



SOCIETY OF EXPLORATION
— GEOPHYSICISTS —



GeoFORCE Houston 10th Grade Academy Field Experience

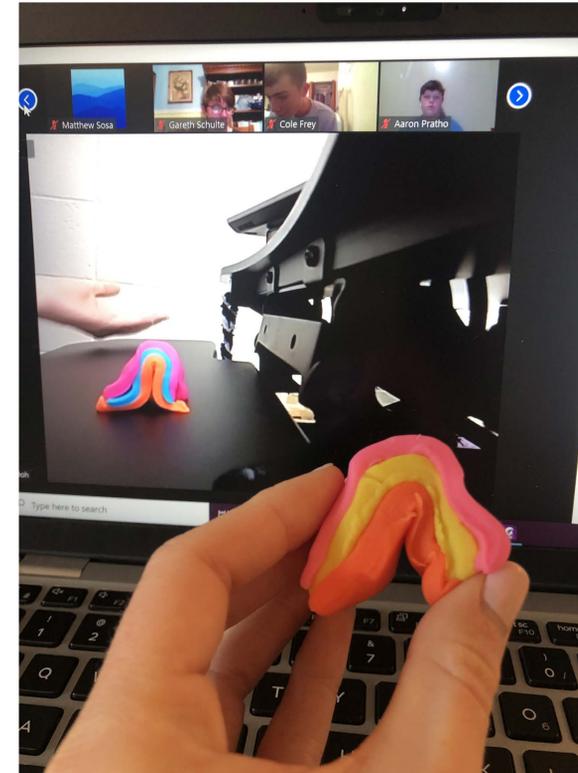
Summer 2021

Purpose: GeoFORCE is a powerful pre-college program that provides hands-on science learning experiences for high-school students from economically disadvantaged areas in Texas. The goal is to encourage a diverse group of youth from underserved schools to excel in the sciences, especially geoscience, and pursue higher education in STEM fields. GeoFORCE, created in 2005, currently operates in both inner-city Houston and rural southwest Texas. This program invites students to participate in geologic field experiences across Texas and throughout the US for each of the four summers of their high school years. The week-long field experiences are no cost to students. University faculty and research scientists lead the field experiences utilizing an intense scientific curriculum. Professional geoscientists from industry partners serve as mentors for program participants. The academic content and rigor build each year.

Method: GeoFORCE engages students in week-long virtual starting the summer before they enter the ninth grade. They gain valuable field experience and further knowledge of the energy industry. The academic content and rigor builds each year. The instruction is provided by university faculty and research scientists. Students also receive mentorship from professional geologists. There is no cost to the students.

Mentoring continues through high school and college. GeoFORCE helps with college and financial aid applications, provides scholarships, and assist students with finding internship opportunities in college.

Location: The 10th grade field guide emphasizes that geologic processes are the main theme of the field experience. As stated in the guide, this includes the processes that made the rocks and landscapes, and the processes that continue to change the landscape. All GeoFORCE Texas Academies took place via Zoom meetings and Canvas courses.



Academy: GeoFORCE Houston 10
Dates: June 14th – June 19th
Coordinator: Cara Collins
Instructor: Staci Lowey
Educational Coach: Catherine Ross

Academy: GeoFORCE Southwest 10
Dates: June 21st – June 26th
Coordinator: Jasmine Gulick
Instructor: Eirini Poulaki
Educational Coach: Tyson McKinney

Academy: GeoFORCE GEAR UP 10
Dates: June 28th – July 3rd
Coordinator: Cara Collins
Instructor: Staci Lowey
Educational Coach: Margarita Ramos

Demographics	Total	GFH10	GFSW 10	GFGU 10
Total Registrants	99	38	42	19
Ethnicity				
Black	7.5%	18.5%	0%	0%
Asian	4%	8%	2%	0%
Hispanic	49.5%	47%	57%	37%
White	17%	5%	17%	42%
Other	1%	3%	0%	0%
Multi Racial	21%	18.5%	24%	21%
Gender				
Female	60.5%	71%	52%	58%
Male	38.5%	26%	48%	42%
Other	1%	3%	0%	0%
2021 Participation				
Attended	86%	76%	93%	89%
Excused	5%	8%	2%	5%
Absence	9%	16%	5%	5%
No Show				



The 10th Grade Academy: The 10th Grade Academy inspires students to “think like a geoscientist.” Students apply geological concepts to what is seen in real time. Students are exposed to sedimentary structures, processes and environments. The geological topics include geologic time, law of superposition, lateral continuity, crossbedding, unconformity, desert varnish, monocline, gradient, antecedent drainage, mass wasting, uniformitarianism, differential erosion, dendrochronology, cinder cone, stratovolcano, and sedimentary rocks.

Student Quotes & Comments

“I will look into more geology career pathways, as a lot of the material interested me.”

“I will take away much more knowledge of rocks and how geologic timing can be used determine about how old they are. I will also take away much knowledge of Mar's surface and the rovers used to sample the rocks.”

“I can now look at big rock landforms and actually understand which layer is eldest and tell how they were formed.”

“Thank you for a great GeoFORCE 10th Grade Academy experience!! I appreciate all of your hard work towards this academy:) You all were awesome staff and role models! I extremely appreciate all of your help with the questions I had. Thank you for making this experience the best it could be!! I hope to see you next year:)”

Student participants: GeoFORCE participants who participated in the SEG Field Camp Grant -funded 10th grade academy for rising sophomores ventured virtually through the American Southwest and other regions where they studied sedimentary rock processes and geologic time.