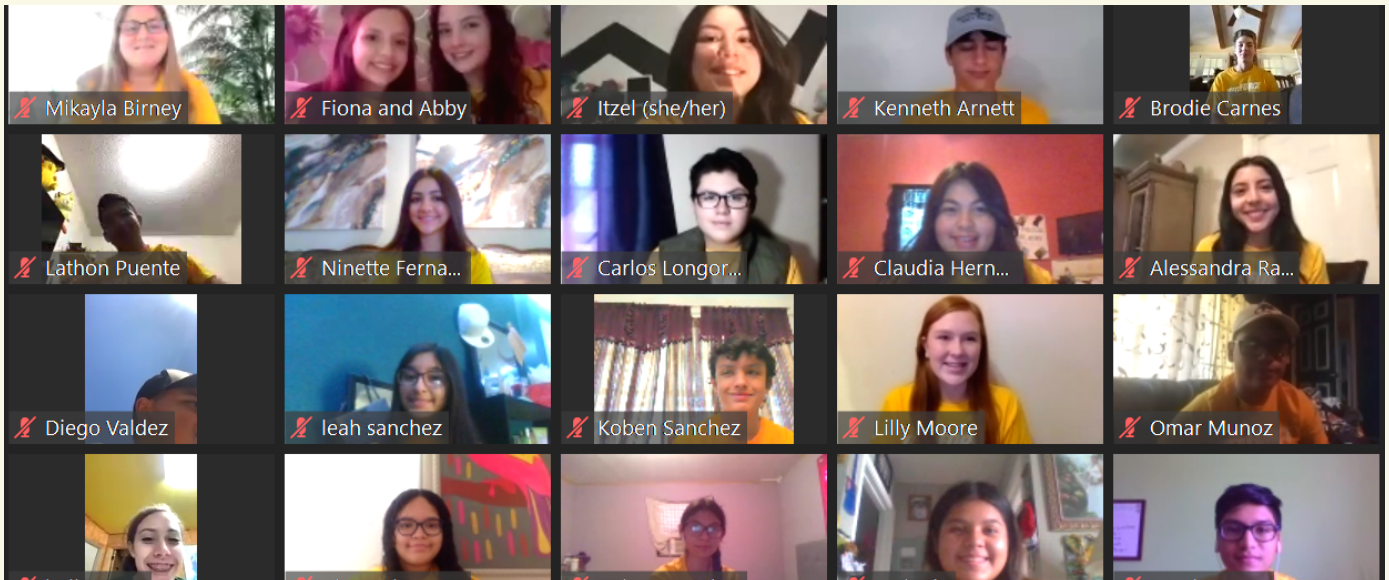


GEOFORCE MONTHLY

Changing lives since 2005



GeoFORCE Southwest 10th grade group picture in summer 2021.

PROGRAM SPOTLIGHT: GF VIRTUAL SUMMER ACADEMIES

This summer, the GeoFORCE Texas Program instructed 375 students across 13 virtual field academies in June and July. These summer academies were taught by instructors, educational coaches, and educational coaches-in-training, most of whom are graduate students, researchers, or postdoctoral fellows at The University of Texas at Austin Jackson School of Geosciences, Bureau of Economic Geology, Institute of Geophysics, and other universities across the country.

This wide breadth of experience and geoscience knowledge allowed our educational teams to customize their individual academies with engaging activities and demonstrations. Tristan Childress, an instructor for one of the 9th grade academies, collected sand samples from the Texas coast to mail out to each of his students. Nicole Guinn, educational coach for the Houston 11th graders, used mentos and coke to demonstrate a pyroclastic flow. Every 10th grader received playdough in their packages to create hands-on stratigraphic columns and learn the ways they can be deformed.

"The material was interesting and piqued your attention as you went through it," an anonymous 9th grader said. "The vibe and atmosphere was always positive. The people who ran and taught the academy made you feel comfortable and encouraged you to ask questions and stay engaged."

Overall, the 2021 virtual summer academies were a success. In their post-academy surveys, over 85% of students said they had fun. Every grade level saw an increase in interest for geology from pre-survey to post, jumping 10 - 15% depending on the grade.

One anonymous 12th grade student said, "GeoFORCE helped me better understand the field of geology and decide on the major that I would be most interested in pursuing within environmental science... GeoFORCE exposed me to many new opportunities, and my communication skills improved drastically because of the program."

We will be celebrating the hard work that went into this summer and recognize several of our amazing alumni during our [GeoFORCE Senior Recognition and Awards Event](#) on Thursday, August 19th at 6pm CST.

GeoFORCE Texas is an outreach program through The University of Texas at Austin's Jackson School of Geosciences that introduces high school students from underserved communities to STEM and geoscience careers through summer field experiences, corporate mentoring, and college guidance. In 2015, our program was honored with the Presidential Award for Excellence in Science, Mathematics, and Engineering Mentoring—the highest such honor from the United States government. More information can be found on our website at <https://www.jsg.utexas.edu/geoforce/>.



Kaelie Contreras during field camp in Moab, Utah in summer 2018.

GEOFORCE AWARDS EVENT

Join us virtually for our inaugural GeoFORCE Senior Recognition & Awards Event to recognize our students who plan to pursue STEM degrees this fall, with special recognition to the geoscience majors, high school valedictorians, and salutatorians. We will also award select alumni, supporters, and staff who worked with us this year.

Join us here Thurs. Aug 19 at 6pm CST!

INTERNSHIP & SCHOLARSHIP RESOURCES

- Geoscience Research Programs & Internship Opportunities for Undergrads & Recent Grads
- Scholarships for Undergraduate & Graduate Students
- Scholarships for High School Students

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Questions or comments? Email us at
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ALUMNI SPOTLIGHT: KAELIE CONTRERAS

Kaelie Contreras came from the small town of Sabinal, Texas, when she joined the GeoFORCE Texas program in the summer of 2008. A decade later, Contreras earned a Bachelor of Science in Geoscience and a minor in Geographic Information Science (GIS) from Texas Tech University.

“Going to graduate school was always part of the plan because I wanted to gain a deeper understanding of the field,” Contreras said. “I’ve loved math since I was a kid and felt I needed more of that, so I looked in geophysics.”

Contreras is a Master’s student at The Pennsylvania State University, where she expects to defend her thesis this fall and graduate in December. Her research involves imaging the Bushveld Complex in South Africa using seismic waves generated by earthquakes.

“I had no clue what to do research in [when applying for graduate schools],” Contreras said. “But this was the absolute best decision I could have made. This degree has steered me towards something I really enjoy – seismology. It feels great to be in a place where I’m seeing the hard work pay off.”

Before enrolling at Penn State, Contreras interned as a GIS Analyst for Freeport McMoRan. This summer, she is interning in Melbourne, Florida where she analyzes waveforms to predict the location and size of a seismic event. She’s also an extern science writer for Temblor Earthquake News, where scientists and journalists provide the public with understandable information about natural hazards, recent earthquake studies, and more. After earning her master’s, Contreras hopes to work for the government as a geophysics employee or contractor.

“All of these experiences were intentional because I’m curious about everything and want to find a career that I’ll love,” Contreras said. “Seismology gives me the combination of coding, physics, and geology along with some mapping and report writing sprinkled in there. That’s the best of all of my experiences!”

Besides her academic and career experiences, Contreras is passionate about outreach and mentoring. She said the mentorship of the GeoFORCE program and its coordinators taught her the power of outreach and leading by example. She plans to use her future platform to help others get excited about STEM.