



THE OKLAHOMA GEOLOGICAL FOUNDATION

OGGF

ANNUAL 20
REPORT 20



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A LETTER FROM THE CHAIRMAN



The Oklahoma Geological Foundation was established in 1993, and since then has embarked on a journey to create a Foundation that is a consistent resource of Earth Science education for teachers, students, and schools throughout Oklahoma. As everyone is aware, 2020 was a year like no other. Although it will always be remembered as the year of the COVID -19 pandemic, the Foundation did not let the pandemic re-define its Mission and Vision as the Foundation continued to provide support for students, teachers, and schools. The 2020 Annual Report provided the Directors an opportunity to briefly discuss the activities and accomplishments during these unprecedented times, and most importantly, to express its thanks and recognition to all the donors and sponsors whose gifts have been instrumental in the continued growth of

the Foundation and the execution of its primary Mission.

From inception, the Foundation implemented a model of "Excellence in Earth Science Education". The Board of Directors fully endorse and embrace this vision of the future for students and teachers and continue to make Earth Science and STEM Education a priority. Notwithstanding the pandemic, the Foundation programs continued to support all aspects of Earth Science education during 2020, including the distribution of Rock, Mineral, & Fossil Collections to schools throughout Oklahoma, working with the Girl Scouts Western Oklahoma to construct a state-of-the-art rock-climbing wall while employing geologic concepts, and assisting the Scouts in their "Fall Break Camp" and "Daisy Day" workshops.

Other STEM related programs include the continued development of EveryDay Earth, which is a program designed to develop online videos for teachers and students. The Foundation provided a grant to assist the Oklahoma Science Museum in the construction of an Interactive Geologic Map and Cave walk-thru exhibit. Funds were granted for a Mother's Day Out and pre-School Earth Science program at Edmond First United Methodist.

"In total, funding of over \$350,000 was provided to students, teachers, and schools in 2020."

Even though college level Summer Field Camps were restricted because of COVID, Grants for students were still available and provided to them in many instances. A complete list of the Grants and Scholarships distributed in 2020 is provided in the Annual Report.

In total, funding of over \$350,000 was provided to students, teachers, and schools in 2020.

In December, the Foundation welcomed two new Board Members. Dr. Camelia C. Knapp, from Oklahoma State University, and Dr. Molly L. Yunker, of the Oklahoma Geological Survey. Camelia is a Professor, V. Brown Monnett Chair of Petroleum Geology and Chair of the Department at the Boone Pickens School of Geology at OSU. Molly is the Education and Outreach Coordinator for the Geological Survey, at OU. Both bring a deep-rooted understanding and appreciation of Earth Science education to the Board. The Foundation is extremely excited and fortunate to have these two highly talented individuals join the Board of Directors.

Finally, thank you all for sharing with the Board of Directors the vision and passion for education that is so important to students and teachers who rely on the Foundation in so many aspects of their science education. All the activities, grants, workshops, etc. are only possible through your generous donations, and we the Directors truly appreciate the stewardship of these gifts. When a teacher writes "thank you from all the students and teachers. We are really enjoying learning with our new set of rocks. The students are totally amazed by them. We are so grateful to you!! What an awesome program you have put together that provides such wonderful hands-on learning." I know the Foundation and YOU, are making a huge difference in the lives of so many students.

The Foundation's Mission is vital and, as you read in this Annual Report, its programs are positively affecting the lives of our students and assisting teachers and schools towards that end. Together we're investing in their future. Thank you so very much!

Warm and personal regards,
Thomas C. Cronin

OKLAHOMA GEOLOGICAL FOUNDATION

"VISION FOR THE FUTURE"

In 1993, a group of Oklahoma geologists had the foresight and desire to promote Earth Science programs within the Oklahoma school systems. Since 1996, the Oklahoma Geological Foundation has been an instrumental source of funding that directly benefits many Earth Science programs. From the beginning, the Oklahoma Geological Foundation has funded grants on an annual basis to elementary, middle, and high schools, to actively promote numerous programs in support of Earth Science teachers and their educational institutions. In addition, the Foundation awards several yearly scholarships to students enrolled in undergraduate and graduate programs in colleges and universities.

By end of 2020, the Foundation has established twenty-three programs, each of which are available to encourage the participation in the Earth Sciences. As listed below with the dates of inception, they include:

- 1). 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). The Frederick H. & Lois M. Kate ESE Award (2006)
- 7). Herbert G. & Shirley A. Davis OSU Geology Scholarship Program (2007)
- 8). The John Gatchell Earth Science Teaching Program (2008)
- 9). The Philip Boyle Foundation & the OGF's School Program (2008)
- 10). The Charles E. Branham Geological Library Program (2010)
- 11). The OGF Summer Field Camp Grants Program (2011)
- 12). Oklahoma Geological Foundation High School Grant (2011)
- 13). Oklahoma Geological Foundation Middle School Grant (2011)
- 14). Oklahoma Geological Foundation Elementary School Grant (2011)
- 15). Lance Ruffel & OGF Innovations in Earth Science Education Program (2012)
- 16). Shirley A. Davis Program for Earth Science Education (2013)
- 17). Frederick M. Black Summer Field Camp Grant (2013)
- 18). William A. Clement Earth Science for Guthrie Middle & High Schools (2014)
- 19). Oklahoma Geological Foundation Graduate Fellowship Award (2014)
- 20). Robert W. & Jo Ann Waring Memorial Scholarship Program (2015)
- 21). The Oklahoma Geological Foundation STEM Program (2017)
- 22). Larry Lunardi & the OGF's Rock, Mineral, & Fossil Collection Program (2018)
- 23). David G. Campbell & the OGF's Native American Scholarship Program (2018)

Funds from the Oklahoma Geological Foundation's Programs are being used to educate, train, and prepare students for the future. The Foundation Directors are fully committed to providing the Geoscience educational needs for teachers and institutions in Oklahoma.

*"Do or do not!
There is no try!"*

Yoda – Star Wars V, 1980

Since inception, 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 a Geological or 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 major in the Geological Sciences, with 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.

GIRL SCOUTS WESTERN OKLAHOMA **CAMP TRIVERA STEM FACILITY**

The Girl Scouts Western Oklahoma Camp Trivera is a first-of-its-kind urban STEM Camp that opened in the fall of 2020. It is located just east of the Oklahoma City Zoo and Botanical Gardens.

Working with the Property Task Force Team for the Girl Scouts Western Oklahoma, the Oklahoma Geological Foundation helped design and develop a rock-climbing wall. Participants 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 the Girl Scouts favorite activity.

In partnership, the Oklahoma Geological Foundation provides funding for one of its popular "Rock, Mineral, and Fossil Collections" kits for the Girl Scouts to use in their STEM Programs. The Foundation will maintain an active role and association with the Girl Scouts Western Oklahoma.



Since December 1993, the Oklahoma Geological Foundation has been a major Supporter of Earth Science education and the Science, Technology, Engineering, and Mathematics, (STEM) Outreach Program in Oklahoma.

Some of the Foundation's existing STEM Outreach Programs include:

- ◆ An Earth Science related teacher program called "More! Rocks in Your Head"
- ◆ The distribution of Rock, Mineral, & Fossil Collections to Oklahoma schools
- ◆ Foundation Annual Awards banquets honoring teachers, students, & schools
- ◆ Educational banquets recognizing Oklahoma's Legends in the Petroleum Industry
- ◆ EveryDay Earth

"The earth, the sea, and air are the concern of every nation, and science technology and education can be the ally of every nation."

John F. Kennedy

THE EVERYDAY EARTH & STEM OUTREACH PROGRAM

The EveryDay Earth Program was established in 2017 by the Oklahoma Geological Foundation as a joint venture with Esteem Interactive Learning and other sponsoring partners. This program is designed to provide Earth Science educational material in an online format that students will enjoy. It is presented in a light narrative that filters in multiple lessons for the students and teachers to explore aspects of the Earth's hydrosphere, geosphere, biosphere, and atmosphere. This is accomplished by using localities in Oklahoma and surrounding areas as the backdrop scenery for the study of the Earth Sciences. The Program contains an accumulation of videos and interactive lessons thus allowing students to participate in scientific investigations on screen.

The Program will consist of ten stand-alone Missions with each being an impactful product delivered at no charge to sponsored schools. The first four Missions are currently online in which the students are able to investigate the hydrosphere, weathering and erosion, minerals, igneous rocks, volcanoes, and sedimentary and metamorphic rocks. The EveryDay Earth Program is designed to be used as self-directed learning by teacher-led or by parents of homeschooled children.

The target audience for the EveryDay Earth Program is 4th through 8th grade students and it directly follows the Next Generation Science Standards as well as the Oklahoma Academic Standards for Science.

Along with the Oklahoma Geological Foundation, other supporting partners include: Jerome Westheimer Family Foundation, Devon Energy, Chesapeake Energy, Echo Energy, University of Oklahoma Department of Geosciences, Halliburton, Pick and Hammer Club, and Directors of the Foundation.

"My daughters and I just finished our first lesson. It is such a fun way to learn. After the lesson, my 8-year-old daughter said, 'this is the best science lesson I ever had.'" Thank you for sharing this knowledge with us struggling home teachers. So happy to have found this hidden gem."

Eddie (homeschooler Dad)

SUPPORTING EARTH SCIENCE EDUCATION FOR OKLAHOMA SCHOOLS, TEACHERS, AND STUDENTS

The Oklahoma Geological Foundation is extremely proud of the number of students and teachers directly impacted by the Foundation's many Programs and Grants. When a teacher or educational facility applies for funding, the Foundation formally asks the applicant for an estimate on the number of students that are affected as well as how many teachers are involved. The numbers given to the Foundation are remarkable.

ROCK, MINERAL, & FOSSIL COLLECTIONS

One Foundation initiative that has had an incredible influence on students and teachers throughout Oklahoma, is the Rock, Mineral, and Fossil Collection Program.

In April 2015, the Foundation, under the direction and leadership of Larry Lunardi, developed a program to supplement Mr. Lunardi's middle school Earth Science teaching model. Mr. Lunardi volunteers his time to assist instructors as they teach Earth Science education to their students. This Program provides a diverse collection of museum quality rocks, minerals, and fossils to Oklahoma based schools to supplement their Earth Science education program. These collections allow the instructors the ability to teach the Earth Sciences with actual rocks, minerals, and fossils, which is a direct learning benefit for the students. As of December 31, 2019, the Foundation has distributed 149 collections which has had a direct effect on approximately 75,000 students and involving over 1,400 teachers!

As stated earlier, these numbers are provided to the Foundation by the teachers who have requested and received these Collections.

UNIVERSITY GEOLOGY FIELD CAMPS

Since 2014, the Foundation has provided funding for 150 college level students to attend summer geology field camps. These students have been selected from Oklahoma State University, University of Oklahoma, and Tulsa University. A total of \$115,000 has been distributed to students attending Geology Field Camp since inception of the Program.

OKLAHOMA TEACHER WORKSHOPS

Annually, since 2011, the Oklahoma Geological Foundation has sponsored and participated in a full-day workshop for Oklahoma Earth Science teachers called: "More! Rocks in Your Head" and continues to present the workshop on at least a yearly basis. This

"Technology is just a tool. In terms of getting the kids working together and motivating them, the teacher is the most important!"

Bill Gates

and skills for the teachers, who can apply this knowledge back to the classroom making Earth Science a memorable experience for the students. Topics covered include environmental processes, rock formation, mineral identification, geologic landforms, mapping, and the formation of fossil fuels. one of the best workshops I have been to. The information will be used in my classroom."

seminar is being taught by Richard Opalka, a degreed geologist and former Earth Science teacher at Edmond North High School.

The workshop covers a full scope of Earth Science topics

Approximately 450 Earth Science teachers have participated in a total of ten workshops over the past eight years.

SAINT ELIZABETH ANN SETON CATHOLIC SCHOOL

Saint Elizabeth Ann Seton Catholic School opened a state-of-the-art science laboratory in the fall of 2006 to facilitate the teaching of pre-K through 8th grade Earth Science Education. Since 2007, the Oklahoma Geological Foundation has funded various Grants to help supply equipment for the lab and to establish a first-class Earth Science Program. This facility is used in the education of approximately 450 students annually. The entire 7th grade year is solely dedicated to the study of the Earth Sciences.

To date, the Foundation has funded Grants totaling over \$75,000 to the school. Funding is primarily through the Beth Cronin Elementary School Endowment Program. A Grant of \$4,000 was distributed in 2020 for the purchase of replacement materials for science (FOSS) kits for the study of Earth, Life, and Physical Sciences and to continue the school's advancement of technology in teaching Earth Science education.

GUTHRIE HIGH SCHOOL

The Oklahoma Geological Foundation has been providing Grants to the Guthrie High School system since 2014. Funds from these Grants have been used to purchase school supplies, laboratory equipment, textbooks, Chromebooks, charging cart for storage, and Earth Science demonstration models to expand the Earth Science classes. In 2019, the Foundation provided a Grant of \$3,875 to purchase lab equipment, demos, and lab kits for the Earth and Environment Science class. Funding for this Grant is primarily through the William A. Clement Guthrie Schools Grant.

Since 2012,
**the Oklahoma Geological
Foundation** has provided
funds totalling over **\$52,000**
to the **Geoscience Center.**



TULSA GEOSCIENCE CENTER

A little over 12 years ago, the Energy American Educational Institute developed the Tulsa Geoscience Center. The Center is an active member of the Tulsa STEM alliance and is one of only eight teaching facilities accredited by the Oklahoma Energy Resources Board (OERB). The Oklahoma Geological Foundation has supported the Center since 2012.

The Center provides field trips for schools and other educational organizations, has museum-quality exhibits donated by local geologists, and unlike other museums, everything at the Center is hands-on and exciting. The Geoscience Center's mission is to instill a sense of joy and passion in students about STEM education and pursuits of careers in STEM.

The format is each visiting class is divided into groups of twelve to eighteen students. An OERB Director or volunteer with geological training, guides each student group with their teachers to various stations. At each station, they learn about rocks, minerals, and fossils, as well as dinosaurs, earthquakes, tsunamis, natural fluorescence, and fossil fuels. Each student can make their own fossil cast and assemble a rock, mineral, and fossil kit to take home. The Center is unique in Oklahoma, with STEM and Earth Science education as its core mission.

Since inception, over 5,500 students, educators, and teachers visit the Geoscience Center annually. The mission has increased the scope to "at risk" students and members of the various Scout groups. Primarily, the Center targets K - 6th grades, but all educational levels visit the Center, which continues to grow each year.

Since 2012, the Oklahoma Geological Foundation has provided funds totaling over \$58,000 to the Tulsa Geoscience Center. Most recently in 2020, the Foundation donated \$6,422 to the Center in support of various operating costs for the Center. These funds were equally distributed from the "Lance Ruffel Innovations in Earth Science" and the "Shirley A. Davis Earth Science Teaching Grant" programs.

THE LARRY LUNARDI AND THE OKLAHOMA GEOLOGICAL FOUNDATION ROCK, MINERAL, AND FOSSIL COLLECTION PROGRAM

In 2015, under the direction of Oklahoma Geological Foundation Director Larry Lunardi, the OGF began assembling and distributing permanent, on-site collections of museum quality rocks, minerals, and fossils for educational institutions located in Oklahoma. This program was well received by students and teachers with overwhelming positive comments and support. As a result, in 2018, the Larry Lunardi & the Oklahoma Geological Foundation's Rock Mineral, and Fossil Collection Program was officially established.

As a testimonial to this success, a total of 150 Collections have been distributed to Oklahoma schools in a little less than five years. These Collections are being studied by hundreds of teachers and thousands of students every school year.

With continued support and funding from the Foundation along with Larry Lunardi's expertise, the ultimate goal is to have a Collection in every school in Oklahoma.

"Dear Mr. Lunardi"

I appreciate how you came to our school, and it was amazing how you have so many rocks and minerals. I didn't know some, but now I do. Thank you so much for donating them to us. You are welcome to our school anytime."

-Wendy-
San Miguel School



Each year, the Oklahoma Geological Foundation conducts the "Annual Awards Banquet" to honor and to recognize deserving students, teachers, and educational institutions. This recognition comes in many forms including: providing grants, scholarships, and awards. Throughout Oklahoma, students, teachers, and their families are invited to attend the banquet. Each year the banquet continues to grow and during this time, the recipients and their families are able to meet casually with the Foundation's Directors and Donors along with other peers from various educational facilities.

Unfortunately, because of the COVID pandemic, the 2020 Annual Awards Banquet was cancelled. However, with a twist of creativity, a new opportunity became available to continue the recognition so deserved for their dedicated hard work. The Foundation contacted a local film crew to capture some of the awardee's stories and created an amazing on-line short video. The results generated a lot of excitement and the Foundation is very proud to be able to continue its support for the students, teachers, and educational organizations.

In 2020, the Foundation provided \$367,518 in funding for grants, awards, and scholarships.

*"Touch a scientist and
you touch a child"*

Ray Bradbury 1920 - 2012

THE FOLLOWING IS A SUMMARY OF THE **\$367,518 FUNDS DISTRIBUTED IN 2020:**

THE OKLAHOMA GEOLOGICAL FOUNDATION ANNUAL AWARDS BANQUET

Frederic H. & Lois M. Kate Endowment Fellowship	\$ 4,000
Oklahoma Geological Foundation Graduate Fellowship	\$ 4,000
Suzanne Takken Memorial Fellowship	\$ 4,000
Herbert G. & Shirley A. Davis OSU Geology Fellowships	\$ 4,000
Fredrick M. Black Field Camp Grants	\$ 4,500
OGF Summer Field Camp Grants	\$ 4,500
Beth Cronin Elementary School Endowment	\$ 4,000
OGF Excellence in Earth Science Education	\$ 2,000
OGF Support Grant: Girl Scouts of Western Oklahoma	\$ 2,000
OGF & Lance Ruffel Innovations in Earth Science	\$ 3,211
OGF & Larry Lunardi Rock, Mineral, & Fossil Collections	\$ 2,000
Charles E. Branham Library Grant	\$ 1,000
Robert W. & Jo Ann Waring Memorial Scholarship	\$ 1,200
Shirley A. Davis Earth Science Education Grant	\$ 3,211
John Gatchell Earth Science Teaching Grant	\$ 1,000
Oklahoma Geological Foundation STEM Program	\$ 308,500
OGF Non-Directed Grants: Oklahoma Schools & Universities	\$ 8,540
Oklahoma Geological Foundation Elementary School Grants	\$ 1,250
Oklahoma Geological Foundation Middle School Grants	\$ 1,250
Oklahoma Geological Foundation High School Grants	\$ 1,250
OGF & The Philip Boyle Foundation Grant	\$ 2,106

THANK YOU
FOR SUPPORTING THE FOUNDATION'S
MANY EDUCATIONAL INITIATIVES!

OKLAHOMA GEOLOGICAL FOUNDATION

GRANTS, SCHOLARSHIPS, & AWARDS

HERBERT G. & SHIRLEY A. DAVIS OKLAHOMA STATE UNIVERSITY GEOLOGY SCHOLARSHIP: (\$4,000)

RECIPIENT: IAN COX
Oklahoma State University

Thesis: "Characterization of the Caney Shale and Associated Chesterian Strata in the Ardmore Basin"

RECIPIENT: CHASE WATKINS
Oklahoma State University

Thesis: "Identifying and Mapping pre-Frisco Hunton Group Clinoforms on a Carbonate Ramp, Central Oklahoma"

THE FREDERICK H. & LOIS M. KATE AWARD: (\$4,000)

RECIPIENT: KELLEY DAVISON
University of Tulsa

Thesis: "Characterization of HTI Anisotropy in the Anadarko Basin, Oklahoma"

BETH CRONIN ELEMENTARY SCHOOL PROGRAM: (\$4,000)

**RECIPIENT: ST. ELIZABETH ANN SETON CATHOLIC
SCHOOL, EDMOND**

Grant: Grant awarded for the purchase of replacement materials for "hands on" science kits for the study of Earth Science, Life Science, and Physical Science. The science kits are called FOSS kits.

THE OKLAHOMA GEOLOGICAL FOUNDATION EXCELLENCE IN EARTH SCIENCE EDUCATION AWARDS PROGRAM: (\$2,000)

RECIPIENT: GIRL SCOUTS WESTERN OKLAHOMA

Grant: Additional funding for the Girl Scouts Camp Trivera STEM Facility to purchase rocks, minerals, and fossils for the construction of a rock-climbing wall, as well as for teaching purposes.

THE OKLAHOMA GEOLOGICAL FOUNDATION ELEMENTARY SCHOOL GRANT: (\$1,250)

**RECIPIENT: EDMOND FIRST UNITED METHODIST
MOTHER'S DAY OUT & PRE-SCHOOL**

Grant: Funds to add a new Earth Science based theme to their Pre-school program by supplying Earth Science materials & books. This program is a blend of academic & developmental learning styles that prepare young children for future school years.

THE SUZANNE TAKKEN MEMORIAL AWARD: (\$4,000)

RECIPIENT: JULIE CAINS
Oklahoma State University

Thesis: "Acoustic velocity and Porosity: Applications to the Caney Shale, Southern Oklahoma"

THE OKLAHOMA GEOLOGICAL FOUNDATION SUMMER FIELD CAMP GRANT: (\$4,500)

**RECIPIENTS: OKLAHOMA STATE UNIVERSITY,
UNIVERSITY OF OKLAHOMA, AND THE UNIVERSITY
OF TULSA STUDENTS WHO WILL BE ATTENDING
GEOLOGY SUMMER FIELD CAMPS.**

Grant: Awarded to undergraduate students to supplement 2020 Summer Field Camp expenses. Since 2012, the Foundation has provided assistance to over 200 students who have attended the camps.

THE OKLAHOMA GEOLOGICAL FOUNDATION HIGH SCHOOL GRANT: (\$1,250)

RECIPIENTS: GIRL SCOUTS WESTERN OKLAHOMA

Grant: Additional funding for the Girl Scout's Camp Trivera STEM Facility to purchase rocks, minerals, and fossils for the construction of a rock-climbing wall, as well as for teaching purposes.

THE OKLAHOMA GEOLOGICAL FOUNDATION MIDDLE SCHOOL GRANT: : (\$1,250)

**RECIPIENTS: OKLAHOMA SCHOOLS,
K - 12TH GRADES**

Grant: Funds provided for the purchase of museum quality Rock, Minerals, & Fossil collections. These collections are distributed to schools and teachers throughout Oklahoma to promote geology and Earth Science

**THE OKLAHOMA GEOLOGICAL
FOUNDATION & THE PHILIP BOYLE
FOUNDATION GRANT:
(\$2,106)**

**RECIPIENTS: THE OKLAHOMA GEOLOGICAL SURVEY
& THE UNIVERSITY OF OKLAHOMA**

Grant: Additional funding to provide starter Rock & Mineral Kits and a traveling Earth Science Library for a program called "GeoKids". The Survey has distributed over 1,100 kits in two years. Funding will aid in the purchase of 33 mineral identification kits for the undergraduate education K - 12 grade outreach. These kits will enhance a hands-on education for generations of Oklahoma students and budding geoscientists.

**THE CHARLES E. BRANHAM LIBRARY
PROGRAM: (\$1,000)**

RECIPIENTS: OKLAHOMA SCHOOLS, K - 12TH GRADES

Grant: Funds provided for the purchase of museum quality Rock, Minerals, & Fossil collections. These collections are distributed to schools and teachers throughout Oklahoma to promote geology and Earth Science education. Since 2015, the Foundation has distributed over 150 collections to schools in Oklahoma.

**THE OKLAHOMA GEOLOGICAL
FOUNDATION NON-DIRECTED FUNDS:
(\$1,000)**

**RECIPIENT: SCHOOL OF GEOSCIENCE, UNIVERSITY OF
OKLAHOMA**

Grant: Funds will be used to support and assist undergraduate students at the University of Oklahoma to further their education in the field of Geoscience studies and completing courses to obtain a college degree

GRANTS, SCHOLARSHIPS, & AWARDS

**THE LARRY LUNARDI & OKLAHOMA
GEOLOGICAL FOUNDATION ROCK
MINERAL & FOSSIL COLLECTION
PROGRAM: (\$2,000)**

RECIPIENTS: OKLAHOMA SCHOOLS, K - 12TH GRADES

Grant: Funds provided for the purchase of museum quality Rock, Minerals, & Fossil collections. These collections are distributed to schools and teachers throughout Oklahoma to promote geology and Earth Science education. Since 2015, the Foundation has distributed over 150 collections to schools in Oklahoma.

**THE ROBERT W. & JO ANN WARING
MEMORIAL SCHOLARSHIP: (\$1,200)**

**RECIPIENT: BOONE PICKENS SCHOOL OF GEOLOGY,
OKLAHOMA STATE UNIVERSITY**

Grants: Funds will be used to support and assist undergraduate students at Oklahoma State University to further their education in the field of Geoscience studies and completing courses to obtain a college degree.

**THE OKLAHOMA GEOLOGICAL
FOUNDATION GRADUATE FELLOWSHIP
AWARD: (\$4,000)**

**RECIPIENT: JOHN RENNER
University of Tulsa**

Thesis: "Horizontal Well Performance in the Anadarko and Arkoma Basins Using Normalized Formation Facies Analysis Independent of Depth and Location".

**THE LANCE RUFFEL & OKLAHOMA
GEOLOGICAL FOUNDATION
INNOVATIONS IN EARTH SCIENCE
EDUCATION PROGRAM: (\$3,211)**

RECIPIENT: TULSA GEOSCIENCE CENTER

Grant: Grant awarded to support various operating costs for the Tulsa Geoscience Center. The Geoscience Center provides education for students and the public on energy, geology, and other earth science disciplines. Students in the K - 12th grades are exposed to rock and mineral identification, fossils, fluorescence, porosity, permeability, the petroleum industry, earthquakes, geologic time, crude oil and natural gas. Students from Oklahoma schools take day long field trips to visit the Center.

**THE JOHN GATCHELL EARTH SCIENCE
TEACHING PROGRAM: (\$1,000)**

RECIPIENT: THE OKLAHOMA SCIENCE MUSEUM

Grant: Funding used for the purchase of a collection of Oklahoma rocks, minerals, & fossils in conjunction with an interactive map of Oklahoma showing their locations throughout the State.

**THE OKLAHOMA GEOLOGICAL
FOUNDATION NON-DIRECTED FUNDS:
(\$3,790)**

RECIPIENTS: OKLAHOMA SCHOOLS, K - 12TH GRADES

Grants: Funding to supplement grant requests from teachers and schools, particularly emphasizing the "Rock, Mineral, and Fossil Collections".

GRANTS, SCHOLARSHIPS, & AWARDS

THE SHIRLEY A. DAVIS PROGRAM FOR EARTH SCIENCE EDUCATION: (\$3,211)

RECIPIENT: TULSA GEOSCIENCE CENTER

Grant: Grant awarded to support various operating costs for the Tulsa Geoscience Center. The Geoscience Center provides education for students and the public on energy, geology, and other earth science disciplines. Students in the K - 12th grades are exposed to rock and mineral identification, fossils, fluorescence, porosity, permeability, the petroleum industry, earthquakes, geologic time, crude oil and natural gas. Students from Oklahoma schools take day long field trips to visit the Center.

THE FREDERICK M. BLACK SUMMER FIELD CAMP GRANT: (\$4,500)

RECIPIENTS: SKYLAR KAMINSKI

Oklahoma State University

GARY DAVISON

University of Oklahoma

GRANT MOREY

University of Tulsa

Grant: Funds awarded to undergraduate geology students to supplement 2020 Summer Field Camp expenses.

THE OKLAHOMA GEOLOGICAL FOUNDATION STEM PROGRAM: (\$308,500)

RECIPIENT: ESTEEM EDUCATION CO.

Grants: Funds awarded to support the Esteem Education Co. in the development of an online format of Earth Science educational material for students and teachers. It is presented as a light narrative that filters in multiple lessons for the students to explore geosphere, biosphere, and atmosphere. This is accomplished by using localities in Oklahoma and surrounding areas as the backdrop scenery for the study of the Earth Sciences. The Program contains an accumulation of videos and interactive lessons thus allowing students to participate in scientific investigations on screen.

The target audience for the EveryDay Earth Program is 4th - 8th grade students and it directly follows the Next Generation Science Standards as well as the Oklahoma Academic Standards for Science. As of 12/31/2020, development costs for the Foundation have totaled \$568,100 for the **EveryDay Earth Program**.



THE OKLAHOMA GEOLOGICAL FOUNDATION LEGENDS AWARD

The Directors of the Oklahoma Geological Foundation recognize that many outstanding men and women have historically distinguished themselves by having made substantial contributions to the science of geology, created significant advancements in the petroleum industry, and have improved their communities for the betterment of society.

To proudly honor these incredible individuals, the Foundation created and established the "Pioneer Legend", "Historical Legend", and "Living Legend" awards. Since inception in the fall of 2007, the Oklahoma Geological Foundation has bestowed these honors to forty-six individuals at the annual "Legends Award" reception.

Unfortunately, because of the inherent risk posed by the pandemic, the 2020 "Legends Award" reception was systematically cancelled and postponed until the fall of 2021. Those being honored will be Dollie Radler Hall as "Pioneer Legend", Dewey F. Bartlett, Sr. as a "Historical Legend", and Dr. Norman J. Hyne and Dr. Gary F. Stewart as "Living Legends". The Foundation looks forward to recognizing these outstanding individuals at the 2021 "Legends Award" event.

THE OKLAHOMA GEOLOGICAL FOUNDATION CHRISTMAS RECEPTION

As an established tradition since 2004, the Oklahoma Geological Foundation and its Directors, have invited donors and friends of the Foundation to the Annual Christmas Holiday Reception. This reception represents an expression of thanks and appreciation to those individuals who are responsible for the success and growth of the Foundation. These leaders have helped the Foundation over the last two decades, by providing funding, time, and support.

Last year, the 2020 Christmas Holiday Reception was held at the Girl Scouts Western Oklahoma Camp Trivera in conjunction with the Oklahoma Chapter of SIPES. It is always a great social event for the Directors and for those who have generously supported the Foundation for many years.



"We make a living by what we get, we make a life by what we give."

Winston Churchill

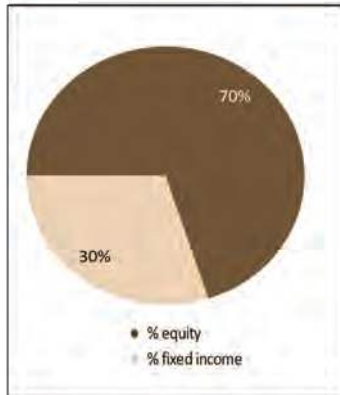
INVESTMENT SUMMARY

PERIOD ENDING DECEMBER 2020

Current Allocation

Allocation	% of FMV
Equity	73.5%
Large Cap	27.6%
Mid Cap	5.5%
Small Cap	21.9%
International	18.5%
Other Equity	0.0%
Fixed Income	25.9%
Short	0.6%
Intermediate	25.3%
Unconstrained	0.0%
International	0.0%
Cash	0.5%
Total	100.0%

Target Allocation



Historical Returns

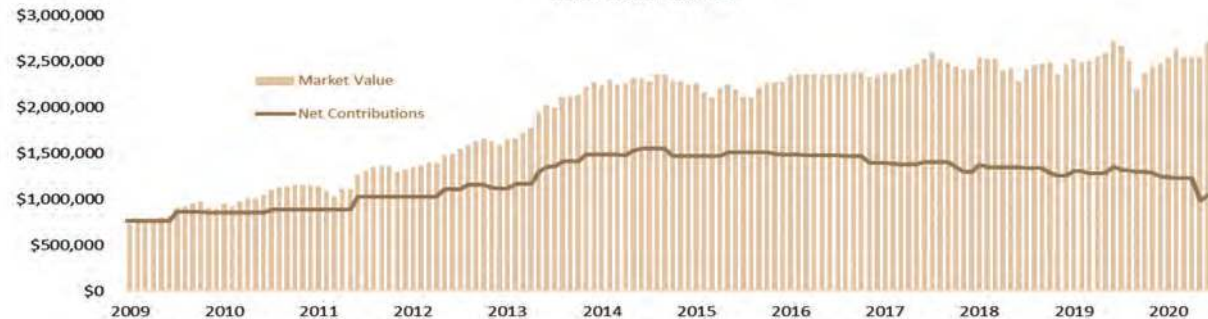
	Trailing 3 Months	Trailing 12 Months	3 Year (annualized)	5 Year (annualized)	10 Year (annualized)
OGF	14.2%	12.3%	7.5%	8.4%	7.6%
Market Returns					
S&P 500	12.1%	18.4%	14.2%	15.2%	13.9%
Russell 2000	31.4%	20.0%	10.2%	13.3%	11.2%
MSCI EAFE NR	16.0%	7.8%	4.3%	7.4%	5.5%
MSCI Em Mkts NR	19.7%	18.3%	6.2%	12.8%	3.6%
BBG BC Int Gov/Crdt	0.5%	6.4%	4.7%	3.6%	3.1%
BBG BC 1-3YR Gov/Crdt	0.2%	3.3%	3.0%	2.2%	1.6%

Annual Returns

Period	Return
2020	12.3%
2019	19.5%
2018	-7.3%
2017	10.2%
2016	9.2%

Growth Over Time

Beginning January 2009



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

OKLAHOMA GEOLOGICAL FOUNDATION 2020 INVESTMENT OVERVIEW

As of December 31, 2020, the Oklahoma Geological Foundation's collective Investment Portfolio had a fair market value of \$2,693,780. This is a decrease of \$18,799 over the previous year balance of \$2,212,579.

This decrease was attributable to investment gains of \$294,200 (net of investment management fees) and net contributions/withdrawals of -\$313,000. The Portfolio had an asset allocation at year end of 73.5% Equity, 25.9% Fixed Income and 0.5% Cash & Equivalents. Under normal circumstances and Foundation investment policy guidelines, the overall equity allocation will typically range from 60-80% and the fixed income and cash allocation will typically make up the residual, a 20-40% allocation.

The mix of equity strategies in the Portfolio is diversified across domicile (e.g., U.S., developed international and emerging markets), style (growth and value) and size (market capitalization). At year-end, the style composition of the equity portfolio was as follows (rounded):

U.S. Large-Cap Growth	7.5%	U.S. Small-Cap Value	2.5%
U.S. Large-Cap Value	5.0%	Developed International	27.4%
U.S. Large-Cap Core	25.0%	Emerging Markets	15.0%
U.S. Mid-Cap Value	7.5%	Real Estate	10.1%

Performance- Net of Fees

	12 Month	3 Year Annualized	5 Year Annualized	Inception 7/1/2008
The Foundation's Investments	12.3%	7.5%	8.4%	7.5%

The primary strategies within the fixed income allocation at year-end were classified as intermediate-term, investment grade but also included a smaller allocation to a short-term, investment grade strategy. The fixed income portfolio style breakdown at year-end was as follows (rounded):

Intermediate-term Bond	97.5%
Short-term Bond	2.5%

For the year ended December 31, 2020, the portfolio returned 12.3%, net of investment management fees, compared to a blended benchmark return of 15.3%. The blended benchmark is comprised of the S&P 500 Stock Index, Bloomberg Barclays Intermediate Government/Credit Index and the Lipper US Treasury Money Market Index, weighted in accordance to the broad class weights of the Portfolio. The table below provides additional performance for the Foundation's Portfolio over various timeframes since inception of July 1, 2008. Since inception, the Portfolio returned 7.5% annualized with net gains, after fees and expenses, of \$1,657,974:

Following sharp declines in the first half of the year related to the pandemic and recession, global equity markets posted a strong recovery resulting in remarkable full-year returns. For the year, the S&P 500 Index (large cap U.S. stocks) returned 18.4% and the Russell 2000 Index (small cap U.S. stocks) gained 20.0%. Within international stocks, developed markets equities (MSCI EAFE Index) and emerging markets equities (MSCI Emerging Markets Index) gained 7.8% and 18.3%, respectively. Additionally, the performance gap between global growth and value stock classifications (growth outperforming) persisted for most of the year across the capitalization spectrum but reversed in the final quarter. Overall, the Foundation's equity investments returned 12.2% during the year. This was modestly behind the S&P 500 Index for the full year largely due to the portfolio's overall value manager tilt.

Falling interest rates and tighter credit spreads, aided by extraordinary policy accommodation by the Fed, led to strong returns for fixed income assets in 2020. The Foundation's fixed income manager positioning was favorable during the year and led to outperformance relative to the Barclays Intermediate Government/Credit Index as the class returned 8.2% versus 6.4% for the benchmark. The overall duration was maintained in a neutral range relative to the benchmark.

The Investment Policy is designed to ensure that existing and future funds managed by the Foundation will provide ample annual income for its charitable purposes in perpetuity, regardless of existing economic or market conditions.

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**OKLAHOMA
GEOLOGICAL
FOUNDATION**

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DEAN A. MCGEE



DENNIS F. SMITH

2011



HAROLD G. HAMM

2008



JOHN W. NICHOLS



ROBERT A. "BOB"
NORTHUTT

2012



FRANK BUTTRAM



LOUIS M. FORD



LEW O. WARD

2009



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SUZANNE TAKKEN

2013



THOMAS E. DAVIS



RAY H. POTTS



SAMUEL "LLOYD" NOBLE



SAMUEL RUSSEL NOBLE

2010



ROBERT ALLEN



CHARLES E. BRANHAM



DAVID G. CAMPBELL

2014



HERBERT H. "BUD"
CHAMPLIN



HERBERT HIRAM
CHAMPLIN



T. BOONE PICKENS

ANNUAL LEGENDS

2015



BOB HANCOCK



DR. KENNETH S. JOHNSON



DR. JAMES O. PUCKETTE



ROBERT W. "BOB" WARING



JEROME MAX
WESTHEIMER, SR.

2019



HARRISON L. TOWNES



RONNIE K. IRANI



CHARLES NEWTON GOULD

2016



J. WALTER DUNCAN, JR.



J.L. HERNDON



ROYCE G. HERNDON



DR. JOHN W. SHELTON



WIRT FRANKLIN



WILLIAM A. "BILL"
CLEMENT

2017



AUBREY K. MCCLEENDON



T. HOWARD MCCASLAND



ROBERT A. HEPNER III

2020



DOLLIE RADLER HALL



DR. GARY F. STEWART



DR. NORMAN J. HYNÉ

2018



RICHARD D. FRITZ



FRANK F. PHILLIPS



THOMAS W. OLSEN



KEITH F. WALKER



DEWEY F. BARTLETT, SR.

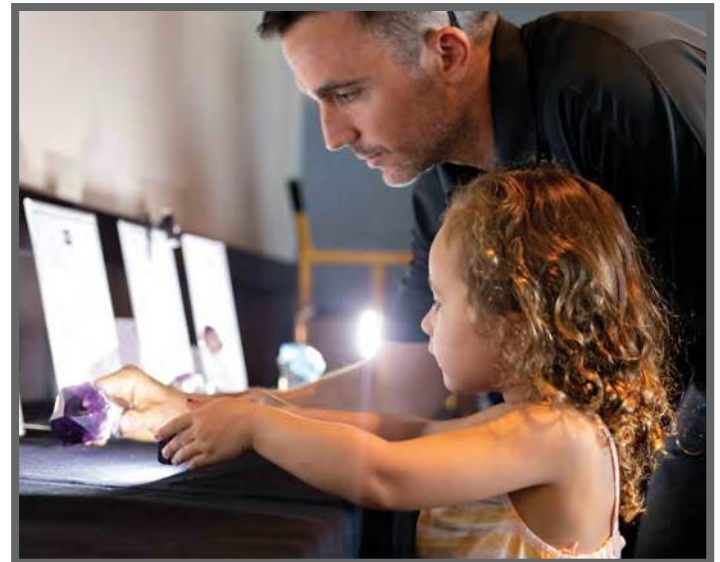
ROCKS & SWING FORE STEM AUCTION

With the success of the inaugural auction in 2019, the Oklahoma Geological Foundation's "Rocks & Swing Fore STEM" auction was continued in 2020 as an annual event. The primary goal of this event is to promote the Foundation as a "family connection" to the organization.



The fundraiser consists of an online and silent auction of minerals, fossils, and artwork. The event is held at Topgolf driving range with a dinner buffet that is fun for all ages while raising money for the "Rocks & Swing Fore STEM".

Although 2020 was an unusual year because of the pandemic, the auction was held as scheduled on September 10th. While attendance was down from the prior year, the event was still considered a success by raising over \$7,300, which will go directly to the Foundation's STEM programs.



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Front Row (L to R): Camelia Knapp, Thomas C. Cronin, Lawrence H. Davis, Lanny Holman, Molly Yunker

Back Row (L to R): Herbert Martin, J. Mark Lester, Terry L. Hollrah, Joel A. Alberts,
Devin Dennie, Frank Gagliardi, Michael J. Bone, Larry Lunardi (not pictured)

OKLAHOMA GEOLOGICAL FOUNDATION
P.O. BOX 7565 | EDMOND, OK 73083



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