



*Gary Lewis, geologist, educator leads.....*

**14-22 July 2018**

# Discover Hawaii's Volcanoes

Join an enthusiastic group of teachers and discover the wonders of STEM on the active volcanoes on Hawaii.

This field experience on the Big Island of Hawaii will introduce you to plate tectonics, hot spot volcanism and the geologic features and hazards associated with living on an active volcano. We will discuss volcanic edifices, eruption styles, magma evolution and see various types of lava flows, lava lakes, tree molds and lava trees, fault scarps, rifts, craters and calderas.

We will use our observations and new found knowledge to discuss methods on how to effectively communicate geologic concepts with students. We will model inquiry in the field. We will collect data and develop models for what we see. We will look at engineering structures to assist with tsunamis and more. You will take a lot of photographs, collect samples and have amazing experiences.

This trip is designed for K-12 Earth science and Geography teachers with no or little Earth science background and college students with an interest in active volcanism. Families are welcome (see trip details).

**GEO** *etc*  
Geoscience Education & Outreach

**us\$1,645**

**Price does not include airfares to/from Hilo, HI.  
Please see more details inside.**



# Trip ITINERARY\*

Day 1. - fly into Hilo airport before 6.00 pm. Meet group in airport and be transported to Ken's House of Pancakes (Hilo institution) for dinner at your expense. Drive to accommodation.

Day 2. - Morning talk : Introduction to Plate Tectonics and Hawaii. Field experiences: Mauna Loa vista, Steaming bluffs - Kilauea Visitor Center - Sulfur banks hike, Jaggar Museum, Halema'uma overlook, Devastation trail. Kau Desert Trail (footprints in the ash).4 miles of hiking on easy trails.

Day 3. - Morning talk: Introduction to Volcanic landforms. Field experiences: Chain of craters road, pit craters, Pu'u Huluhulu and Mauna Ulu hike. Coastal plain, petroglyphs. 6 miles of hiking on easy trails and 1 mile of hiking off trail. Optional hike to active lava flows - if open (8 mile return).

Day 4. - South Point Day. Hike to Green Sand Beach (swim). (Lunch). Dinner on a black sand beach and see turtles. 3 mile hike on easy trail.

Day 5. - Hike the caldera morning, Thurston Lava Tube. Puna district lava flows, Kumukahi lighthouse, Hot springs.

Day 6. - Wiapio Valley, Laupahoehoe point tsunami site, Akaka falls, Kaumana caves. Time for helicopter flights in afternoon (at own expense)

Day 7. - Snorkeling (bring your own gear) and swimming at Ho'okena Beach Park and visit Pu'uuhonua o Honaunau National Historic Park. Dinner in Kona.

Day 8. - Transfer to Hilo for flights home (no flights before noon please).

*\* Itinerary may change due to weather and other factors.*

## us\$1,645

US\$500 Deposit is required with registration. See the refund policy details online.

**Members of the National Earth Science teachers Association (NESTA) - or equivalent national/international science teachers associations - receive a US\$50 discount.**

### Trip Details (the fine print)

- Price does not include flights to/from Hilo airport.
- Please do not book any flights or make any travel arrangement until the trip and your place on it has been confirmed. We will send you details of arrive and departure dates and time as early as possible.
- Transport is in airconditioned vans.
- Accommodation is in shared hotel rooms.
- Four Dinners are not included, but will be held in restaurants in Hilo and Kona. There will be some options on most nights. Other nights options will be limited. 3 Dinners are included.
- Price does not include helicopter flights and snorkeling equipment.
- Price includes breakfasts. We will expect folks to make their own picnic lunches for each day - we will visit stores to get supplies.
- The trip is open to all teachers and their families. Family members have to stay and travel with the group. There is no discount for children. Use of private or hired vehicles by participants during trip is not allowed.
- Be aware that this trip involves some hiking (as noted in the Trip Plan) you should be moderately fit and have no medical condition that precludes you from participating. Be aware that at times we will be in areas with high sulfur content which can trigger asthmatic and other responses.
- We will be staying on an active volcano and we will always attempt to provide you the very best opportunities to view volcanic processes on this trip. However, we heed all warnings provided by the local authorities and do not venture out onto active lava flows unless with a guide.

**www.geoetc.com**



## Accommodation

We will be staying in a delightful Hawaiian-owned and operated hotel in Hilo. It has a real family feel and is close walking distance to many landmarks and places to eat. The rooms all have airconditioning and a refrigerator. There is a coin-operated laundry, a swimming pool and a museum.



## Transportation

We will use 15 seater airconditioned vans to travel around the Big Island. There is plenty of room which provides everyone with a great opportunity to take photos as well as spend time with fellow cachers between stops.



## Trip Leader

Gary Lewis is the President of GEOetc and works for the Maine Mathematics and Science Alliance. His speciality is the communication of geological processes to teachers, students and the general public and the operation of programs that raise the awareness of Earth science at an international level. He is a trained geologist - with an honors degree in Geology from the University of Sydney - and a K-12 teacher. He has worked in Earth science outreach in Australia and the USA and run trips for teachers to Hawaii, Iceland, Australia and other destinations since the 1980s. He is the author of over 30 Earth science teaching resources. He has been involved in teacher and student trips to Hawaii for over twenty years and is passionate about making visits to Hawaii life-changing for the participants.

## What do past participants say.....

*"I attended a professional development session in Hawaii with Gary Lewis. Though he had conducted this session on volcanoes numerous times before, it did not diminish Gary's enthusiasm, which was contagious. His knowledge is impressive and he has a passion that invigorates others. During this session Gary used demonstrations, discussions, and hands-on activities in the field to teach a substantial quantity of material. The amount I learned was staggering and I thank Gary for being such an inspiring example of what it means to be an outstanding teacher!"*

**Stephanie Jhones**

*"Taking learning out of the classroom and into the "real" world is what all science teachers strive for, and Gary Lewis is an expert. Having worked with Gary to plan a trip for middle-schoolers, and having participated myself on one of his trips for teachers, it's clear that he not only knows his stuff inside-out, but he understands his audience, too. Gary does a wonderful job tailoring incredible experiences for multiple levels of learners. His materials are top-notch and his excitement at sharing his experience with students is beyond compare."*

**Ian H. D. Clark, Middle School Science Teacher, CT."**

## Want more information or make a reservation?



Contact Gary Lewis on:  
Email: [gary@geoetc.com](mailto:gary@geoetc.com)  
Call : 207 693 8501 (Eastern Time)