

Our hands-on interactive workshops equip teachers to bring engaging...

Earth science lessons to their classroom.

"We are so excited and grateful to the Oklahoma Geological Foundation for the incredible set of rocks, fossils, and minerals...

... You're helping to inspire future Geologists !!"

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"This award relieves some of the financial stress I have been experiencing, and for that I am extremely grateful. I am so excited to attend field camp with my peers. I am honored to receive your gift! Thanks!"

> Bren C., Student University of Oklahoma

2023 was another exciting year for the Oklahoma Geological Foundation. Each year, the Directors of the Foundation look forward to the opportunity to present the yearly accomplishments in the OGF Annual Report, and to thank all the donors whose gifts have been instrumental in these reported accomplishments. Because of your gifts since and including 2010, the Foundation has funded over 875 Grants and Scholarships to students, teachers, and schools, totaling over 1.9 million dollars! This Annual Report allows the OGF the opportunity to highlight and recognize the many students, teachers, and schools that have directly benefited from all the many gifts bequeathed to the Foundation by you, our donors. With this backdrop, *I am honored to present to you the Annual Report for 2023*.



As you review the Annual Report, you will notice the pictures of teachers and students as they explore and study the science of Geology and other Earth Sciences. They are learning and having fun. One of the many goals the Foundation has: is to focus on "Impact". As you review the accomplishments of 2023, you will see how the Programs of the Foundation impact not only the quality of education delivered to the students, but the number of students the Grants impact. The Foundation has seen significant growth in Field Camp Grants; Rock, Mineral, and Fossil Collection requests, and the very popular GeoKIDS visits. Grant requests from other OGF Programs have increased significantly, and as a result, two new Programs were established in 2023. You should especially note that in 2023, the Foundation funded over \$115,000 in Grants, which is up nearly 10% from 2022!

The Directors and the Foundation are receiving more and more thank you letters and notes from students and teachers. They are terrific and genuine. Words used are "WOW – I can't believe it", or "hands-on experience", and "can you come back again". Your gifts and financial support do make a difference! The students and teachers are learning about Earth Science and STEM education and having fun doing so. Technology continues to drive the economy and the workforce, and your Foundation is providing early age exposure and "hands-on" education that will impact students for a lifetime, allowing them to be a part of the ever-changing economy and workforce.

I, and the OGF Directors want to express our sincerest gratitude for your continued support for the Foundation. Stated as part of the Foundation's Mission Statement, "The Foundation is strongly committed to making significant, positive impact to science education and to the lives of students in Oklahoma". Your financial commitment to the Foundation has made that happen. Together – we are changing lives! Your gifts truly express your loyalty and helps build on the Foundation's highest aspirations.

homas C. Gonin

OKLAHOMA GEOLOGICAL FOUNDATION Vision for the Future MAKING DREAMS REALITIES

Currently, the Foundation has twenty programs that were established to give students, teachers, and institutions the opportunity to participate in the Earth Sciences and STEM education. These programs have been established by the Foundation, by individuals to honor loved ones, both living and deceased, and by individuals and companies who desire to preserve the Legacy of deserving individuals.

- I. The Frederick H. & Lois M. Kate Award (2006)
- 2. The Suzanne Takken Memorial Award (2006)
- 3. The Beth Cronin Elementary School Program (2006)
- 4. Kenneth Stewart Cronin Lecture Series Program (2006)
- 5. OGF Excellence in Earth Science Education Awards Program (2006)
- 6. Herbert G. & Shirley A. Davis OSU Geology Scholarship Program (2007)
- 7. The John Gatchell Earth Science Teaching Program (2008)
- 8. The Philip Boyle Foundation & OGF's Elementary and Secondary School Program (2008)
- 9. The Charles E. Branham Geological Library Program (2010)
- 10. The OGF Summer Field Camp Grants Program (2011)
- 11. Lance Ruffel & OGF Innovations in Earth Science Education Program (2012)
- 12. Shirley A. Davis Program for Earth Science Education (2013)
- 13. The Frederick M. Black Summer Field Camp Grant Program (2013)
- 14. The William A. Clement Earth Science Grant for Guthrie Middle & High Schools Program (2014)
- 15. Robert W. & JoAnn Waring Memorial Scholarship Program (2015)
- 16. The Oklahoma Geological Foundation STEM Program (2017)
- 17. The Larry Lunardi & OGF's Rock, Mineral, and Fossil Collection Program (2018)
- 18. David G. & Janet G. Campbell & OGF's Native American Scholarship Program (2018)
- 19. The Oklahoma Geological Survey and Oklahoma Geological Foundation's GeoKIDS Program (2023)
- 20. The Oklahoma Geological Foundation's Geoscience Education & Engagement Program. (2023)

the MISSION

The Mission of the Oklahoma Geological Foundation has been to implement a model of *"Excellence in Earth Science Education."* With the help and support of the Foundation, this model challenges students and teachers to make Earth Science education a priority.



The Foundation's "Mission" is divided into the following Directives:

- 1. Motivate and provide technical support for students who attend elementary, middle, and high schools within Oklahoma and who participate in an Earth Science curriculum.
- 2. Promote and grant financial support to teachers and schools throughout Oklahoma that conduct programs in the Geological Sciences.
- **3.** Facilitate and aid financially students who: (a) attend colleges and universities in Oklahoma and the goal of obtaining an undergraduate or graduate Degree in those fields of study, and (b) students who plan to pursue a career in the Earth Sciences.
- **4.** Provide funding for worthy, scientific endeavours that are conducted by other organizations that promote the Geological Sciences in Oklahoma.
- 5. Acknowledge and honor certain Professionals that are employed in businesses affiliated with the Geological Sciences, and who have made or continue to make significant contributions to the profession and their communities.

FOUNDATION PARTNERSHIP BENEFITING STEM & EARTH SCIENCE EDUCATION

In addition to the Foundation's traditional Mission of providing grants and awards to students, teachers, and schools, the Foundation actively partners with other organizations to further promote the importance and awareness of Earth Science education and STEM, which includes actual hands-on participation. One such partnership is with the Girl Scouts Western Oklahoma.

Working with the Property Task Force for the Girl Scouts Western Oklahoma, the Oklahoma Geological Foundation helped design and develop a rock-climbing wall at the Girl Scouts new STEM camp, Camp Trivera. The Girl Scouts are able to utilize their geological knowledge with the use of corresponding fossils and the geologic time-scale while climbing the rock wall. This thirty-foot tall exhibit is located in the Inasmuch Foundation's Gathering Hall and has proven to be one of the Girl In early 2022, the Foundation participated in the *Girl Scouts Geekapalooza* which was at Camp Trivera. The Foundation had rocks, minerals, and fossils for the attendees to look at and study, as well as a Geode cracker, where geodes were cracked, and the girls were able to see what was inside the geodes. An opportunity to see how mother nature preserves history and view it first-hand.

The Oklahoma Geological Foundation had the honor in 2022 to support the Girl Scouts "Wall of Women in STEM Recognition", and recognize Dr. Molly Yunker, a Foundation Director and chairman of the Grants and Awards and Girl Scouts Committees for the Foundation, and Education and Outreach Coordinator for the Oklahoma Geological Survey, as one of the honorees of the Wall of Women. Other activities include providing Camp Trivera with two Rock, Mineral, and Fossil Collections for teaching purposes, as well as large minerals specimens which are placed in various places around Camp Trivera. The Foundation has participated in the Daisy Day event, which the Cirl Scouts sponsor every year for girls.

The Foundation maintains an active role and association with the Girl Scouts Western Oklahoma.

Another partnership with the Girl Scouts that the Foundation has been extremely successful is through the Larry Lunardi and Oklahoma Geological Foundation's Rock, Mineral, and Fossil Collection Program, which not only distributes these Collections to teachers and schools throughout Oklahoma, but to other organizations as well. Provided \$116,330 in grants and awards to students, teachers, and institutions in Oklahoma!

Distributed 47 Rock, Mineral & Fossil collections to Oklahoma Schools!

Provided \$28,000 for Grants to fund 25 students to attend Summer Geology Field Camps!

Established two Foundation Programs: The Oklahoma Geological Survey & the Oklahoma Geological Foundation GeoKIDs Program, and the Oklahoma Geological Foundation Geoscience Education & Engagement Program.

Honored two outstanding geological scientists as Oklahoma Legends: Thomas B. Slick and Lloyd E. Gatewood which brings the total number of individuals honored by the Foundation to 53.

A sponsorship and a booth at the 6th Annual Boone Pickens School of Geology Techfest!

Participated at the Girl Scouts Western Oklahoma "Geekapalooza" with a Geode cracking booth and Rock, Mineral & Fossil Collection display.

Participated and had an Exhibit Booth at the Oklahoma State University Energy Conference at the Hamn Institute for American Energy.

Participated in the week-long "ROCK the Earth Summer Academy", hosted by Rose State College.

Supported and participated in the *Claremore Indian Hospital Summer Fest,* which included a fossil and mineral dig, and the Foundation's Rock, Mineral and Fossil display, as well as "give-a-ways" of shark teeth and quartz crystals for children and other participants.

> Participated in the 2023 Summer Outreach Program, First Christian Church, Edmond.



HIGHLIGHTS



CHANGING THE LIVES OF MANY for the better!



For decades, **Robert and JoAnn Waring** were active members of the Oklahoma City geo-community. In 1964, Bob became an independent geologist early in his career and like many other successful geologists in the 1960's and later years, Bob knew everyone. For many years, Bob and JoAnn

were involved in several organizations including the Oklahoma City Geological Society and the Geo-Wives group.

Both Bob and JoAnn were of great character and integrity and as a result were involved in many philanthropic activities. JoAnn unfortunately passed away in 2003, but Bob continued to be a contributor to many groups including the Thelma Gaylord Emergency Shelter of women and children. His contributions helped to double the size of the original shelter.



Bob was a Charter Member of the Oklahoma City Geological Foundation and was honored and received the Foundation's "Legend Award" in November of 2015. Both Bob and JoAnn were strong advocates of education and through the Foundation, continue to provide funding to those unable to afford or have access to a quality education.

The *"Robert W. and JoAnn Waring Memorial Scholarship"* is a legacy that honors these two caring and giving individuals and will leave a standard for all to aspire.

GOLF & BBQ BENEFITING STEM

Since its debut in 2019, the **ROCKS** & **SWING FORE STEM** event has skyrocketed in popularity, drawing crowds and most importantly, boosting funds for the Oklahoma Geological Foundation's vital STEM initiatives. Aimed at igniting passion for STEM and Earth Science education in Oklahoma's schools, this event is not just about raising funds but also about raising spirits for education. The



2023 event featured magnificent minerals, unique fossils, and exquisite artwork through the always exciting silent online auction. The highly anticipated live auction featured some of NAPA Valley's finest wines, the Foundation's treasured Rock,

Mineral & Fossil Collection, and museum quality minerals and fossils. The event was once again held at the TopColf driving range, where swings meet philanthropy. Attendees were able to relax, hit golf balls in the popular golf bays, and enjoy the always sumptuous BBQ dinner buffet. It's more than an event, it's a family friendly celebration of community and education for families and friends of all ages.

In 2023, the 5th Annual ROCKS & SWING FORE STEM raised over \$25,000 for STEM learning and Earth Science education. Don't miss out on the fun for next year. Join us and make a difference in education for Oklahoma's future Geoscientists.

GeoKIDS

a Program of the Oklahoma Geological Survey and the Oklahoma Geological Foundation

Dr. Molly Yunker, Education & Outreach Coordinator, Oklahoma Geological Survey

GeoKIDS - Geology Explorers in Oklahoma: Kids Investigating and Doing Science" has been a popular Program since its inception in 2018. The Oklahoma Geological Foundation (OGF) has been the sole supporter of this Program from the beginning and the Program would fail to exist without the OGF support over the last 6 years. The Oklahoma Geological Survey (OGS) continues to receive requests for the GeoKIDS Program from teachers, camps, library programs, and other venues including recreation center programs, and homeschool communities. The program is well-liked and very popular amongst teachers and instructors of all entities. To date, the OGS has assembled and disseminated 3,319 kits to students and other groups throughout Oklahoma.

Teachers sincerely appreciate the access to these invaluable resources, which are free of cost, as they often have little to no budget to

spend on science materials. One teacher, Mrs. S. wrote "This is my first-year teaching. I have some rock samples from previous years, but mostly without any identification. I'd like to do as many hands-on activities as possible, but without rocks or field trips I'm struggling. I only have a \$500 budget. Thanks for your help!"

Along with the delivery of the GeoKIDS kits, one for each student, the OCS delivers an engaging and interactive hands-on geoscience program that makes use of the Rock, Mineral, and Fossil Collection (an OCF program). Barbara (Grove Library Manager) requested and asked, "Would you be willing/able/interested - in coming to do it again next summer? We realize it is such a long trip, but it was such a smashing success, the kids loved it, and we loved it"!

Dr. Molly Yunker of the OGS states "There are many teachers in Oklahoma in the same boat as Mrs. S., they are not aware of the resources available to them through the OGS and the OGF. Programs like GeoKIDS and the Rock, Mineral and Fossil Collection allow the Survey and Foundation to disseminate invaluable information to teachers who have no support or resources, such as Mrs. S., and are looking to enhance their Earth Science programs. Because it's completely free to all due to support from the OGF, we are doing educators in Oklahoma a great service by providing physical and instructional resources!"

Total of 3,319 kits distributed since 2018!

Year		# GeoKIDS Kits Distributed	
	2018	520	
	2019	530	
	2020	435	
	2021	454	
	2022	489	
	2023	891	

Mrs. U., a teacher has requested year after year a GeoKIDS visit for the students in her district. With her latest request, she writes, "They are phenomenal specimens and kids are amazed they get to keep these as their own. These gifts are a springboard for students to become interested in collecting rocks and minerals on their own".

This is what we do best! COMMUNITY OUTREACH

In addition to providing funding for Grants, Scholarships and Awards, the Foundation continues to be involved in Community outreach programs and provide hands-on education to communities and organizations about Earth Science and STEM Education.

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Most of the community outreach programs the Foundation participates in involves introducing students of all ages, and industry leaders, to many of the principles of Earth Science Education that are not taught in many classrooms. For Example, the Directors will teach from the Rock, Mineral and Fossil Collections to multiple classrooms, have mineral and fossil digs, and introduce students and teachers to geodes, ending with a hands-on Geode Cracking Exhibit. The Directors set up a Foundation Exhibit Booth at professional Oil and Gas conventions, again, introducing professions in the industry to the Foundation, and the value of Earth Science Education.

SCHOOL AGE SUMMER PROGRAM

During the summer of 2023, Directors from the OGF provided Earth Science education – and fun! – to 1st through 5th graders attending the School Age Summer Program.

Directors Kevin Werth and Herb Martin spent two days demonstrating geology fundamentals, while sharing a Rock, Mineral and Fossil Collection – a keystone OGF program. The kids loved holding the big, beautiful specimens and asking a lot of questions! They got to dig for their own treasures in a mineral and fossil dig, which they were excited to take home and share with their families.

A highlight of the 2-day event was a clip of the movie "Megalodon!", followed by a hands-on Megalodon tooth and shark jaw demonstration.

The grand finale was cracking a geode. Each student took turns cranking the handle until the geodes popped! Kids and adults alike enjoyed this presentation! A final treat was a small geode each student took home. Fun and learning - that's what OGF does best!

CLAREMORE INDIAN HOSPITAL SUMMER FEST

The Oklahoma Geological Foundation participated at the "Claremore Indian Hospital Summer Fest" in June 2023. This free event is held annually for kids in the Claremore area and was open to the public for everyone to join.

Four Oklahoma Geological Foundation Directors attended the event to answer questions and speak about the OGF Rock, Mineral, and Fossil Collection. In addition, a special collection of fossils and rocks from Oklahoma was displayed along with a map of their location. A fossil and mineral dig was set up for a "hands-on" activity for the children, and participants were able to collect shark's teeth, quartz crystals, and other specimens. The students were given the opportunity to take some of the shark's teeth and quartz crystals home.

BOONE PICKENS SCHOOL OF GEOLOGY TECHFEST

The student chapter of the American Association of Petroleum Geologists (AAPG) at Oklahoma State University, through the Boone Pickens School of Geology, held its 7th Annual "Geoscience and Geoengineering TechFest" in February of 2023.

For the last 4 years, the Oklahoma Geological Foundation has either been a sponsor, or had an Exhibit Booth at the event, or both. The TechFest provides a unique opportunity for undergraduate and graduate students to showcase their research to other students, faculty, professional geoscientists, and potential employers. In attendance were companies representing a wide range of industries including oil and gas, environmental and hydrogeology.

WOMEN IN SCIENCE CONFERENCE & THE 2023 OKLAHOMA ENERGY PRODUCERS ALLIANCE ANNUAL MEETING

The Oklahoma Geological Foundation participated in both events in 2023 by having an Exhibit Booth at each event.

The Women in Science Conference was held in October of 2023, where between 800 to 1500 girls attended the conference. The Directors who attended the Conference interacted with teachers and the students, introducing them to what the Foundation is about and the grants available to them. Activities for the girls included a demonstration of the Rock, Mineral, and Fossil Collection and a mini-fossil dig.

The Foundation attended and had an Exhibit Booth at the Annual Meeting of the Oklahoma Energy Producers Alliance, where Directors interacted with professionals in the Oil and Cas Industry, as well as representatives from many companies associated with the Oil and Gas business. It was a chance for the Directors to discuss the value and importance of Earth Science and STEM Education, and the difference their respective companies can make in the education of students in Oklahoma.

EXCELLENCE IN EARTH SCIE

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GRANT REQUESTS IMPACTING GENERATIONS

Since 2010, over 270 Grants and Scholarships have been awarded to students, teachers, and schools in Oklahoma. This number does not include the Rock, Mineral, and Fossil Collections or the Field Camp Grants. The requests are well written, unique, and very diverse. Most of the Grant requests involve "hands-on" and field-based educational projects for students K thru 12th grade, as well as university students. The Grants awarded provide the resources and educational materials that will not only enhance "hands-on" education for generations of Oklahoma children, teachers, parents and budding geoscientists, but will also impact the lives of thousands of Oklahomans of all ages for years to come.

Below are a few Grant requests that have been submitted to the Oklahoma Geological Foundation.

 School:
 Cristo Rey OKC Catholic High School
 Grant Request: \$2,394

 Teacher:
 Mahlon E., Science Teacher

 Impact:
 The Grant will impact 25 Seniors in Geology, 75 Freshmen in Physical Science, 10 Juniors and 10 Seniors in

 "Topics of Science", and 15 Seniors in AP Environmental Science

"The Grant request is for the purchase of rocks and minerals for the study and identification for the 12th grade Geology class. They will be used in 9th grade Physical Science classes when studying physical and chemical properties and chemical formulae. The new 12th grade AP Environmental Science class use them while studying the Earth's natural resources.

Streak plates and glass scratch plates will be used (as listed above) for rocks and minerals. Also, they will be used by the Physical Science classes. Grow lights and soil sample probes will be used by both Geology and AP Environmental Science for studying different soil types. Geology students will analyze the soil samples.

The "Topics in Science Class" will use these materials. A study of a variety of topics (severe weather in Oklahoma, the solar system, Biodiversity, etc.) in these classes, and in the future, plans are to add units on Natural Resource usage in Oklahoma.

The materials are intended for continued use from year to year."

 School:
 Westmore High School
 Grant Request: \$3,200

 Teacher:
 Jeffrey B., Earth Science Teacher
 Impact:
 The requested Grant will impact an estimated 750 Junior and Senior level students

"The Earth Science classes do not have the necessary equipment to conduct laboratory investigations. This grant would help fill that void and to open up Earth Science for more laboratory work. For now, students have written laboratory investigations about heating rates of various types of matter (soil, gravel, water, sand) as well as analyzing the freezing rates of a salt brine, beet juice, and a mixture of the two (for the treatment of icy roads during the winter). These investigations address the following Oklahoma Academic Standards for Science:

ES.ESS 2.2 Analyze geoscience data to make the claim that one change to Earth's surface can create feedbacks and interactions which in turn cause changes to other Earth's systems.

ES.ESS 2.4 Analyze and interpret data to explore how variation in the flow of energy into and out of Earth's systems can cause changes to the atmosphere and climate.

ES.EES 2.5 Plan and conduct investigations of how the structure and resulting properties of water interact with the Earth's materials and surface processes.

ES.EES 3.1 Construct an explanation based on evidence for how the availability of natural resources, occurrence of natural hazards, and changes in climate effect human activity.

School:St. Elizabeth Ann Seton Catholic SchoolGrant Request: \$6,147Teacher:Shireen S., TeacherImpact:The requested Grant will impact an estimated 360 K thru 8th grade students

"St. Elizabeth's is excited to share the news of the recently opened STREAM lab serving nearly 360 students in grades K-8. It has been several years in development and was brought to life by STREAM instructor, Mrs. S, a teacher at St. Elizabeth.

The requested lab equipment will provide the necessary resources to facilitate learning of renewable energy resources, aviation involving the building and launching of various instruments for flight, mechanical engineering used to construct lunar landing modules and rovers, construction of simple machines for manipulation and study, and Chromebook devices for 8th-grade students participating in eight sessions of the OERB Virtual STEM maker program.

School:Southmoore High SchoolGrant Request: \$1,000Teacher:Martin B., Earth Science TeacherImpact:The requested Grant will impact an estimated 250 11th grade students per semester &
five Earth Science Teachers

"I am interested in supplementing the Oklahoma Geological Foundation's Rock, Mineral, and Fossil Collection that was presented to the school earlier. I am trying to give my students more investigation labs with rocks and minerals by adding fluorescents to the mix. Using both Short and Long Wave Light would allow students to see the hidden magic with theses rocks and minerals. I have arranged the rocks throughout the classroom and display cases that will only enrich their knowledge of this amazing subject – Earth."

School:Kenneth Cooper Middle SchoolTeacher:Lindsey B., 6th grade science teacherImpact:The requested Grant will impact an estimated 200 students in the 6th thru 8th grades per semester or
approximately 600 students annually.

Grant Request: There is no cost to schools for a Rock, Mineral and Fossil Collection. The Foundation has provided over 285 of these Collections to schools throughout Oklahoma.

"Kenneth Cooper Middle School is a Title 1 public school composed primarily of a minority student population. There are three grade levels at the school, with each grade split into two teams, with an average of 100 students per team, from a broad range of backgrounds. The curriculum follows the State of Oklahoma guidelines and as such all grades are shown aspects of Earth Science, with emphasis placed on the age of the earth, type of rocks, fossils, and understanding rock layers. We value hands-on science teaching, so having this collection will be invaluable. Many of the students have never had the opportunity to experience science through actual specimens or artifacts. Observing and learning more about the collection will be a wonderful learning opportunity. The Collection is exhibited during class time, along with magnifying lenses to facilitate labs. The students will learn to identify the types of rocks based on their observations collected during these labs. Fossil specimens will be used to show how life has evolved over time through similar methods.

This collection will primarily serve grades 6 through 8, plus we are planning on "family nights" where STEM tables will be set up as well. It will be a great opportunity to show the families of our students the Exhibits."

 School:
 Rose State College
 Grant Request: \$2,000

 Teacher:
 April M., Professor
 Impact:
 The requested Grant will impact four Freshmen and Sophomore students in the College Department of Earth and
 Environmental Science, Geology Program

This grant will provide students with stipends for a portion of the time they spend conducting field data collection and laboratory analysis training.

Students will conduct field work and laboratory analysis during the fall semester and produce a poster of their work. They will be required to present their poster at a professional event, such as the annual OSU TechFest.

School: Friend School **Teacher:** Janet H., Teacher **Impact:** The requested Grant will impact an estimated 200 students of K thru 8th Grades

Grant Request: There is no cost to schools for a Rock, Mineral and Fossil Collection. The Foundation has provided over 285 of these Collections to schools throughout Oklahoma.

The Friend School is a rural public school located east of Chickasha. Students at Friend School attend pre-K through 8th grade. By receiving a Rock, Mineral and Fossil Collection, all grade levels will have the opportunity to have a "hands-on" experience in the "world of Geology". Upper grades would be able to classify, investigate the process of rock formations, minerals and earth structure.

The science teacher is very excited to set up lab stations which will allow students to identify rocks and minerals as test material. Elementary students will diagram and visually explore the samples. Students will be able to transfer their knowledge by drawing maps, which will indicate the layers of the earth and rock formations. In the kindergarten class, students can explore the Earth using oil exploration and production. The RMF donation would coincide with this Unit and reinforce the Oklahoma Science Standards.

"I am so grateful to the Oklahoma Geological Foundation for their investment in Oklahoma's students and teachers. we simply could not afford all the amazing resources that the foundation provides to our students. i am so thankful to the many individuals and organizations that financially support OGF. the foundation has had a profound impact on the students of my school, district and myself, as an educator. the foundation is making a difference in the lives of Oklahoma's students."

HERBERT G. & SHIRLEY A. DAVIS OSU GEOLOGY FELLOWSHIP: (\$5.000)

- **Recipient:** Megan Garrett Oklahoma State University
- "Numerical Study for Induced Thesis: Seismic Hazard in the State of Oklahoma"
- Melissa Perkins **Recipient: Oklahoma State University**
- Thesis
- "Provenance and Reservoir Properties of the Upper and Lower Morrow Sandstones, Anadarko Basin, Oklahoma"

THE FREDERICK H. & LOIS M. KATE FELLOWSHIP AWARD: (\$5,000)

Recipient: Yiran Xing University of Tulsa

"Facies Classification Using Thesis: Weaklev Supervised Convolutional Neural Network from Chengdao Oilfield in China"

The Oklahoma Geological Foundation Graduate Fellowship Award: (\$10,000)

Danial Mansourian Recipient: University of Oklahoma "Exploring Landslide Thesis:

Susceptibility through Pore-pressure Analysis and Shear-strength Responses, a Geophysical and Geotechnical Approach'

Recipient:	Lauren Haygood Oklahoma State Universit
Thesis:	"Investigating the Preservation of Organic Carbon in Iberian Margin Sediments via Reactive Iron Phases"
Recipient:	Silas Samuel

Thesis:

Project:

Project:

Oklahoma State University

Jniversity

"Integrated Seismic Inversion, Rock Physics Modeling and Data Analytics for Carbon Storage"

THE OKLAHOMA GEOLOGICAL FOUNDATION GEOLOGY AWARD: (\$2,250)

Recipient:	Matin Mazroee Rose State College
Project:	"Utilizing Drones in Geoscience Work"
Recipient:	Evan Burkhart

Evan Burkhart Rose State College

- "Convolutional Neural Networks (CNN) Methodology on Well Cuttings"
- Frost Trussell **Recipient:** Rose State College
 - "Geochemistry Studies"

THE SUZANNE TAKKEN MEMORIAL FELLOWSHIP AWARD: (\$5,000)

Recipient: **Emma Shook Oklahoma State University**

Thesis:

"Investigating Changes in Redox Conditions to Using Trace Metal Proxies off the Coast of Namibia'

THE OKLAHOMA GEOLOGICAL FOUNDATION SUMMER FIELD CAMP **GRANT: (\$22,000)**

Recipients: A total of 22 Students: **Oklahoma State** University (10), University of Oklahoma (11), and the University of Tulsa (1) who attended summer field camps.

Grant:

Funds from these grants are awarded to undergraduate geology students to supplement 2023 Summer Field Camp expenses. Since 2012, the Foundation has provided financial assistance to over 220 students who have attended Field Camps.

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THE FREDERICK M. BLACK SUMMER FIELD CAMP GRANT: (\$6,000)

Recipients: Tyson King

Oklahoma State University

Riley Woodrow University of Oklahoma

Helena Gutzmer University of Tulsa

Grant:

Funds awarded to undergraduate geology students to supplement 2023 Summer Field Camp expenses.

BETH CRONIN ELEMENTARY SCHOOL PROGRAM: (\$6,148)

Recipient:	St. Elizabeth Ann Seton Catholic School, Edmon
Cront	Fundaturad to purchase

Catholic School, Edmond Funds used to purchase STEAM/STEM lab equipment for learning about energy resources.

ROBERT W. & JOANN WARING MEMORIAL FELLOWSHIP: (\$1,500)

Recipient: Bixby School

Funds used to purchase a specialized case to display and feature the RMF Collection, and to also purchase additional fossils, which would be a bony fish preserved in shale kit for each teacher.

WILLIAM A. CLEMENTS EARTH SCIENCE PROGRAM: (\$5,000)

Recipient: Seismic Reflection Centennial Oklahoma City

> Funds used to support students and teacher activities that included seismic reflection experiments, ground penetrating radar, seismic sources, and other activities, during the Seismic Reflection Centennial Conference. Approximately 125, K-12th grade students participated in the activities.

OKLAHOMA GEOLOGICAL FOUNDATION SUPPORT GRANT PROGRAM: (\$696)

Recipient: Teachers &

Project:

Grant:

Teachers & Schools throughout Oklahoma

Funds will be used to purchase additional specimens for schools, teachers, and students. These minerals will be used and distributed in conjunction with the distribution of the RMF Collections, as well as being used as teaching tools by the Directors when visiting schools throughout Oklahoma. The minerals include blue calcite, rose quartz and chalcopyrite.

SHIRLEY A. DAVIS EARTH SCIENCE EDUCATION GRANT: (\$80)

Recipient: Messiah Lutheran Middle School Oklahoma City

Grant:

The funds will be used to purchase schoolbooks based upon a real volcano in world history. The books will be used by each student as a literature tie to their science unit about "Forces that Shape the Earth."

OKLAHOMA GEOLOGICAL FOUNDATION GEOKIDS PROGRAM: (\$3,467)

Recipient: The Oklahoma Geological Survey Grant: Funds used to support

Funds used to support the purchase of rocks and minerals, for the GeoKIDS Kits, distributed freely to students in Oklahoma, in concert with educational programs given by the Oklahoma Geological Survey's Education and Outreach team. In 2023, 891 Kits were distributed to individual students, and since 2018, 3,319 Kits have been distributed to students throughout Oklahoma.

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Grant:

THE LARRY LUNARDI & OGF ROCK, MINERAL, & FOSSIL COLLECTION: (\$17,500)

Recipient:

Grant:

Oklahoma schools K - 12th grades

Grant funds will be used to purchase museum quality Rocks, Minerals & Fossils to be put in individual Collections for distribution. These Collections are distributed to schools and teachers in Oklahoma to promote geology and Earth Science education. Since 2015, the Foundation has distributed over 289 Rock Mineral and Fossil Collections to schools in Oklahoma.

OKLAHOMA GEOLOGICAL FOUNDATION STEM PROGRAM: (\$4,500)

Recipient:

Grant:

University of Oklahoma School of Geosciences

Funds from this Grant will support awards given at the "Geoscience Spring Break Student Expo" at the University of Oklahoma for the top three student posters in each of three categories. Each award was \$500.

THE LANCE RUFFEL AND OGF INNOVATIONS IN EARTH SCIENCE EDUCATION PROGRAM: (\$4,000)

Recipient: United States Earth Science Organization. Oklahoma

Grant:

The Funds were used for transportation costs for students in support of a series of Earth Science themed field trips during the summer of 2023.

THE JOHN GATCHELL EARTH SCIENCE TEACHING PROGRAM: (\$750)

Recipient:

Owasso High School

Grant funds were used to cover expenses for five students, grades 9 through 11, and two teachers to attend the GSA Convention in March 2023. The funds paid for a field trip, as well as water testing and sampling equipment, which the students were studying.

THE PHILIP BOYLE FOUNDATION & THE OKLAHOMA GEOLOGICAL FOUNDATION ELEMENTARY AND SECONDARY SCHOOL PROGRAM: (\$1,480)

Recipient:

Grant:

Teachers and schools throughout Oklahoma

Funds used to purchase various specimens from a specific vendor for the Rock, Mineral, and Fossil Collections, that are given to schools Oklahoma and be integrated with Earth Science curriculum.

THE CHARLES E. BRANHAM LIBRARY PROGRAM: (\$1,250)

Recipient: Casady School Oklahoma City

Grant:

Grant:

Grant funds were used to purchase two glass rock-curio display units, LED lighting, wall tethering, and a plaque with donor information. The science department will use it to display a Rock, Mineral, and Fossil Collection when it is not being used by students.

KENNETH STEWART CRONIN LECTURE SERIES PROGRAM: (\$6,100)

Recipient: NGWA University Powered by Oklahoma State University

The Grant funds will be used to sponsor 10 classrooms at \$500 per school for a total of \$5,000 to initiate interaction with Oklahoma teachers. The Grant will impact 30 teachers, and potentially 750 students.

Grant: C

DAVID G. AND JANET CAMPBELL **NATIVE AMERICAN FELLOWSHIP:** (\$2,000)

Recipient:

Arron Walker University of Oklahoma

Grant:

An Oklahoma Geological Foundation Geology Grant

OKLAHOMA GEOLOGICAL FOUNDATION SUPPORT GRANT: (\$2.700)

Recipient:

University of Oklahoma School of Geosciences

Grant:

Funds used to support the awareness of geosciences to potential students at the Geosciences Spring Break Student Expo in March of 2024. Students will also visit the Sam Noble Museum of Natural History, and a rose rock collection.

The Oklahoma Geological Foundation Excellence in Earth Science Education Awards Program: (\$409)

Recipient: Southmoore High School Moore

Grant:

Grant funds used to supplement existing the Rock, Mineral and Fossil Collection with a purchase of additional fluorescent samples.

OKLAHOMA GEOLOGICAL FOUNDATION SUPPORT GRANT: (\$2,700)

Recipient:

Grant:

BPSoG PhilanthroPete Campaign, Stillwater

Funds are used to continue running the Geosciences Educational Opportunity-**Research Experience** (GEO-Rex), an Outreach program of Oklahoma State University.

OKLAHOMA GEOLOGICAL FOUNDATION SUPPORT GRANT: (\$800)

Recipient: Oklahoma Mineral & Cem

Grant:

Society (OMGS) **Oklahoma** City

Funds were used to support the OMGS's desire to introduce students to a number of disciplines. including physical science, geology, and paleontology, at the annual "Gems and Stones and Petrified Bones" show at the Oklahoma State Fairground in October 2023

\$116,330 TOTAL

Every year since 2004, the Oklahoma Geological Foundation has sponsored an

ANNUAL CHRISTMAS HOLIDAY RECEPTION

as a deeply felt thank you and appreciation to our sponsors and donors for their generous support throughout the year.

Always held on the first Tuesday in December and for the last four years, the **Oklahoma City Chapter of the Society** of Independent Professional Earth Scientists has co-hosted the reception. Food, drinks, and entertainment are the Foundation's way of giving thanks to our incredible donors.

PROVIDING OPPORTUNITIES SHAPING THE FUTURE OF EARTH SCIENCES

Since its inception in 2011, the Oklahoma Geological Foundation Field Camp program has been a cornerstone in supporting aspiring geologists from Oklahoma State University, University of Oklahoma, and Tulsa University. Recognizing the financial hurdles of field camp tuition and necessary gear needed, the Foundation has diligently worked to fill these gaps, ensuring that no student will miss out on this pivotal educational experience due to cost.

In just over a decade, your generosity has enabled the Foundation to award numerous Field Camp Grants, including the FM Black Field Camp Scholarship, amounting to assistance for over 298 students. Just last year, the Foundation provided over \$34,000, thus allowing 25 deserving students to advance in their field studies. The success stories that have emerged from these field camps are a testament to the opportunities your contributions have created.

Your unwavering support, totaling over \$275,000, has not only provided financial aid but has also paved the way for future geologists to explore, learn, and contribute to the field of Geoscience. On behalf of all those who have benefited, we extend our deepest gratitude. Your gifts are more than just monetary, they are investments in the future of geology and have not only provided financial assistance but have opened doors to opportunities that shape the bright minds that will lead the future of the Geosciences.

Thank you for being an integral part of this educational journey. Together, we are not just providing opportunities, we are shaping the future of the Earth Sciences.

THANK YOU!

2023 DONATIONS DIRECTED

OKLAHOMA GEOLOGICAL FOUNDATION EXCELLENCE IN EARTH SCIENCE EDUCATION

Jason F. & Cristina Hamilton

BETH CRONIN ELEMENTARY SCHOOL PROGRAM

Bob & Jay Gilson

Thomas C. Cronin

- In Memory of Gwen Lenore Willits
- In Memory of Nancy Louise (Gilson) Turner

Larry G. & Le Akers Kim & Cathy Guyer

DAVID G. & JANET G. CAMPBELL & THE OKLAHOMA GEOLOGICAL FOUNDATION NATIVE AMERICAN SCHOLARSHIP PROGRAM

American Association of Professional Landmen, Inc OKLAHOMA GEOLOGICAL FOUNDATION SUMMER FIELD CAMP GRANT Bob & Jay Gilson

KENNETH STEWART CRONIN LECTURE SERIES PROGRAM Thomas C. Cronin In Memory of Barth W. Bracken In Memory of Robert (Bobby) L. Cox, Jr. In Memory of Thomas F. Stapleton In Memory of Thomas F. Stapleton In Memory of Joe Dan Trigg In Memory of Jim Fellers

FREDERICK M. BLACK FIELD CAMP GRANTS Lawrence H. & Ronna Davis

MAP Royalty, Inc.

2023 SPONSORS

The Reserve Petroleum Company-Herb & Marvnm Martin Diana Krakowski In Honor of Ron J. Krakowski **Michael E. Hale Shirley A. Davis Thomas C. Cronin** Novo Oil & Gas. LLC **The Tellers Family** WV Oil & Gas **Caliber Resources Partners, LLC Ancova Energy MCWL Paladin Geological Services** Larry Lunardi Kevin Werth **Greg & Connie Riepl** The Herbert G. & Shirley A. **Davis Family** Ken Johnson **STAR Geophysics, Inc. Kim & Cathy Guyer J. Mark & Carol Lester** Lawrence & Ronna Davis **Equitable Royalty Corporation Michael & Casey Hale OSO Resources, LLC Frank Gagliardi**

"Thank you for awarding me the Frederick M. Black field camp grant. This is almost exactly the amount I still needed to attend camp this summer. Earning my degree has been a long road for me. I sincerely appreciate the foundation making it possible for me to cross the finish line. I thought you might like to know I finished this semester with all A's and I intend to use this grant to earn the same grades at camp. Thank you for the good work you do to promote Geoscience education in our state and thank you so much for this grant."

Brittany B, Student University of Oklahoma

2023 DONATIONS NON-DIRECTED

Ray H. Potts **Shelly M. Shomber** Gary F. Stewart **JP** Warren **Cindy Kyle Chris Wright** Shirley A. Davis In Memory of Harold W. Hanke Herb & Marynm Martin Steven W. Kage Lawrence H. & Ronna Davis **J. Mark & Carol Lester David L. Murphy Family Legacy Fund Jorge Viamontes** Dan J. & Nancy L. Kennedy **Neil Peake** Mike R. McFeely **Joseph & Joan Bruns** Map Royalty, Inc. Peter J. Massion John W. Shelton Marvin Woody **Joe Dan Trigg Michael W. Smith** William W. Smith In Memory of Barth W. Bracken **Patrick & Diane Burgess**

as of 12/31/2023

Patrick Tolson Kenneth Johnson In Memory of Shirley A. Davis Diane M. Krakowski In Memory of Shirley A. Davis Thomas C. Cronin In Memory of Roland Tague In Memory of Nancy Louise (Gilson) Turner In Memory of Shirley A. Davis In Memory of Jere W. McKenny

Bobby & Judith Shackouls, James W. Wallis, John C. Linehan, George Gaspar, Thomas C. Cronin, Kirkpatrick Oil Company, Joullian Foundation: Cary & Carol Jullian and Craig & Marion Story In Memory of Jere W. McKenny 2023 DONATIONS NON-DIRECTED IN KIND as of 12/31/2023

Terry & Betty Hollrah Thomas C. Cronin Lawrence H. & Ronna Davis

'I wanted to express my over whelming gratitude for your generosity in providing Yukon MS with a rock, mineral and fo collection. Your desire to promote earth science is encouraging and inspiring. My students were so excited to interact with the samples you provided and have already been asking great questions concerning their creation and formation. Earth science can often be hard to actually "bring" into the classroom and you have helped facilitate that. I heard many affirming comments from students such as "I didn't know rocks were so co and "now I want to be a geologist" (in addition to , "can I lick this" and "I can't believe I touched that" after their discovery of the coprolite). Thank you so much for providing this experience to not only my students, but all of the students at Yukon Middle School".

> Kendra H., 8th Grade Teacher Yukon Middle School

THE INCREDIBLE ROCK, MINERAL, & FOSSIL COLLECTION

"We value "hands-on" science teaching, so having this collection will be invaluable. Many of our students have never had the opportunity to experience science by the use of actual specimens or artifacts, so seeing them and learning more about the Collection is a wonderful learning opportunity".

"Second grade students love rocks! We (as educators) are looking to grow the unit and find more "hands-on" activities to engage their interest and create more experiences to evaluate, create, and synthesize. Not only will the second-grade students benefit from the rocks and minerals, but the first-grade class will benefit from the fossil component by investigating the different types of animals and analyzing them".

"The Collection is exhibited during class time, along with magnifying lenses to facilitate labs. The students learn to identify the types of rocks based on their observations collected during these lab studies. Fossil specimens are used to show how life has evolved over time through similar methods".

Since the first delivery in 2015, and as of December 2023, a total of 286 Collections have been distributed to Oklahoma schools, all of which are currently being studied by hundreds of teachers and thousands of students every school year. The impact is huge and schools that apply for these Collections are asked how many students and teachers are impacted. **Based on the responses**

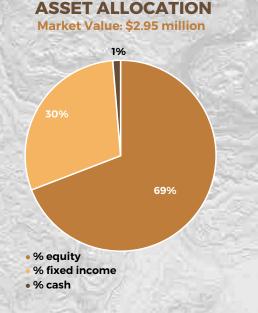


from the teachers, total students impacted is incredibly in excess of 75,000 annually, and total teachers impacted is over 1,400 annually. These numbers only grow as more Collections are distributed.

The Rock, Mineral, and Fossil Collection Program is totally funded by the Foundation. The feedback and reactions from the students are incredible when the specimens are circulated around the classroom. Education at its best!! 22

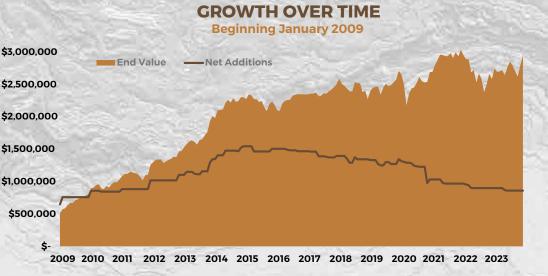
OKLAHOMA GEOLOGICAL FOUNDATION INVESTMENT SUMMARY

PERIOD ENDING DECEMBER 2023



HISTORICAL RETURNS

Trailing 12	3 Year	5 Year	10 Year
Months	(annualized)	(annualized)	(annualized)
15.9%	5.2%	9.3%	5.8%



Oklahoma Geological Foundation's collective Investment Portfolio had a market value of \$2.95 million as of December 31, 2023, with a 15.9% return on investments for calendar year 2023. At year-end, the Portfolio had an asset allocation of 69% Equity, 30% Fixed Income, and 1% Cash & Equivalents. As the U.S economy avoided a recession and inflation moderated, Fed policy expectations shifted from further increases to cuts in 2024. With this backdrop, global equities delivered double-digit returns and fixed income markets rebounded strongly from the losses in 2022. Despite recent periods of high volatility, the Foundation's investments continue to be managed with a disciplined approach and a long-term focus. Over the trailing five- and ten-year periods, the Foundation has generated annualized returns, net of investment management fees, of 9.3% and 5.8%, respectively.

*Returns are net of fees. Returns for periods longer than 1 year are annualized. Performance will largely be driven by asset allocation and fund manager performance. BancFirst used data from external sources in the preparation of this report. BancFirst states that to the best of its knowledge, information, and belief the information contained herein is reliable but BancFirst does not warrant the accuracy. Past performance does not guarantee future results.

OKLAHOMA GEOLOGICAL FOUNDATION DEDICATED TO OUR PAST LEGENDS

2007

Frederick H. "Fritz" Kate Dean A. McGee Dennis F. Smith

2008

John W. Nichols Robert A. "Bob" Northcutt

> 2009 Herbert G. Davis Suzanne Takken

2010 Robert Allen Charles E. Branham David G. Campbell

2011 Harold G. Hamm

2012 Frank Buttram Louis M. Ford Lew O. Ward

2013

Samuel Russel Noble Samuel "Lloyd" Noble Ray H. Potts Thomas E. Davis

2014

T. Boone Pickens Herbert Hiram Champlin Herbert H. "Bud" Champlin

2015

Jerome Max Westheimer, Sr. Robert W. "Bob" Waring Dr. James O. Puckette Dr. Kenneth S. Johnson Bob Hancock

2016

Wirt Franklin Dr. John W. Shelton Royce G. Herndon J.l. Herndon J. Walter Duncan, Jr.

2017

Aubrey K. McClendon T. Howard McCasland Robert A. Hefner III

2018

Richard D. Fritz Frank F. Phillips Thomas W. Olsen Keith F. Walker

2019

Harrison L. Townes Ronnie K. Irani Charles Newton Gould William A. "Bill" Clement

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Dollie Radler Hall Dr. Gary F. Stewart Dr. Norman J. Hyne Dewey F. Bartlett, Sr.

2022

Thomas N. Berry Thomas E. Berry Clyde Mckee Becker Clyde M. Becker Thomas C. Cronin

2023

Thomas Baker "Tom" Slick Lloyd E. Gatewood

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