER

JULY 6 - SAN JOSÉ

Upon arrival enjoy a welcome reception at the hotel and introduction to the geology program with your Costa Rican geologist expert and naturalist guide. (Hotel check-in is available beginning at 2 pm.)
Overnight at Radisson Europa. (D)

JULY 7 - SARAPIQUÍ

This morning we convene for a welcome orientation to the Research and Public Safety of Costa Rican Earth Sciences. During our orientation we will seek to meet with 2-3 science advisors representing seismic monitoring from the University of Costa Rica, evacuation management for public safety during an eruptive cycle, and a representative from Earth University studying climate change in the tropics of Costa Rica. After our morning introductions, we will take a field trip to Poás Volcano Observatory under the guidance of a University of Costa Rica geologist to discuss the active cycle of gas emissions from the caldera and the unique attributes of this volcanic system. We will have lunch en route and following our explorations check into our hotel for an evening introduction and exploration of the rainforest. *If Poás Volcano is not an option, we will visit Irazú Volcano. *Overnight at Selva Verde Lodge. (BLD)*

JULY 8 - ARENAL

This morning we begin our transfer to Arenal. En route we'll stop to visit the town of La Fortuna, situated in the shadow of Arenal Volcano, and have lunch at a local restaurant. This stratovolcano is the youngest and most active in Costa Rica. The 5,437-foot-high Andesitic volcano towers above the eastern shores of Lake Arenal, which has been enlarged by a hydroelectric project. Arenal was constructed by successive eruptions to the northwest of the older Chato Volcano, which contains a 1,640-foot-wide summit crater. Visit the blast site of the 1968 eruption; after having lain dormant for over 400 years, Arenal Volcano erupted violently on July 29, 1968, wreaking havoc on the local population and creating a lava-scape for miles around its base.
Overnight at Arenal Observatory Lodge. (BLD)

JULY 9 - ARENAL

This morning, we continue our exploration of Arenal Volcano. The earliest known eruptions of Arenal took place about 7,000 years ago, and the two volcanoes were active concurrently until the activity of Chato ended about 3,500 years ago. Growth of Arenal has been characterized by periodic major explosive eruptions at several-hundred-year intervals, with periods of lava effusion that armor the cone. The current eruptive period began with the major explosive Arenal eruption in 1968, and occasional emission of pyroclastic flows has occurred since then from vents at the summit and on the upper western flank. Arenal eruptions are of the strombolian type, which produces infrequent, moderate eruptions. Following a day of active exploration, visit the thermal hot springs at Paradise Springs. *Overnight at Arenal Observatory Lodge. (BLD)*

JULY 10 - RINCÓN DE LA VIEJA

This morning we continue our explorations, transferring to the Guanacaste province, with a stop at the Miravalles Geothermal Power Plant en route. During this field visit, witness the use of volcanic energy to generate power. We'll have lunch at a local restaurant en route, and then arrive to the hotel in the late afternoon. Check in and have dinner at the lodge. *Overnight at Hacienda Guachipelin or similar. (BLD)*

JULY 11 - RINCÓN DE LA VIEJA

Today, enjoy a full day of field explorations of geologic and biotic sites in Rincón de la Vieja Volcano National Park. Visit the hydrothermal vents, mud volcanoes, and fumaroles. The name Rincón de la Vieja

translates to English as "the old woman's corner." According to locals, the indigenous people of the Guatuso tribe named the volcano for one of two reasons. Either there was an old witch on top of the mountain who sent columns of smoke into the air when she was angry, or there was a kindly old woman occupying the same nook, and the smoke was from her cooking fire as she prepared meals for weary travelers. Maybe it's both, because the Rincón de la Vieja crater has had at least eight periods of intense volcanic activity, and still bubbles and steams. Return to the hotel for lunch and then go to the nearby hot springs. Dinner tonight is at the hotel. *Overnight at Hacienda Guachipelin or similar. (BLD)*

JULY 12 - DEPARTURE

We will have a very early morning breakfast before our group transfer to Liberia for our international flight home. *If you are making your own reservations, please note the Liberia airport is in northwestern Costa Rica and is not the same as the arrival airport. Hotel check-out time is noon. (B)

LAND PRICING

\$2,835 per person (based on a minimum of 10 participants; price will decrease to \$2,475 with 21 participants)

Cost includes activities, accommodations, meals as stated in the itinerary, private in-country transportation, local guides in each region of the program, all gratuities, bottled water on the bus, carbon offset, and 1-year membership to NESTA.

International airfare, optional activities, items of a personal nature, and alcoholic beverages are not included. Rate is based on double occupancy for participants; for a single room throughout the trip, add \$215 per person (limited availability).

AIR SERVICES

Holbrook offers a full service air department catering to both group air and individual air arrangements. Please anticipate air rates to vary between \$850-\$1,100, dependent on your point of departure.

Important: If you are making your own reservations, please note the arrival and departure airports are different. Flights should arrive into San José (SJO) and depart from Liberia (LIR).

TRAVEL PROTECTION

Holbrook Travel purchases Travel Protection on behalf of all participants traveling in 2018 or beyond. These plans help provide coverage once the trip has departed and offer benefits for Baggage/Personal Effects, Accident & Sickness Medical Expenses, Emergency Evacuation and more. Refer to the Plan Document for more details.

Optional additional coverage is available in the form of the Group Deluxe Plan, which offers benefits for Trip Cancellation/Interruption, in addition to many other insurance benefits and non-insurance assistance services. If interested in this optional plan, we can provide you with rates and plan details.

THE FINE PRINT

Price is based on 10 participants in double occupancy; with 21 participants, price will drop to \$2,475 per person. A \$200 per person deposit and enrollment form are required to reserve your space on the trip. This deposit is refundable excluding a \$100 cancellation fee until April 2, 2019, at which time non-refundable final payment is due.

FOR MORE INFORMATION OR TO ENROLL:

Visit holbrook.travel/nesta-cr19 or contact Sandy Doss at sandydoss@holbrooktravel.com or 206-604-5715 (cell).