GEOFORCE TEXAS

JACKSON SCHOOL OF GEOSCIENCES

Annual Report 2013

THE UNIVERSITY OF TEXAS AT AUSTIN

JACKSON

SCHOOL OF GEOSCIENCES

The Year 2012-2013 in Review

Milestones and Accolades

This year, the ninth summer of GeoFORCE field trips, marked significant milestones in the program. Our first cohort is now four years out of high school, and they are graduating from college (see page 15). In addition, GeoFORCE tallied our first geology degree; a BS in Geophysics at the Jackson School was awarded to Jeff Sitgreaves of Bracketville, Texas, in May. Jeff is currently enrolled in the Master's program at the Jackson School.

GeoFORCE continues to impress people in Texas and beyond. This year, the National Academy of Sciences published two reports that featured GeoFORCE as an exemplary program.

The first, Emerging Workforce Trends in the U.S. Energy and Mining Industries (*National Academies Press, 2013*), was the result of three years' effort by an ad hoc committee of the National Research Council charged with studying the availability of skilled workers to meet the energy and mineral security requirements of the United States. The committee analyzed data and held meetings across the country to learn about workforce needs, and what is being done to meet them. In the end, they identified four programs and one collaborative as solutions that work and are therefore programs to emulate; GeoFORCE was one of them. In addition, our partners at Fort Valley State (CDEP) and Penn State (AfricaArray) were cited as programs to emulate, and the Greater Houston Partnership, Energy Collaborative (GeoFORCE has been a member from the start) was cited as the exemplary collaboration.

The National Research Council convened a second committee to look at trends and opportunities in federal earth science education and workforce development. This committee looked at programs with federal funding that are impacting the pipeline in earth science education. Again, GeoFORCE features in the report (*Preparing the Next Generation of Earth Scientists: An Examination of Federal Education and Training Programs, National Academies Press, 2013*) as an exemplary program especially in the area of increasing diversity in the geosciences. The committee highlighted our ability to leverage public, private, and federal funds, and to form productive partnerships.

The Texas Workforce Commission featured GeoFORCE on the cover of their Solutions magazine (GeoFORCE Educates Kids, Solutions, Summer 2013, v. 10, no. 3, p. 8).

GeoFORCE Texas is making its mark on the future of geosciences.

 # High School Summer Participants in 2013

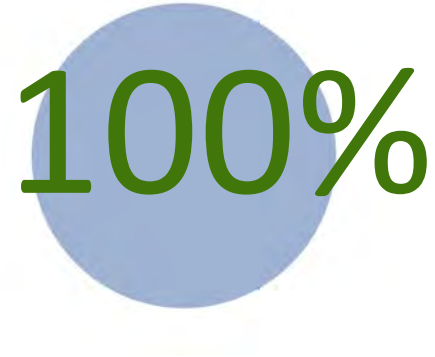
594

 # Graduates from GeoFORCE

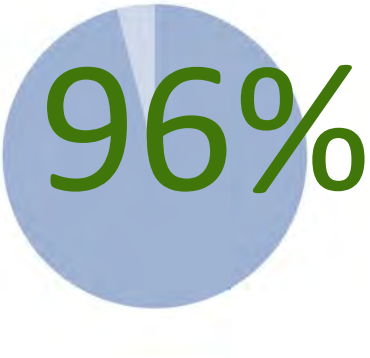
475

Summer 2013 Minority Participants

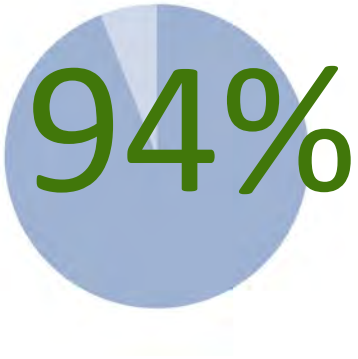
GeoFORCE High School Graduation Rate



GeoFORCE College Admission Rate



GeoFORCE College Sophomore Persistence



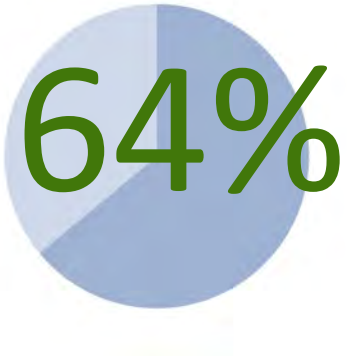
 # GeoFORCE Grads Geology Majors

70

 # GeoFORCE Grads Engineering Majors

54

GeoFORCE Grads STEM Majors



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THE UNIVERSITY OF TEXAS AT AUSTIN
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GEOFORCE
TEXAS

MISSION, OBJECTIVES, and RESULTS

GeoFORCE Texas was designed to address the pending workforce need for more trained scientists and engineers in the energy industry. The program targets high-achieving eighth graders who are interested in math and science and provides rich learning experiences in geosciences throughout their high school career. Having now completed its ninth summer, GeoFORCE has learned some important lessons about what works, what doesn't work, and what success looks like.

GeoFORCE Texas operates in two geographic regions of the state—inner-city Houston and an 11-county region in rural southwest Texas. The program began in 2005 in southwest Texas. The Houston region was added in 2008 and reached full implementation two years later. Since 2010, the program has recruited 80 new students in each region each year. Half of these students are brought into the Academy program and the other half into the Young Geoscientist program. Both of these groups take geologic field trips every summer. The Academy trips last eight days and include travel all over the country. The Young Geoscientist trips cover two to five days in Texas and New Mexico. In addition to the summer trips, both groups are given college prep resources that include SAT preparation classes, college and financial aid application workshops, a senior career day, college scholarships, and precalculus math support.

This year, the fifth cohort of students in the program graduated from high school. GeoFORCE has been able to track not only students who have completed the program by attending at least three summer field trips but also students who participated only partially (one or two summer field trips), as well as others who were qualified for the program but did not participate. These data clearly show that GeoFORCE is succeeding in its mission to increase the number and diversity of students pursuing science, technology, engineering, and math (STEM) degree programs and entering the future high-tech workforce. The results are presented below.

GeoFORCE Measures of Success

1. Impact on a large number of students from diverse backgrounds
2. Retention of students in the program through high school
3. High school graduation and college matriculation rates
4. Number of students studying STEM fields, especially geology and engineering

Objective 1: Engage students at the eighth-grade level and keep them in the program for four years.

Since its inception, GeoFORCE has touched the lives of more than 1,000 high school students, about half of whom are still in high school. GeoFORCE targets schools having high populations of minority and economically disadvantaged families and, in rural Texas, very small schools, because these schools commonly have difficulty meeting the needs of high-achieving kids. GeoFORCE helps these students to see a pathway through high school and college to achieve their goals.

80% Minority

Southwest Region:

71% Hispanic

Houston Region:

43% Hispanic; 34% Back; 8% Asian

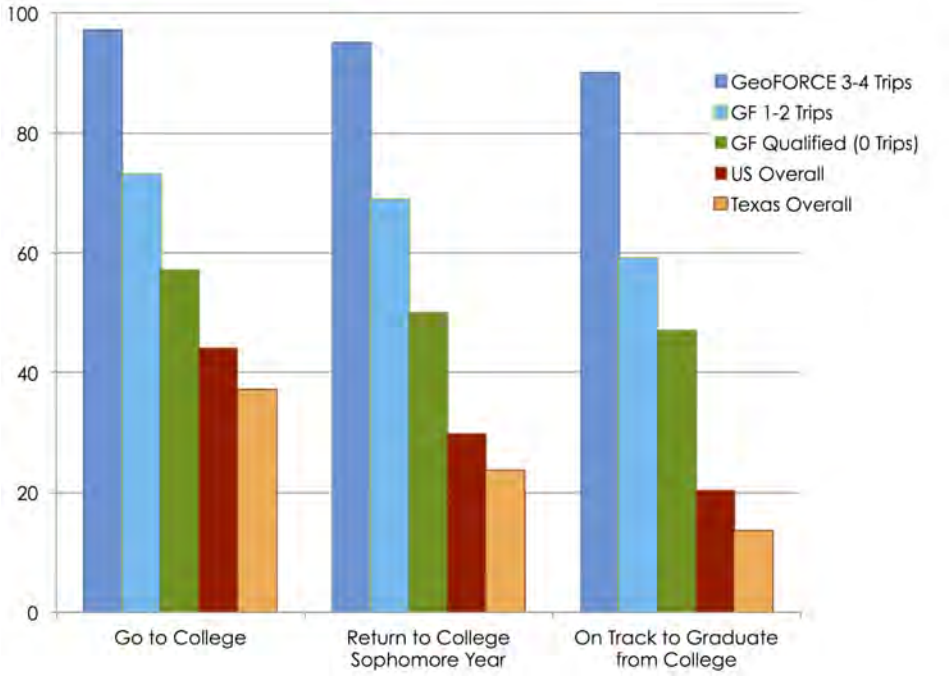
GeoFORCE primarily engages the students through the summer field program, where students travel to spectacular places such as the Grand Canyon, Crater Lake, Port Aransas, the Guadalupe Mountains, and Great Falls Park (see descriptions starting on page 27 for details.) The summer program is a lot of fun, but it is also rigorous and academic. A guidebook for each trip provides the geologic content, and students are expected to know the material and pass a test at the end of the trip with a grade of B or better. Almost all of them do.

Students learn by doing, and GeoFORCE immerses students in nature's classroom. They draw maps, measure beach profiles, create stratigraphic columns, and analyze sand samples. Each year the geologic content and complexity build so that by the end of four years, the students have a solid background in basic physical geology. Year one focuses on surficial processes and sediments. In year two the students move on to master sedimentary rocks and stratigraphy, also learning about cinder cones and meteor impacts. In the third year they study plate tectonics and volcanic rocks. Finally, in their fourth year, the students look at folded and faulted metamorphic rocks and complex mountain-building events.

GeoFORCE students tend to stick with the program, especially in the Academy, where 95 percent of the students have completed at least three of the four summer trips. In the Young Geoscientist program about half of the students complete the program. This trend is important because it is clear that staying in the program at least three years is a strong indicator of college matriculation and persistence.

One of the keys to retaining students is to build a cohort of high achievers. Each GeoFORCE group has 40 students who stay together for the four years of high school. They form deep and sustaining friendships. In their final year they come together with other GeoFORCE students for the senior events. The two Academy groups travel together for their summer trip, and all four senior groups participate together in the Fall Career Day in Houston and the Senior Celebration trip to Austin in the spring. In college, GeoFORCE students from different regions and class years are meeting up and forming friendships. At the University of Texas, they have even formed a student organization, GeoFORCE Longhorns.

Objective 2: Achieve high school graduation and college matriculation.



GeoFORCE boasts a 100 percent high school graduation rate. Not only do our students stay in high school, but 96 percent of GeoFORCE students go directly to college, and 94 percent of students return for their second year. These numbers are substantially higher than national averages.

With data from the National Student Clearinghouse, we can compare GeoFORCE outcomes with those for a matched group of students who did not participate in GeoFORCE (see Appendix). The comparison cohort consists of students who applied for and were qualified to join GeoFORCE but chose not to participate. In the eighth grade, these students were identical to GeoFORCE students in their backgrounds, academic preparation, and motivation for studying science. Of the 185 we can track, 57 percent went to college, and 51 percent returned for their second year.

GeoFORCE students are enrolled in 74 different colleges in 20 states. Most students enroll in Texas state schools, but GeoFORCE students are also enrolled in public and private schools nationwide.

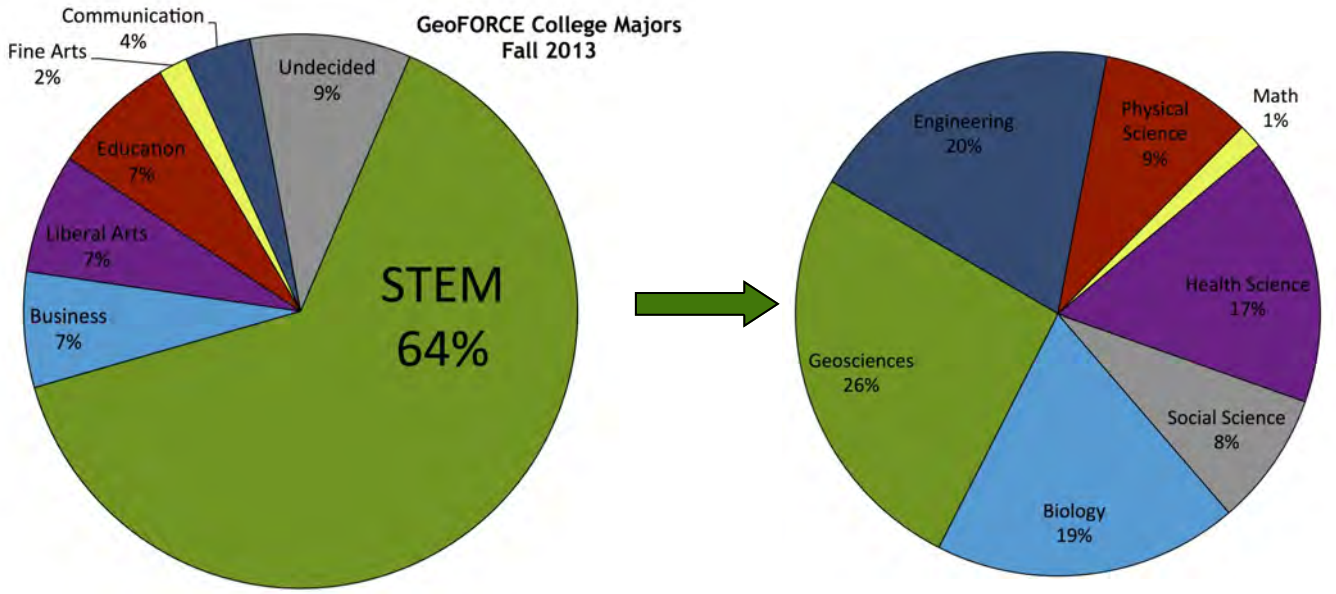
GeoFORCE Students in College as of Fall 2013							
Four-Year Colleges						Completed College	
Angelo State	6	Rice	4	Texas Tech	15	Graduated AA/AS Degree	8
Art Institute of San Antonio	2	RI School of Design	1	Trinity	1	Graduated BA/BS Degree	15
Baylor	3	Rochester Institute of Tech.	1	U.S. Coast Guard Academy	1	Total Completed	23
Brigham Young	2	Sam Houston State	6	U Chicago	1	Two-Year Colleges	
Brown	1	Schreiner	3	U Houston	15	Blinn College	4
Bucknell	1	Samford	1	UH Clear Lake	1	Houston CC	14
Dallas Baptist	1	Soka University	1	UH Downtown	7	Lone Star College	1
Fort Valley State	1	Southern	2	UH Victoria	2	NW Vista College	3
Franklin Pierce	1	St Edward's	1	U Incarnate Word	8	San Antonio College	4
Harvard	1	St. Mary's	4	U Mary Hardin-Baylor	2	San Jacinto JC	4
Harvey Mudd	1	Stephen F Austin	4	U Minnesota	1	Southwest Texas JC	32
Howard	2	Sul Ross State	6	U North Texas	4	Total 2-Year Students	62
Knox College	1	Tarleton State	1	U Oklahoma	1	**Total College Students**	**439**
Lamar	1	Texas A&M	45	U Oregon	1	Out of State	33
McMurry	2	Texas A&M Commerce	1	U Texas Austin	81	Private Colleges	55
Mass. Institute of Technology	1	Texas A&M Corpus Christi	8	UT San Antonio	42	HBCU[1]	11
Northwestern	1	Texas A&M Galveston	2	UT Tyler	1	Texas State Schools	349
Oberlin	1	Texas A&M International	6	Ursinus College	1	Not in College	
Oblate School of Theology	1	Texas A&M Kingsville	3	Wabash College	1	US Armed Forces	6
Ohio State	3	Texas Lutheran	2	Whitman College	1	Working	30
Pepperdine	1	Texas Southern	1	Xavier	1	Total Not Pursuing College	36
Prairie View A&M	5	Texas State	24	Total 4-year Students	354	**Total GeoFORCE Graduates**	**475**

[1] *Histroically black colleges and universities*

Objective 3: Increase the number of students choosing STEM majors, especially geosciences and engineering.

The standard measurement for college achievement is a six-year graduation rate. The first GeoFORCE students are now four years past high school graduation and are on track to achieve a >85 percent six-year college graduation rate. Currently about 35 percent have completed their undergraduate education, and another 53 percent are still in school working toward degrees.

GeoFORCE's first B.S. degree in geosciences was granted by the Jackson School in May 2013 to Jeff Sitgreaves of Bracketville, Texas. Jeff is currently working on an M.S. degree, also at the Jackson School.



GeoFORCE students study STEM degrees in much higher numbers than the national average of 32 percent. In addition, 56 percent of GeoFORCE STEM majors are in physical sciences and engineering.

The table below compares the distribution of GeoFORCE students in geoscience and engineering majors with National Science Foundation data on degrees awarded in these fields. Nationally only about 0.3 percent of bachelor's degrees are awarded in geosciences, but more than 16 percent of GeoFORCE graduates are pursuing geoscience degrees.

Minorities in Geoscience and Engineering Majors	College Students Overall	GeoFORCE Students
STEM Majors	31.5%	64.7%
Geoscience Majors	0.3%	16.2%
Black Geoscience	<0.01%	2.5%
Hispanic Geoscience	0.02%	10.3%
Female Geoscience	0.1%	9.3%
Engineering Majors	4.5%	11.8%
Black Engineer	0.2%	1.8%
Hispanic Engineer	0.4%	6.6%
Female Engineer	0.8%	3.4%

I took Physical Geology for my petroleum engineering degree. I could have passed the final my first day; I knew it all from GeoFORCE "

Stephen Cantu, SW Academy class of 2011
Texas A&M, class of 2015

OUTCOMES

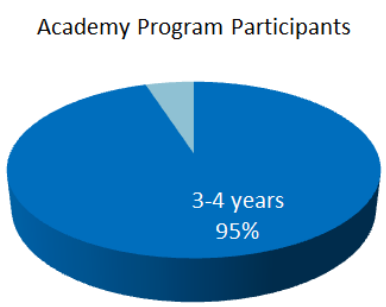
Academy vs. Young Geoscientist Programs

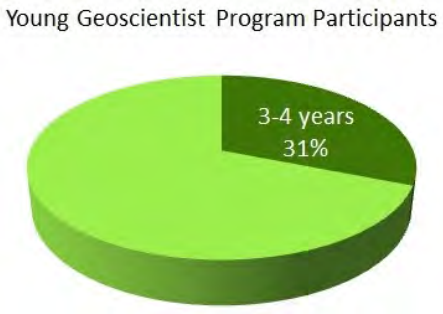
In 2013, GeoFORCE completed our ninth summer, and we have students all through the pipeline from eighth grade to graduate school. In our first 5 graduating classes, 644 students have participated in GeoFORCE, and we have good statistics about how we are meeting our goals. Two things stand out clearly:

1. **Students staying in the GeoFORCE program at least three years is a strong positive indicator for staying in college.**
2. **The Academy program is substantially stronger than the Young Geoscientist program in producing STEM, geoscience, and engineering students.**

Objective 1: Engage students at the eighth-grade level and keep them in the program for four years.

- 95% of Academy students participated in at least three out of four of the summer events.
- 31% of Young Geoscientist students participated in at least three summer events. The majority either dropped out of the program or joined later to replace students who dropped out.



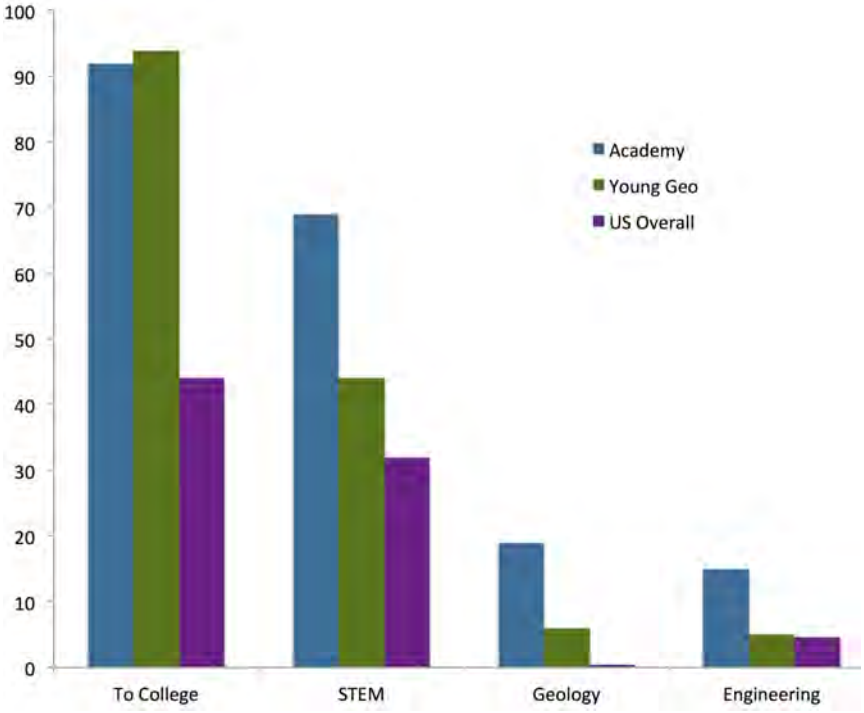


Objective 2: Achieve high school graduation and college matriculation.

- **High School Graduation:** GeoFORCE has a 100 percent high school graduation rate in both Academy and Young Geoscientist programs.
- **College Matriculation:** There is not a clear distinction between Academy and Young Geoscientist students in this statistic. However, college matriculation is tied quite strongly to number of years students attended GeoFORCE events, and the Academy has a much higher retention rate.

  - 93% of students who attended at least three out of four summer events went to college.

  - Only 69% of students who attended one or two summer events went to college.



Objective 3: Increase the number of students choosing STEM majors, especially geosciences and engineering.

There is a clear distinction between Academy and Young Geoscientist students in these measures.

- 69% of Academy students choose STEM majors in college.
- Only 44% of Young Geoscientist students choose STEM majors in college.
- Of 70 geology majors, 64 are from the Academy.
- Of 54 engineering majors, 49 are from the Academy.

What we have learned

It is clear that full participation (three to four years) in GeoFORCE is tied to college matriculation, and that Academy students are much more likely to participate fully in the program than Young Geoscientist students. Furthermore, even with full participation, Academy students major in STEM fields including geology and engineering at much higher rates than their Young Geoscientist counterparts.

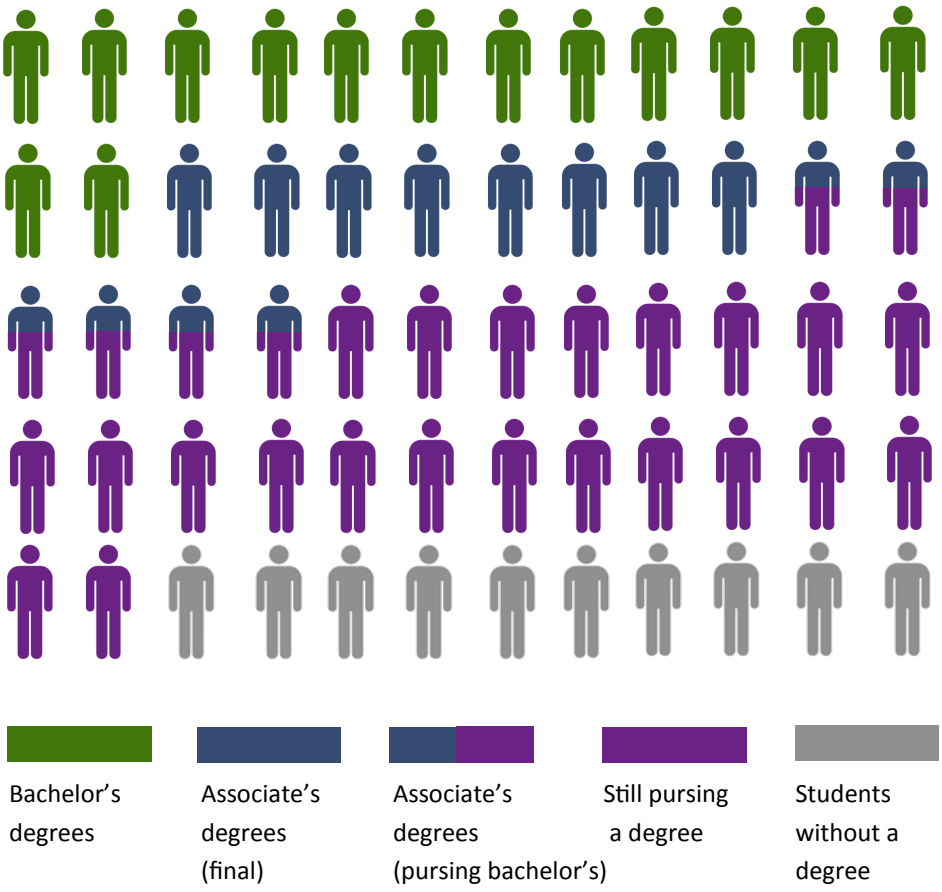
GeoFORCE Class of 2009 Young Geoscientists

On their first GeoFORCE Trip in Uvalde, Texas in 2005

GeoFORCE Class of 2009 Academy

On their first GeoFORCE Trip in Austin, Texas in 2005

Checking in with the Class of 2009



In 2005, 68 recent eighth-grade graduates from southwest Texas became the first GeoFORCE class. The next summer, 2 students were added, and of these 70 students, 60 completed at least three years of the program. Among them, these students hold 14 associate's degrees and 14 bachelor's degrees. Twenty-eight of the students are still pursuing undergraduate education (including six who earned associate's degrees and are now working on bachelor's degrees). There are five geology majors in this group, three at UT Austin and two at UT San Antonio. Three will graduate in December 2013, and the other two in May 2014. Two of them at the Jackson School, Katie Bales and Marissa Vara, have had abstracts accepted and are presenting the results of undergraduate research projects at the American Geophysical Union meeting in December 2013. Another five engineering majors will all finish up by May 2014.

Among the graduates, Pat Saucedo is at UT Medical School. Sabrina Cervantez is at Louisiana State University working on a master's degree on the history of geology and paleontology in the 18th and 19th centuries. Carlos de la Torre joined the Peace Corps.

FINANCIAL STATUS

Income

Income	2003-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	Total
Jackson School							
Subtotal Jackson School	**1,178,154**	**636,099**	**574,435**	**453,115**	**565,265**	**724,346**	**4,131,414**
Contracts & Grants							
Texas Workforce Commission	129,302	249,484	72,128	208,361	36,286	39,960	735,521
Title V CAMSC (SWTJC)		151,823	190,100	74,099			416,022
BOEMRE/MMS	50,000	25,000	50,000	50,000			175,000
TG Foundation			100,000				100,000
Community Foundation	42,324						42,324
US Geological Survey				42,267			42,267
Subtotal Contracts & Grants	**221,626**	**426,307**	**412,228**	**374,727**	**36,286**	**39,960**	**1,511,134**
Endowment (Payout)							
Darwin Family Endowment		172	1,437	2,562	3,530	4,754	12,456
Valence Operating Company		730	2,745	2,791	2,836	3,056	12,158
Janet E. and David I. Rainey			64	271	438	975	1,748
Subtotal Endowment (Payout)		**730**	**2,809**	**3,062**	**3,274**	**4,031**	**13,906**
Gifts							
Shell	235,000	125,000	125,000	125,000	125,000	125,000	860,000
ExxonMobil	85,000	220,000	120,000	130,000	140,000	140,000	835,000
BP	130,000	120,000	120,000	120,000	120,000	120,000	730,000
Chevron	80,000	80,000	120,000	120,000	120,000	120,000	640,000
Marathon	153,000	100,000	100,000	100,000	100,000	75,000	628,000
ConocoPhillips	126,000	21,000	21,000	21,000	21,000	21,000	231,000
Halliburton	60,000	30,000	30,000	25,000	25,000	25,000	195,000
Devon	25,000	40,000	40,000	40,000	40,000		185,000
BHP					75,000	100,000	175,000
Schlumberger	6,000	3,000		12,000	30,000	25,000	76,000
Anadarko						55,000	55,000
Talisman						50,000	50,000
Vulcan Materials	30,000		15,000				45,000
Baker Hughes Foundations				20,000	20,000		40,000
Valero	15,000		10,000	10,000			35,000
AEP	3,000	25,000	1,500	1,000	1,250	1,250	33,000
Alcoa	5,000	15,000					20,000
El Paso Corporation		10,000					10,000
Newfield					10,000		10,000
Swift Energy	22,000						22,000
Dominion	15,000						15,000
Priority Oil & Gas	2,000						2,000
Subtotal Corporate Gifts	**992,000**	**789,000**	**702,500**	**724,000**	**827,250**	**857,250**	**4,892,000**
Ed Rachal Foundation			20,000	20,000	20,000	20,000	80,000
AAPG Foundation	10,000	10,000	10,000	15,000	15,000	15,000	75,000
Hamman Foundation				20,000	20,000	20,000	60,000
GDL Foundation	1,400	2,500	7,500	7,500	20,000	12,000	50,900
AT&T Foundation	40,000						40,000
SEG Foundation		5,000	3,000	5,083	5,000	10,100	28,183
Kinder Morgan Foundation		5,000	5,000	5,000	5,000	5,000	25,000
Anonymous				15,000			15,000
Salvation Army				6,615			6,615
Brown Foundation				2,000	2,000	2,000	6,000
SIPES-Central Texas Chapter			1,000	1,000	1,000	500	3,500
Undergraduate Geo. Society				1,736	1,302	325	3,363
Chevron, Employee Match			1,000	1,000		1,000	3,000
ExxonMobil, Employee Match						750	750
Subtotal Foundation Gifts	**51,400**	**22,500**	**47,500**	**99,934**	**89,302**	**86,675**	**397,311**
Jeremy and Lynn Greene			2,500	2,500	2,500	2,500	10,000
William and Marilee Fisher	1,000	1,000	1,000	2,000	2,000	1,000	8,000
Jim Sansom			1,000	1,000	1,000	300	3,300
Dennis Trombatore	100			250	250	500	1,100
Peter Flawn						1,000	1,000
John Preston			200	300		200	700
Charles A. Caughey						500	500
Catherine Ott Griffith						500	500
Martha Mills						500	500
David Luke Gorney						350	350
Gail F. Worrell						250	250
Robert Leigh Boyce						250	250
Sterling H. Fly						225	225
Brian Timothy Moore						100	100
Gifts Under $100					154	25	179
Previous Donors	10,593	29,975	4,500	4,450	5,700		55,218
Subtotal Individual Gifts	**11,693**	**30,975**	**9,200**	**10,500**	**11,604**	**8,200**	**82,172**
Total Funding	2,454,873	1,905,611	1,748,672	1,665,339	1,532,981	1,720,462	11,027,938

Expenditures

Expenses	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	Change TY vs LY
General Expenses	164,172	129,195	269,691	268,282	313,717	16.9%
GeoFORCE Southwest						
9th Grade Academy	109,567	90,419	126,367	110,189	100,210	-9%
10th Grade Academy	102,522	107,395	114,569	120,042	110,981	-8%
11th Grade Academy	123,827	99,022	121,578	109,019	108,980	0%
12th Grade Academy	118,487	107,935	105,832	120,664	121,317	1%
9th Grade Young Geoscientists	31,110	33,846	25,544	35,389	27,536	-22%
10th Grade Young Geoscientists	33,305	52,566	55,881	45,418	45,287	0%
11th Grade Young Geoscientists	28,595	35,683	33,576	36,083	31,207	-14%
12th Grade Young Geoscientists	63,376	37,922	78,795	54,124	48,727	-10%
GeoFORCE Houston						
9th Grade Academy	114,249	78,723	131,249	120,021	105,167	-12%
10th Grade Academy	103,752	112,086	110,151	118,807	115,373	-3%
11th Grade Academy	81,802	87,927	143,438	131,013	106,523	-19%
12th Grade Academy	98,805	105,570	132,081	131,918	112,281	-15%
9th Grade Young Geoscientists	32,639	43,719	42,675	39,731	34,618	-13%
10th Grade Young Geoscientists	37,408	42,095	35,058	47,915	35,801	-25%
11th Grade Young Geoscientists	26,300	34,509	27,629	33,175	30,286	-9%
12th Grade Young Geoscientists	56,158	40,565	69,660	55,786	52,685	-6%
Teacher Workshops	27,200	11,811	55,903	43,876	52,884	21%
GeoGRAD Events	10,314	23,256	29,792	97,427	85,286	-12%
Summer Math Prep			1,600	7,500	3,150	-58%
Dual Credit Course	65,243	81,580	73,441	12		
CAMSC Summer Interns	89,176	117,131	11,453			
Total Expenses	**1,518,009**	**1,472,952**	**1,795,963**	**1,726,391**	**1,642,016**	**-5%**
Surplus/Deficit	**387,602**	**275,720**	**(130,624)**	**(193,411)**	**78,446**	

Scholarships

Income - Gifts (Fiscal Year)	2009	2010	2011	2012	2013	Total
Chevron Corp	20,000	20,000	52,000	52,000	52,000	196,000
TWC		30,000	30,000			60,000
Marathon	10,000					10,000
BP					200,000	200,000
Anonymous				1,255,786	1,227,727	2,483,513
Total Income	**30,000**	**50,000**	**82,000**	**1,307,786**	**1,479,727**	**2,949,513**

Expenses (Academic year)	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014* Fall Semester	Total
UT Transition to College Scholarships	30,000	59,990	78,559	39,100	58,000	265,649
GeoFORCE Graduate Scholars Program				242,097	336,181	578,278
BP Scholars Program					89,600	89,600
Total Expenses	**30,000**	**59,990**	**78,559**	**281,197**	**483,781**	**933,527**

Sponsors

Thank you to the generous financial supporters of the GeoFORCE program

Peter Flawn	Jeremy & Lynn Greene	Bill & Marilee Fisher
Janet & David Rainey	Dennis Trombatore	Catherine Ott Griffith
Charles Caughey	Martha Mills	David Luke Gorney
Gail Worrell	Jim Sansom	Robert Boyce
Sterling H. Fly	John Preston	Brian Timothy Moore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PARTNERSHIPS

GeoFORCE maintains strong academic partnerships with universities and school districts that share our values and goals. Together we are better at serving the needs of our target population and furthering our objectives. We work closely with educators at Penn State University, California State University Bakersfield, UT San Antonio, Texas A&M, and the University of Houston. We also work with diversity initiatives in professional organizations, including the Geological Society of America and the American Association of Petroleum Geologists.

Southwest Texas Junior College (SWTJC)

The partnership with Southwest Texas Junior College is the cornerstone of the southwest region's success. SWTJC helps with every aspect of implementing GeoFORCE from building relationships with local school districts to providing logistical support for GeoFORCE events in the area. The ninth-grade Young Geoscientist field trip has used the college as a base since 2005—15 groups of students have come there. In addition, southwest area closing ceremonies have all been held in the college ballroom. Many friends at the college have been involved, but this year we owe special thanks to Blaine Bennett, Willie Edwards, Rosy Arellano, Andrea Flores, and Mayta Garza.

Houston Independent School District (HISD)

HISD supports our partnership in the Houston region by giving us access to middle schools for recruiting and to high schools for our school year programs. We have used HISD facilities for meetings and as drop-off and pick-up locations. Most importantly, individual principals and teachers have gone out of their way to make GeoFORCE possible for their kids. Special thanks are extended to Yolanda Evans, our point person in the district office, and Karla Auzenne, who keeps a close eye on our students.

University of Alaska Fairbanks (UAF)

GeoFORCE Alaska ran its second field trip this summer, with a group of twenty-eight 10th graders who went to Arizona. We continue to partner with and support this growing GeoFORCE program as it develops into the second GeoFORCE program in the nation. Texas hosted Anne Rittgers, the new Alaska coordinator, for a week in the spring as she shadowed Lindsay Stephens to learn the job of a coordinator. This summer the GeoFORCE Houston and Alaska 10th graders traveled together on the field trip to Utah and Arizona. In addition, three Alaska staff members came as guests on the Houston 11th grade trip to learn the stops and the curriculum for their Oregon excursion next summer. Sarah Fowell is the GeoFORCE Alaska director.

Fort Valley State University (FVSU)

We remain closely connected to FVSU, where the model for GeoFORCE was framed. GeoFORCE has one student currently attending FVSU, and we continue to work together to bring opportunities to students of color. Isaac Crumbly and Jackie Hodges run the Fort Valley programs.

Industry and Government Participation

Corporations	Individuals	Advisory Committee Member	Region and Event
Anadarko	Tom Griffith		Southwest Young Geoscientists 12
	John Hull		
	Keith Mahon		Houston Young Geoscientists 11
	Jessica Schubert		Houston Young Geoscientists 9
	Robert Tally	✓	
	Doug Wilson		Southwest Young Geoscientists 9
BHP	Christine Skirius	✓	Houston GeoFORCE Academy 11
	Tyson Smith		Southwest Young Geoscientists 11
BP	Sneha Chanchani	✓	
	Kira Diaz Tushman	✓	Southwest GeoFORCE Academy 12
	Peter Hargrove		Southwest GeoFORCE Academy 11
	Genevive Mathers		Houston GeoFORCE Academy 10
	Rachel Murphey		Houston Young Geoscientists 11
	Leslie Neal		Southwest GeoFORCE Academy 10
	Stefan Punnette		Southwest Young Geoscientists 10
	Tony Riccardi		Houston GeoFORCE Academy 12
Chevron	Joni Baird	✓	
	Danielle Carpenter		Southwest Young Geoscientists 12
	Troy Hawkes		Houston Young Geoscientists 12
	George Hildebrandt	✓	Houston Young Geoscientists 10
	Susan Howes		Southwest GeoFORCE Academy 11
ConocoPhillips	Anna Morisani	✓	
ExxonMobil	Reggie Beasley	✓	
	Lucas Buchanan		Southwest GeoFORCE Academy 9
	Lauren Fortson		Houston GeoFORCE Academy 9
	Mike Loudin	✓	
	Julie Mahler	✓	
	Enrique Perez		Southwest Young Geoscientists 10
	James Pyburn		Southwest GeoFORCE Academy 11
	Lyanne Yurco		Southwest Young Geoscientists 10
Halliburton	Bill Agee	✓	
	Lisa Finch	✓	
Marathon	Susan Baber	✓	
	Rodrigo Bastidas		Southwest GeoFORCE Academy 9
	Chelete Burnett	✓	
	Jared Hamilton		Houston GeoFORCE Academy 10
	Laura Reich	✓	
Schlumberger	Geraldine Haas		Houston Young Geoscientists 12
	Joel le Calvez		Houston GeoFORCE Academy 11
	Susan Rosenbaum	✓	
Shell	Mike Alvarez	✓	Houston GeoFORCE Academy 12
	Liz Baker		Houston Young Geoscientists 10
	Denise Butler	✓	
	Kevin Eagar		Houston GeoFORCE Academy 11
	Aaron Shunk		Houston GeoFORCE Academy 9
Talisman	Woody Pace	✓	
	Alan Zick		Houston GeoFORCE Academy 10
Valence	Bud Scherr	✓	Houston GeoFORCE Academy 9

Government/Organization	Individuals	Advisory Committee Member	Region and Event
Department of the Interior	Lori Caramanian		GeoFORCE Academy 12
Texas Workforce Commission	Kelly Sadler	✓	
U.S. Geological Survey	Randy Orndorff		GeoFORCE Academy 12
	Lydia Quintana		GeoFORCE Academy 12

Other Professionals

Park Rangers, Museum Staff, and Other Professionals Who Provided or Arranged for Learning Opportunities	
Barton Springs Pool:	Group Scheduling Dept
Bob Bullock Museum:	James McReynolds
Cape Perpetua:	Lori Robertson
Carlsbad Caverns:	Helen Fields
Colorado River Discovery:	Dianne Powers, Korey Seyler
Crater Lake National Park:	Amelia Bruno
Del Rio Outcrop:	Sherman Mumme
Fort Inge and Uvalde Historical Society:	Dick Whipple
Ft. De Soto:	Jim Wilson, Jean Long
Glacial Sand & Gravel Co.:	Jocelyn Lewis-Miller
Glen Canyon Dam:	Nikki Johnson, Rachel Dawavendewa, Dana Crane, Curtis Jaborski
Grand Canyon:	Jim Heywood, Roger Benefield, Nancy Reilly
Great Falls Park:	Craig Madison, Cheryl Bresee
Guadalupe Mountains:	Holly Olds
Harpers Ferry National Historical Park:	Jeff Woods, Rebecca Harriett, Roxanne Ruppenthal
Inner Space Cavern:	Shirree Krahn
John Pennekamp Coral Reef:	Cecelia McCafferty, Jesula Milfort
John U. Lloyd State Park:	Carmelo Duesler
KATY Research Vessel:	Captain Stan Dignum, Dana Sjostrom
Leesylvania State Park:	Karen Lambey, Maribel Cervantes
Lovers Key State Park:	Gloria Beauchamp
Marine Science Institute:	Linda Fuiman, Lynn Ulch
Mt Hood National Forest - Timberline Lodge:	Tammy Villali
Mt St Helens:	Kristine Cochrane-Bell
Newberry National Volcanic Monument:	Elizabeth Wasserman
Oregon Coast Aquarium:	Group Reservations Dept
Padre Island National Seashore:	Buzz Botts
Pennsylvania State Geological Survey:	Gary Fleeger
Siuslaw National Forest:	Lori Robertson
Sunset Crater/Wupatki National Monument:	Inez Paddock, Jeff Beauchamp
Texas Memorial Stadium:	Lauren Lichterman, Allison Fredin
Texas State Aquarium:	Stacy Treviño
Tualatin Valley Fire & Rescue:	Jeff Rubin
United States Geological Survey:	Randy Orndorff, Lydia Quintana, Michael Marketti
Vulcan Materials, Knippa:	Joanne Valenzuela
Vulcan Materials, Uvalde:	Chris Havelka
White Sands National Monument:	David Bustos
Windley Key Fossilized Coral Reef:	Melba Nezbed
Zion National Park:	David Walker, Amy Esplin, Allison Christofis


TECHLITES
VARIAN

SUMMARY OF 2012 - 2013 ACTIVITIES

GeoFORCE continued to provide a strong high school program for 594 students, as well as providing expanded opportunities for our 475 GeoFORCE graduates.

In 2012 - 2013, GeoFORCE ran

8

Summer Academy Trips

8

Summer Young Geoscientist Trips

2

SAT Prep Courses

2

College Admission Workshops

2

School Year Events for High School Seniors

2

Educator Professional Workshops

Online college math preparation for all high school seniors planning on majoring in the STEM fields

Various scholarship programs for our GeoFORCE graduates

Mentoring program for college freshmen


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Academies

9th Grade: Austin and Florida

Objectives

1. Introduce students to basic geological terms and processes
2. Gives students the opportunity to experience life on a major university campus

Geological Topics

Rivers, erosion, sediment transport, coastal erosion, barrier islands, carbonate production, reefs, sea-level change, uniformitarianism, superposition

Austin Field Stops:

· McKinney Falls

· Guerrero Park

· TX Memorial Museum

· U of Texas Campus

Florida Field Stops :

· Fort Desoto Park

· Lovers Key

· Big Carlos Pass

· John U Lloyd Park

· Pennekamp Coral Reef

Houston (June 8–15, 2013)			41 students
Coordinator:	John Hash	**Counselors:**	**Corporate Guests:**
Trail Driver:	Ivan Ponce	Davion Antwine, Tania Babu	Lauren Fortson - ExxonMobil
Instructor:	Terry Quinn	Fidelina Carranza, Denise Castillo	Bud Scherr - Valence
Edu. Coach:	Carrie Millican	Kimberly Routt, Dorian Smith	Aaron Shunk - Shell

Southwest (June 22–29, 2013)			42 students
Coordinator:	Matt Hofer	**Counselors:**	**Corporate Guests:**
Trail Driver:	Devon Vanderveer	Kelsey Bruce, Alexis Gonzales	Rodrigo Bastidas - Marathon
Instructor:	Wonsuck Kim	Jesus Gonzales, Faith Montgomery	Lucas Buchanan - ExxonMobil
Edu. Coach:	Lauren Oefinger	Aimee Vasquez, Dominique Zvorak	


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10th Grade: Arizona and Utah

Objectives

1. Inspire students to "think like a geoscientist"
2. Apply geological concepts to what is seen in real time
3. Expose students to sedimentary structures, processes, and environments

Geological Topics

Geologic time, law of superposition, lateral continuity, crossbedding, unconformity, desert varnish, monocline, gradient, antecedent drainage, mass wasting, uniformitarianism, differential erosion, dendrochronology, cinder cone, stratovolcano

Arizona Field Stops:

· Grand Canyon
· Balancing Rock
· Navajo Bridge
· Glen Canyon Dam
· Wupatki Ruins
· Sunset Crater
· Meteor Crater

Utah Field Stop:

· Zion National Park

Southwest (June 8–15, 2013) — 43 students

Coordinator:	Edgar Garza	**Counselors:**	**Corporate Guest:**
Trail Driver:	Victoria Herndon	Raymoundo Cordova, Teresa Gaitan	Leslie Neal - BP
Instructor:	Greg Frébourg	Zenia Garza, Drew Slack	
Edu. Coach:	Michael Arratia	Devon Vanderveer, Dominique Zvorak	

Houston (June 22–29, 2013) — 41 students

Coordinator:	John Hash	**Counselors:**	**Corporate Guests:**
Trail Driver:	Ivan Ponce	Fidelina Carranza, Denise Castillo	Jared Hamilton - Marathon
Instructor:	Peter Flaig	Christina Chong, Raymundo Cordova	Genevive Mathers - BP
Edu. Coach:	Karla Auzenne	Kimberly Routt, Dorian Smith	Alan Zick - Talisman


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11th Grade: Oregon and Washington

Objectives

1. Expose students to volcanic structures, processes, and environments
2. Compare beach environments on east and west coasts of the United States
3. Reinforce geological concepts from 9th and 10th Grade Academies

Geological Topics

Law of superposition, lateral continuity, uniformitarianism, magma, lava, fissure, vesicular texture, pyroclastic flow, caldera, longshore current, tides, tsunami, sea stack, marine terrace, intertidal zone

Oregon Field Stops:

· Columbia River Gorge
· Mt. Hood
· Newberry Caldera
· Crater Lake
· Salt Creek and Multnomah Falls
· Oregon Coast
· Oregon Coast Aquarium

Washington Field Stop:

· Mount St. Helens

Southwest (July 20–27, 2013)			42 students
Coordinator:	Matt Hofer	**Counselors:**	**Corporate Guests:**
Trail Driver:	Devon Vanderveer	Jessica Delgado, Teresa Gaitan	Peter Hargrove - BP
Instructor:	Jeff Paine	Alexis Gonzalez, Ruben Polanco	Susan Howes - Chevron
Edu. Coach:	Lashonda Banks	Aimee Vasquez, Dominique Zvorak	James Pyburn - ExxonMobil

Houston (July 27–August 3, 2013)			38 students
Coordinator:	Lindsay Stephens	**Counselors:**	**Corporate Guests:**
Trail Driver:	Ivan Ponce	Zenia Garza, Ariel Hernandez	Kevin Eagar - Shell
Instructor:	Jeff Paine	Hope Iyierwure, Faith Montgomery	Joel le Calvez - Schlumberger
Edu. Coach:	Daryll Tricksey	Austin Moore, Larry Savoy	Christine Skirius - BHP


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12th Grade: Pennsylvania, West Virginia, Virginia, and Washington, D.C.

Objectives

1. Compare the ancient convergent plate boundary of the Northeast with the active convergent plate boundary of the Northwest
2. Reinforce geological concepts from past three summers

Geological Topics

Geologic periods, geologic provinces, orogeny, Pangaea, fossil fuels, valley and ridge, coastal plains, faults, folds, rifting, anticlines and synclines

Pennsylvania Field Stops:

- McConnells Mill State Park
- Moraine State Park
- Graff North Mine

West Virginia Field Stop:

- Harpers Ferry National Monument

Virginia Field Stops:

- Rift Basin
- Great Falls Park
- Leesylvania State Park

D.C. Area Field Stops:

- Smithsonian Museum
- National Mall
- USGS Headquarters

Houston (July 13–20, 2013)			42 students
Coordinator:	Lindsay Stephens	**Counselors:**	**Corporate Guests:**
Trail Driver:	Ivan Ponce	Alejandra Eljuri, Ariel Hernandez	Mike Alvarez - Shell
Instructor:	Liz Catlos	Cortney Pichon, Kim Routt	Tony Riccardi - BP
Edu. Coach:	Madelyn Percy	Larry Savoy, Dorian Smith	

Southwest (July 13–20, 2013)			42 students
Coordinator:	Edgar Garza	**Counselors:**	**Corporate Guest:**
Trail Driver:	Victoria Herndon	Stephen Cantu, Alyssa Esquivel	Kira Diaz Kushman - BP
Instructor:	Jamie Austin	Zenia Garza, Carolyn Hernandez	
Edu. Coach:	Michael Arratia	Daniela Ocada, Frederico Salinas	


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Young Geoscientists
9th Grade: Uvalde, Texas

Objectives

1. Introduce students to basic geological terms and processes
2. Expose students to fluvial systems
3. Apply concepts to hands-on experiences

Geological Topics

Uniformitarianism, law of superposition, lithification, deposition, differential erosion, columnar joints, rock cycle, water table, point bar, cutbank, aquifer, terrace, quarry, floodplain, volcano

Uvalde and Surrounding Field Stops:

· Blackwater Hole
· Vulcan Materials Asphalt Quarry
· Knippa Traprock Quarry
· Del Rio Hacienda Formation
· Fort Inge
· Leona River
· Annandale Bat Cave

Southwest (July 1–2, 2013) — 44 students

Coordinator:	Edgar Garza	**Counselors:**	**Corporate Guest:**
Trail Driver:	Victoria Herndon	Alexandria Castillo, Jessica Delgado	Doug Wilson - Anadarko
Instructor:	Linda McCall Ruiz	Teresa Gaitan, Jesus Gonzales	
Edu. Coach:	Craig Weart	Daniela Ocada, Federico Salinas	

Houston (July 9–11, 2013) — 38 students

Coordinator:	Matt Hofer	**Counselors:**	**Corporate Guest:**
Trail Driver:	Devon Vanderveer	Davion Antwine, Cierra Gilmore	Jessica Schubert - Anadarko
Instructor:	Staci Loewy	Thu Nguyen, Cortney Pichon	
Edu. Coach:	Craig Weart	Sade Picquet, Diajine Woodford	


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Young Geoscientists

10th Grade: Port Aransas, Texas

Objectives

1. Learn basic coastal processes and nomenclature of the coastal zone
2. Inspire students to "think like a geoscientist" and apply the geological concepts to what they are seeing in real time
3. Reinforce geological concepts from previous summer

Geological Topics

Barrier island formation, accretion, algal mat, swash zone, longshore drift, salt marsh, surf zone, estuary, fetch, tides, jetty, beach, backbeach

Port Aransas Field Stops:

· Mustang Island

· Packery Channel

· Leonabelle Turnbull Birding Center

· UT Marine Science Institute

· *KATY* Research vessel

Corpus Christi Field Stop:

· Texas State Aquarium

Houston (July 14–17, 2013) — 28 students

Coordinator:	John Hash	**Counselors:**	**Corporate Guests:**
Trail Driver:	Jeff Cullen	Davion Antwine, Inmer Cardona	Liz Baker - Shell
Instructor:	Hilary Olson	Ugochi Ibekwe, Antonio Martinez	George Hildebrandt - Chevron
Edu. Coach:	Rosslin Gill	Ruben Polanco, Cristina Soto	

Southwest (July 31–August 3, 2013) — 38 students

Coordinators:	Lisa Aguiñaga and John Hash	**Counselors:**	**Corporate Guests:**
Trail Driver:	Victoria Herndon	Debbie Duran, Teresa Gaitan	Enrique Perez - ExxonMobil
Instructor:	Jud Patin	Antonio Martinez, Federico Salinas	Stefan Punnette - BP
Edu. Coach:	Marla Hibbits	James White, Dominique Zvorak	Lyanne Yurco - ExxonMobil


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Young Geoscientists

11th Grade: Austin, Texas

Objectives

1. Give students a glimpse of life on a major university campus
2. Expose students to fluvial systems and aquifers
3. Compare fluvial systems in Austin and Uvalde
4. Reinforce geological concepts from 9th and 10th grade field courses

Geological Topics

Law of superposition, uniformitarianism, geologic time, erosion, deposition, watershed, stream discharge, geomorphology, topography, flood, fault, earthquake, escarpment, karst, cave, speleothem

Austin and Surrounding Area Field Stops:

· McKinney Falls
· Barton Springs
· Texas Memorial Museum
· Bullock Texas State History Museum
· Inner Space Cavern
· Mount Bonnell
· Perry Park

Houston (June 8–11, 2013) — 27 students

Coordinator:	Matt Hofer	**Counselors:**	**Corporate Guests:**
Trail Driver:	Jeff Cullen	Christina Chong, Abi Guerra	Keith Mahon - Anadarko
Instructor:	Tiffany Caudle	Chloe Mendez, Cortney Pichon	Rachel Murphey - BP
Edu. Coach:	Darryl Tricksey	Larry Savoy, Cristina Soto	

Southwest (June 12–14, 2013) — 38 students

Coordinator:	Matt Hofer	**Counselors:**	**Corporate Guest:**
Trail Driver:	Jeff Cullen	Stephen Cantu, Alexandria Castillo	Tyson Smith - BHP
Instructor:	Jamie Barnes	Alejandra Eljuri, Carolyn Hernandez	
Edu. Coach:	Eleanour Snow	Daniela Ocada, Ruben Polanco	


CARLSBAD CAVERNS

Young Geoscientists

12th Grade: Texas and New Mexico

Objectives

1. Expose students to the many types of careers in the geosciences, all while giving them first-hand experience in the field
2. Expose students to basic tectonic concepts
3. Compare fluvial systems in depth
4. Reinforce geological concepts from past three summers

Geological Topics

Aquifer, groundwater, basin, desertification, depositional environment, eolian dunes, subduction, tectonics, water table, recharge, discharge, spring

Texas Field Stops:

· Camp Peña
· Pecos High Bridge
· Guadalupe Mountains
· McKittrick Canyon

New Mexico Field Stops:

· White Sands Nation Monument
· Carlsbad Caverns

Southwest (June 25–28) — 30 students

Coordinator:	Edgar Garza	**Counselors:**	**Corporate Guests:**
Trail Driver:	Victoria Herndon	Stephen Cantu, Zenia Garza	Danielle Carpenter - Chevron
Instructor:	Brad Gooch	Carolyn Hernandez, Antonio Martinez	Tom Griffith - Anadarko
Edu. Coach:	Madelyn Percy	Austin Moore, Ruben Polanco	

Houston (July 22–26, 2013) — 28 students

Coordinator:	John Hash	**Counselors:**	**Corporate Guests:**
Trail Driver:	Jeff Cullen	Inmer Cardona, Okechukwu Ibekwe	Geraldine Haas - Schlumberger
Instructor:	Tim Shin	Regina Manion, Anthonio Martinez	Troy Hawkes - Chevron
Edu. Coach:	Madelyn Percy	Rachel Ruthven, Dorian Smith	John Hull - Anadarko

Valedictorians and Salutatorians

GeoFORCE students continue to succeed. We would especially like to congratulate the 21 GeoFORCE students from the class of 2013 who through their hard work graduated valedictorian or salutatorian of their class.

Laura Adams
Salutatorian
Hondo HS

Keena Auld
Valedictorian
Leakey HS

Chaquette Blanks
Valedictorian
Worthing HS

Abreana De La Garza
Salutatorian
Cotulla HS

Lanize Flores
Salutatorian
Crystal City HS

Alejandra Garcia
Salutatorian
Eagle Pass HS

Rolando Garza
Valedictorian
Uvalde HS

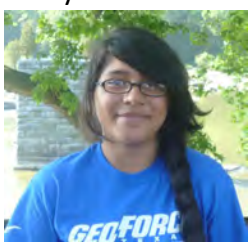
Tomica Gawlik
Valedictorian
Dilley HS

Selina Gerardo
Salutatorian
Bracketville HS

Darby Gonzalez
Valedictorian
Hondo HS

Paoloa Gonzalez
Salutatorian
Del Rio HS

Leah Guerrero
Valedictorian
Crystal City HS



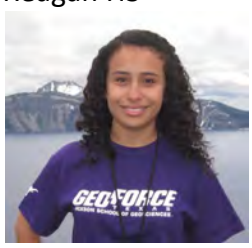
Saira Guillen
Valedictorian
Reagan HS

Jelena Lara
Salutatorian
Uvalde HS

Savannah Martinez
Valedictorian
Utopia HS

Nevah Navarro
Salutatorian
Nueces Canyon HS

Keilon Robinson
Valedictorian
Madison HS



America Ruiz
Salutatorian
CC Winn HS

Alexandrea Salazar
Salutatorian
La Pryor HS

Matthew Smith
Valedictorian
Knippa HS

Daniela Zuniga
Salutatorian
Challenge ECHS

SAT Prep

GeoFORCE provided two SAT prep courses for our high school juniors and seniors. These workshops help teach students strategies for achieving their best SAT scores. Next year GeoFORCE will add PSAT prep classes. We are expanding our program because the PSAT determines National Merit Scholarships and PSAT preparation classes are not offered at many of our targeted schools.

College Admission Workshops

GeoFORCE provided two College Application Information sessions. These workshops provide parents and students the opportunity to learn about college applications, admissions, the financial aid process, and scholarship opportunities. Last year we held the southwest region college admission workshop as a picnic and invited GeoFORCE graduates to attend and speak with the high school seniors individually to address their questions and concerns about getting into college or transitioning from high school to college. Attendance levels were significantly higher than in previous years, and the informal atmosphere appeared to encourage better dialogue. Next year GeoFORCE will host both the Houston and southwest region's college admission workshops as picnics and will invite students, their families, their teachers, and current undergraduate students.

High School Senior Events

Each fall GeoFORCE hosts an event in Houston focused on career options for all GeoFORCE seniors. This year, students visited both Shell and BP, as well as the Wiess Energy Hall at the Houston Museum of Natural Science. The goal of the day was to expose students to the wide variety of jobs in energy companies. Students got to see 3D seismic visualization, do their own seismic interpretation, and visit with professionals about their jobs, training, and career pathways.

In addition, our southwest region students stopped at UT San Antonio on the way to Houston. They got a tour by the admissions office staff, visited geology labs, and had lunch with former GeoFORCE students who are currently studying at UTSA.

In the spring we brought the senior class to Austin for a graduation celebration. This is a celebratory event to congratulate the students on their hard work and an opportunity to speak again with the students about transitioning to college. Students went to Enchanted Rock to hike, climb, and picnic, and then spent some time at UT talking with current undergraduate students about what to expect in college. The day ended with a dinner cruise on Lake Austin with professors, sponsors, and staff.

Educator Professional Workshops

GeoFORCE maintains close contact with educators at our target schools in southwest Texas and Houston. Our educators play an essential role by helping recruit students, guiding them through the application process, monitoring them throughout high school, and assisting in the instruction during our summer field events. Without these dedicated teachers, GeoFORCE would not be able to recruit the high-caliber students we have in the program.

GeoFORCE hosts two Educator Professional Workshops each year. These workshops are free and available to math and science teachers from our targeted schools. They provide teachers with hands-on field exposure to STEM topics taught in their classroom, as well as lessons they can take back to their classrooms.

Our fall workshop, held November 11–13, 2012, in Del Rio, Texas, was attended by 40 educators. The focus was on the Eagle Ford Shale. On the first day, a team of researchers from the Bureau of Economic Geology (Steve Ruppel, Bob Loucks, and Greg Frébourg and Harry Rowe) led the teachers to field stops West of Del Rio to examine the geology of the Eagle Ford where it is exposed at the surface. On the second day, our corporate sponsor, Anadarko Petroleum, hosted the teachers at their operations near Crystal City, Texas. Teachers visited a drill site, a fracking job, and a petroleum distribution center. They got to see the whole process from well location to extraction to distribution. We thank Robert Talley for arranging that trip. The workshop left the teachers with a much better understanding of the industry that is driving so much change in Texas.

Our spring workshop was held February 10–12, 2013, in San Antonio, Texas. A total of 50 educators attended. We partnered once again with the National Energy Education Development Project (NEED), an organization designed to improve energy education. The focus was on wind energy, and teachers participated in hands-on activities to learn how to teach the concepts. They were provided with windmill kits

to take back to their classrooms.

Online College Math Preparation

Our students are successfully getting into college and choosing the STEM fields. Now they need help overcoming barriers they face to graduate from college in these challenging fields. Most of our students have large gaps in their knowledge of basic math and chemistry concepts that make their university-level required courses especially difficult. About 10 percent of GeoFORCE initial STEM majors change their majors in their first year of college. Others struggle but persist in STEM majors despite setbacks in their freshman year. For the past two years GeoFORCE has offered students access to the ALEKS online math and chemistry programs to help address this issue.

ALEKS tests a student's current knowledge and points out areas of weakness. Students are then able to access learning modules to work on improving their fundamental knowledge.

Scholarship Programs

For many GeoFORCE graduates, getting into college is a challenge, but it only sets the stage for a more formidable obstacle—paying for it. GeoFORCE is fortunate to have donors who understand this problem (see page 18 for financial details).

Chevron continued their support of GeoFORCE with scholarships for students studying at the University of Texas in the Jackson School of Geosciences or Cockrell School of Engineering.

BP generously donated scholarships to all GeoFORCE students from the class of 2013 attending a four-year university in the fall of 2013.

An anonymous donor stepped forward again in 2013 to continue the GeoFORCE Graduate Scholars Partnership for the class of 2013. This partnership is open to participation by other donors. The goal of these scholarships is to provide financial resources to GeoFORCE graduates who are outstanding students who have demonstrated the potential to become future leaders in their fields, have chosen to study a STEM field, and have unmet financial need. The scholarships provide four years of funding. Student recipients are required to live on campus for the first year of college, meet monthly with their assigned mentor, and after their freshman year, serve as peer mentors for younger scholars on their campus.

Mentoring Program

Graduate students at the Jackson School of Geosciences have created a mentoring program to assist incoming freshman to the Jackson School. Each graduate student is assigned an incoming freshman, and they meet on a monthly basis to help the younger students with their transition to college. They also host regular gatherings to meet with the freshmen students in informal settings. This year activities have included a trip to the supermarket to fill up on supplies for their dorm room, a trip to the Congress Avenue Bridge to see the

STAFF

This past year Dr. Eleanour Snow moved from Associate Director to Interim Director and oversaw the entire program. The high school program this year was run by seasoned coordinators Lindsay Stephens and Edgar Garza. They were assisted by coordinators Matt Hofer and John Hash. After five years of dedication to the GeoFORCE program and the students, Edgar Garza left at the end of the summer for a position with the Jackson School's international programs. Lisa Aguiñaga joined us over the summer as the newest coordinator.

Debra Sue Trinque and Karen Barton assist with accounting, finances, and purchasing. Ann Merriman works with the college programs and corporate and foundation relations. Many others in the Jackson School assist with GeoFORCE. We would especially like to thank Sheree Courney, Rosalind Gamble, Jay Raney, and Susie Doenges.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APPENDIX I: Additional Data

Additional information about the National Student Clearinghouse and detailed information about school participation and student demographics can be found below.

National Student Clearinghouse

The National Student Clearinghouse (http://www.studentclearinghouse.org/) is an organization that tracks students' progress through higher education by gathering data from member colleges and universities. Most U.S. colleges are members. The NSC has been in business for many years, providing information to employers and higher education for verification purposes. Recently the NSC opened up a portal for outreach programs that allows access to enrollment and degree data by subscription and with a student's name and birthdate. GeoFORCE has been tracking student college data by maintaining contact in any way we can, but as the number of GeoFORCE graduates increases, the ability to track our participants more easily without having to chase them down is very helpful. This system is also more accurate than our previous method.

In addition, the new outreach portal allows us to track students who dropped out of GeoFORCE or who were qualified for enrollment in the program but did not participate, mostly because of space limitations. This information is extremely valuable because it allows us to see the direct effect of the program on college enrollment and choice of major. The "qualified" students are a matched cohort to GeoFORCE students—same promise in the eighth grade, same communities, same schools. Their progress through higher education gives us a picture of how these students fare without GeoFORCE. Looking at the outcomes for students who participated in just part of the GeoFORCE program is also instructive. It tells us that the four-year commitment really is critical to achieving our goals of getting kids into and through college.

Number of Students GeoFORCE Tracks					
Program	Still in High School		High School Graduates*		Qualified*
	3-4 Trips	1-2 Trips†	3-4 Trips	1-2 Trips	0 Trips
Academy	332	13	360	20	185
Young Geo	270	60	115	149	

*For these students, progress through college is tracked with data from the National Student Clearinghouse.

†The *Still in High School, 1-2 Trip* numbers represent students who have left the program. Active students are counted as completers even if they are 9th or 10th graders and have therefore only attended once or twice.

As a result of tracking through the NSC, we have changed how we report data on GeoFORCE students. We have seen a clear difference in outcomes between students who participate fully in GeoFORCE and those who attend only once or twice; therefore, we are separating them out for reporting. When we refer to GeoFORCE students in the outcomes, we are talking about those who completed the program by attending at least three of the summer field events. Some graphs and tables also report data about participants who attended only one or two trips, and these results are clearly marked.

This change may cause some confusion. For example, sharp readers who compare the college table from previous annual reports to this one will see that the total number of students in college has increased by only 44. Actually, we added 114 students from the class of 2013, but subtracted 70 students from previous years whom we have been tracking but who only participated in one or two GeoFORCE events.

Participating Schools

The following is a list of schools who participated in GeoFORCE recruitment and had students join GeoFORCE this summer.

9th Grade Students (Academy and Young Geoscientist)

Houston Middle Schools	Number of Students
Clifton Middle School	12
Dowling Middle School	1
Fondren Middle School	16
Grady Middle School	15
Hamilton Middle School	3
Hogg Middle School	3
Holland Middle School	9
Johnston Middle School	2
Lanier Middle School	5
Revere Middle School	7
Ryan Middle School	1
Woodson Middle School	5

Southwest Texas Middle Schools	Number of Students
Brackett Junior High School	3
Carrizo Springs Junior High School	4
Del Rio Middle School	3
Eagle Pass Junior High School	19
Frank Newman Middle School	2
Knippa ISD	2
La Pryor ISD	2
Leakey ISD	3
Mary Harper Middle School	2
McDowell Middle School	2
Memorial Junior High School	12
Nueces Canyon ISD	2
Rocksprings ISD	1
Sabinal ISD	4
Sterling Fly Junior High School	5
Utopia ISD	2
Uvalde Junior High School	18

Demographics of 2013 GeoFORCE Summer Events

(Eight individuals participated in both an Academy and a Young Geoscientist trip.)

Houston Region

	Black	Asian	Hispanic	White	Total
Academies					
9th Grade	18	2	12	9	41
10th Grade	11	4	19	7	41
11th Grade	9	5	17	7	38
12th Grade	13	5	18	6	42
Young Geoscientists					
9th Grade	15		16	7	38
10th Grade	7	5	14	2	28
11th Grade	12	1	13	1	27
12th Grade	11	2	13	2	28

Southwest Region

	Black	Asian	Hispanic	White	Total
Academies					
9th Grade	1	3	27	11	42
10th Grade			34	9	43
11th Grade		2	29	11	42
12th Grade	1	2	25	14	42
Young Geoscientists					
9th Grade		1	35	8	44
10th Grade		2	30	6	38
11th Grade		1	24	13	38
12th Grade			23	7	30

APPENDIX II: Other Outreach

Other Outreach Financials

The outreach staff at the Jackson School are involved with additional outreach programs beyond GeoFORCE. Historically these have been included in the annual report. The detailed financial information for other outreach programs can be found below.

Income	03-08	08-09	09-10	10-11	11-12	12-13	Total
Jackson School (Scholarships)	89,109	9,173	77,040	101,148	3,724		280,194
Jackson School (LAF)	-	10,795			3,313	10,000	24,108
Jackson School (General)	460,445	96,691	39,892	64,022	34,612	1,668	697,330
Total Income	549,554	116,660	116,932	165,170	41,649	11,668	1,001,632

Expenses	03-08	08-09	09-10	10-11	11-12	12-13	Total
FVSU Scholarships	89,109	9,173	77,040	101,148	3,724		280,194
Latin American Forum (LAF)	-	10,795			3,313	10,078	24,186
MSEA 11th Grade Academy	289,172	75,085	20,643	32,776	28,414		446,090
CDEP Student Visits	25,471	9,298	3,797	6,292			44,858
Other JSG Outreach	138,407					1,668	140,075
Innerspace Explorations	-		159	19,780	4,813		24,752
Explore UT	7,395	12,307					19,702
UTEACH	-		15,293				15,293
Upward Bound	-			2,650			2,650
Manor STEM Field Trip	-			2,524			2,524
Exemplar Manor and East Texas	-				1,385		1,385
Total Expenses	549,554	116,659	116,932	165,170	41,649	11,746	1,001,710


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