

Museum of Geosciences Annual Report 2018-2019

The Museum of Geosciences (MoGs) is a tangible way the Department of Geosciences fulfills Virginia Tech's Land Grant mission to create, preserve, and provide information about science and technology for the public. Exhibits and programs are open to the public free of charge.

During the 2018-19 academic year, the Museum has hosted over **9600 visitors**, including many Virginia Tech faculty and students, pK-12 school groups, 4H youth, homeschoolers, families, campus visitors, and community members.

Programmatic contacts reached nearly **4000 people** including **1366 pK-12 youth**, and **70 teachers**. In that number, on-site guided visits with over 500 pK-12 youth and 40 teachers from 19 different schools were facilitated by **10 trained Museum volunteers** along with head interpreter, Sarah Windes.

There were **33 uses of kits and materials** through loans and on-site visits.

Academic visits brought 1929 VT students to the Museum from **16** different courses in **7** departments. Many students, not just from Geosciences, use the Museum for group project meetings or as a pleasant on-campus study space.

A new course, **Natural History Collections Curation (GEOS 4984)**, was taught in the Museum. Several students did projects interacting with the Museum collections and exhibits.

Donations

Cash donations including the GeoFair, Northrop Grumman Corp, the Roanoke Gem and Mineral Club, annual donors, memorial donations, matching, and earmarks in GiveBigVT, totalled nearly **\$19,000**. (GeoFair alone brought in \$6500 this year.)

In-kind donations received from Don Dalton, Paul and Ruth Prideaux, and Jenny and Royce Zia were valued at over \$16,000.

Collections Highlights

The Natural History Collections Club is a student organization at Virginia Tech, sponsored by Jordan Metzgar in the Massey Herbarium. Though most of these students are interested in life science specimens, they were amazed by our mineral collections! They ended up volunteering to help with collections moves and outreach events.

Information and Collections Management took a giant leap forward this year thanks to GTA Katie Krueger. Working with Llyn she extracted the data from our out-of-date FileMaker database and imported it into a much more accessible Excel database. This is also much more vulnerable to data corruption: we need to be very careful. Public and staff accessible versions of the "Museum Mothership Database" are available by

security-edited exports to Google Sheets. We then refined this tool by using it to inventory, catalog, and put away many of the backlog specimens scattered throughout Museum spaces. An encouraging amount of progress was made! We hope to continue this project of inventories and data cleanup to provide better Collections Management.

Exhibit Highlights

Don Dalton donated a beautiful double-width oak cabinet. This caused a re-organization of cabinets in the Museum and led to some refurbishing of exhibits.

Aly Hoehner was instrumental in revamping the Systematic Minerals exhibit for Mineralogy (GEOS 3504). **Erin Kelly** relocated and the Australia and Mexico specimens to different exhibit cabinets, inventoried, and replaced labels for those.

Sarah Windes refurbished an academic support exhibit on Mineral Characteristics and installed it in part of the new cabinet. In the other half of that cabinet, using the newly acquired Prideaux collection, **Ella Davis** developed an exhibit for her class project in Collections Curation (GEOS 4984) that highlighted some favorite minerals of members of the Department.

Program Highlights (see complete programs list in appendix)

Sterling Nesbitt and **Michelle Stocker** conducted a citizen science program to unpack some of their field material in Fall semester. This is the third time they have led this wildly successful “**Paleo Unpacking Party**” activity. There were 110 people who took part, including 32 kids!

Research a la Mode (RALM) continued for the 4th year, coordinated by **Lisa Whalen**. RALM offers grad students a chance to practice communicating science with interested peers. There were 3 presentations in the fall. Presenters came from several departments, with a total attendance of about 45.

Museum Public Lectures and **Special Events** featured meet-the-scientist receptions, as well as the main programs. These were well-attended (**230** total) and much appreciated by the community. Super exciting was the **World Premiere** of a new dinosaur discovered, researched, and named by Dr. Sterling Nesbitt, and presented in May in coordination with the publication in *PLoS ONE*. (110 total included above)

The TECHtonic Newsletter regularly features a “Museum Piece”. This year the topics were *“The Evolution of the Dinosaur”*, *“The Evolution of the Dinosaur”*, and a *“The Evolution of the Dinosaur”*, and the many advances during his tenure.

People

Museum Outreach and Collections Committee: Mark Caddick, Gary Glesener, Neil Johnson, Scott King, Sterling Nesbitt, and Bob Tracy (chair)

Undergrad rep Camille Do. Grad rep Aly Hoehner. Staff Llyn Sharp, Sarah Windes.

Board of Curators: Bob Tracy (chair), Sterling Nesbitt, Rick Law, Mark Caddick, Neil Johnson, Shuhai Xiao. Staff Llyn Sharp.

Staff this year: about 1.0 FTE total. Llyn (.66 FTE sal), Sarah Windes (.15 FTE wage), Katie Krueger (1.0 GTA Fall 18 and Spring 19), Khanh To (.5 GTA Spring 19), Erin Kelly (.15 FTE student wage Fall 18 and Spring 19)

Volunteers:

We have over 100 people who have volunteered in some way with the Museum this year; we don't track hours, but a conservative estimate would exceed 1000 hours. GeoFair 2018 had a total of 40 people who worked contributing over 400 total hours. Paleo Events called upon their Lab Group and Lab Night volunteers, at least 8 people. Group visit leaders (docents) had 10 volunteers conducting numerous tours. In addition to staff and committee members, many Friends of the Museum and members of the Natural History Collections Club have continuously volunteered expertise and effort throughout the year: (alphabetic order by last name)

Sharon Collins, Don Dalton, James Dunson, Tina Dura, Ben Gill, Gary Glesener, Thomas Hale, Rebecca Hawkins, Bill Henika, Aly Hoehner, Christiana Hoff, Devin Hoffman, Steve Holbrook, Neil Johnson, Erin Kelly, Krista Koeller, Dana Korneisel, Mark Lemon, Jim Langridge, Lowell Moore, Claire Morton, Sterling Nesbitt, Morrison Nolan, Philip Prince, Nancy Ross, Mary Jane Smith, Sarah Stamps, Michelle Stocker, Bob Tracy, Jo Thomason, Khanh To, Scott Tucker, Lisa Whalen

Social Media and Website

Llyn was able to keep the website updated to communicate with the public. By Spring we were also able to (finally) post databases of our collections online! This was a big accomplishment!! We also post reports for easy access for faculty writing proposals. Without a designated media marketing manager, we have minimal Facebook, Twitter, and Instagram presence.

Goals for next year - developing brain trust, other curators, developing role of museum in dept and MEDL, student involvement (responsibility ladder), collection management (inventories, documentation, backups, database solution, preservation and access), security (new alarm system). This year we were very happy to meet our goals for student involvement and opportunities for professional development, and development of a greatly improved collection management system, as well as getting a boatload of specimens put away.

Appendices:

1. Program/Events report (Llyn)
2. Guided Visits report (Sarah)
3. GeoFair report (Erin)

1. Programs and Events Report

Museum of Geosciences

Academic Year 2018-2019 Programs and Events

The Museum is open to the public from 8:00-5:00 Monday-Friday during the Fall and Spring Academic Semesters. Events are free and take place in the Museum of Geosciences, 2062 Derring Hall, unless noted otherwise. No parking permit needed after 5:00 or on weekends. Handicap spaces located adjacent to the building.

Fall 2018

The fall schedule includes youth programs, graduate student communicating science seminars, public lectures, alumni events, student exhibits, Earth Science Week, and Women in Geosciences events.

Research a la Mode* (RALM): science communication seminar--with ice cream!
>ci fbYmifc`h Y7 Ybhff`cZUb`5 WjY Jc`WUbc. `K \ mijg`8 YYd`GYU8 f]`]b[`GVYbWW`
-a dcfHUbB`"?Ubb] \ U?c`UbXUjYi "JH"; YcgVYbWg"Wednesday, August 29, 2018, 5-6 pm, in the Museum, 2062 Derring. RALM is by grad students, for grad students, also appropriate for K-12 teachers and Master Naturalists. Free. (26 VT)

Fossil Unwrapping Party

Wednesday, September 26, 2018. 6:30-8:00. Starts at NCB 360, then Derring 2062.

A fall tradition with our paleontologists Dr. Nesbitt and Dr. Stocker--hear about their summer field season then help unpack some of the fossils the team collected. This is an unusual opportunity to participate in an active scientific research project. They found bones from reptiles 215 million years old from Arizona!

We will start with a brief presentation at 6:30 in Room 360, New Classroom Building (NCB, 1455 Perry St). Then at about 7:15 we will go to the building next door to unwrap the fossils in the Museum, 2062 Derring (926 West Campus Dr). This free museum program is open to the public, and is appropriate for VT students, K-12 teachers, community members, and families bringing kids over age 7.

Please pre-register by emailing mogs@vt.edu with how many adults and kids, and your name and email in case we need to contact you about program changes. We can also let you know about future programs! (90 at lecture)

Research a la Mode* (RALM): science communication seminar--with ice cream!
Thursday, Sept. 27, 2018. 5:00-6:00 pm in the Museum, 2062 Derring. **Wildlife Conservation.** 12 VT attended.

GeoFair and Mineral Sale

Saturday, October 13, 2018. 10:00 am - 4:00 pm. 2062 Derring Hall.

Join us for this popular event: hands-on family-friendly activities, learning stations about geosciences, and beautiful minerals for sale priced for teachers and students (cash or check best). Open to the public and Family Day visitors. Free

admission and parking. Co-sponsored by the Geology Club and Don Dalton.
(over 900 people, biggest ever this year!)

Research a la Mode* (RALM): science communication seminar--with ice cream!

Wednesday, Oct. 17, 2018. 5:00pm-6:00pm in the Museum, 2062 Derring.

Gluing your broken heart back together: How a new peptide recharges the heart's batteries after a heart attack. Mitchell Allen, VT HNF. (12 VT)

Your body is powered by millions of tiny batteries. These batteries, called mitochondria, give us the energy we need to get out of bed, walk to class, or go on an afternoon run. Unfortunately, during heart disease our mitochondria become ill, fall apart, and are unable to make the energy we need to function. Come hear PhD candidate Mitchell Allen talk about his research on developing a medicine to treat sick mitochondria and restore energy production after a heart attack. (7 adults)

Plate Tectonics in Action: Breaking up the African Continent!

Dr. D. Sarah Stamps, VT Geosciences.

Thursday, October 18, 2018, in Derring Hall.

Reception 6:00-7:00 in room 2062. Lecture 7:00-8:00 in room 4069.

The African continent is slowly breaking up on its eastern side along the East African Rift System. In millions of years we expect to have a new ocean forming, which is already partly underway in Ethiopia. This talk will address the topics of why and how Africa is breaking up and how geoscientists use technology to study the process.

In advance of the lecture, join us for a reception in the Museum where you can meet the scientists and see some of their geodetic instruments.

Appropriate for VT students, K-12 teachers, Master Naturalists, and community members interested in Earth Sciences. (

“Dream Big” Day with MCPS 7th grade and The Graduate School at Virginia Tech.

Tuesday, October 23, 2018. (10:00), 11:00, 1:00. in the Museum

Grad students in our Hydrology program and 7th graders from Montgomery County Public Schools explore how hydrology fits into geosciences. This program is to help introduce careers and fields of study before the students choose high school courses. Stacey Law, Grady Konzen, Rick Jayne, Josh Benton.

[VT Science Festival](#) at the Moss Arts Center in downtown Blacksburg.

Saturday, October 27, 2018 from 10:00-4:00pm. Free.

Plenty of Geoscience: the Museum, the Geology Club, the MEDL, and the Geodesy Lab will have exhibits as part of this big event. Come see us!

Natural History Collections Club

Tuesday, November 6, 2018. 6:30-7:30.

Workshop on casting techniques with paleontology PhD student Devin Hoffman.
(16 VT)

[Connecting to Collections Care](#) Webinar group viewing in Museum.

Tuesday, November 13, 2018. 2:00-3:30 pm.

There is also an [Arctos](#) webinar on at 3:00.

Connecting to Collections Care Webinar group viewing in Museum.

Tuesday, November 27, 2018. 2:00-3:30 pm.

Spring 2019:

This semester a new course was offered in the Museum -- **Natural History Collections & Curation (Geos 4384)**! We hosted a public lecture and a very special public event: the world premiere of a new dinosaur. There were our usual school group visits, a Hokiesaurus Presents: youth program, 5th grade campus expeditions with Kindergarten-to-College, Tazewell 4H 4th grade visits, an Alumni Open House, and other activities our students invented. Follow [@hokiesaurus](#) on twitter for quick reminders!

Virginia Tech SCIENCE OLYMPIAD

Saturday, Feb. 2, 2019 from 8:00-4:00. McBryde Hall and Squires Student Center.

Paleo grad students Morrison Nolan, Dana Kornesiel, and Khanh To will be conducting the "Fossil Competition" and "Glacial Competition" sections for High School students from the region. Our grad students also developed the test items that are used here at the Virginia Tech Contest. Events like the Science Olympiad are a good way for interested high school students to learn more about Virginia Tech Geosciences. (120 high school kids, 15 adults)

International Darwin Day

Tuesday, February 12, 2019

Kindergarten-to-College (K2C)

February, March, April dates on Mondays and Fridays.

K2C brings over 1200 5th graders and 220 teachers from all over Virginia to campus to explore college and encourage learning. They visit activities in small groups of 10-20.

The Museum of Geosciences is always a favorite because of our enthusiastic Geosciences student hosts.

Hokiesaurus Presents*: Where does our water come from?

Wednesday, April 10, 2019, 4:30-5:30 pm in the Museum, 2062 Derring

Leaders: Erin Kelly and Katie Krueger

Youth program for upper elementary age (10-12 years old).

Free. Kids must have an accompanying adult.

Please pre-register with erink25@vt.edu, limit 12 kids.

Lots of citizens in Montgomery County have wells, while others get their water from the New River. We will explore where drinking water resources come from and why it is important to keep them clean. We will talk about runoff from farms and how it can affect our lakes and rivers. We will also talk about how pollution can get into our groundwater and travel to our wells. This will be a fun filled event with hands-on models of aquifers and surface waters. (12 kids, 10 adults)

Beeks Library Book Festival: Dinosaurs!

Wednesday, April 10, 2019, 5:00-6:30,

Margaret Beeks Elementary School, Airport Road, Blacksburg

The Book Festival theme this year is Dinosaurs and they invited us to participate. The Museum will have a table at the Festival Open House, staffed by Sarah Ulrich (PhD candidate). Materials and activities from the Museum collections and the Paleobiology Research Group spark the interest of over 150 kids.

Tazewell 4-H elementary school visits.

April 8, 15 and 17, 2019, various times.

All Tazewell County 4th grade students visit Virginia Tech over several days, offering over 300 kids exposure to campus and participation in activities and STEM learning. Geosciences students will lead interactive programs for many of their groups who visit the Museum during this event.

Museum Public Lecture

7cUgHU'8 YHWHj Yg. fYUX]b['H YWi Yg'Zca 'YUHA ei U_ Yg'UbX'igi bUa]g']b'WUgHU' XYdcg]hg''

Dr. Tina Dura, VT Geosciences.

Thursday, April 18, 2019, 7:00-8:30 pm in Derring Hall.

Lecture 7:00-8:00 pm in room 4069 Derring, followed by a meet-the-scientists reception from 8:00-8:30 in the Museum, 2062 Derring.

Dr. Tina Dura recently joined the VT Geosciences department. Dr. Dura's research explores subduction zone earthquake and tsunami records over many seismic cycles (thousands of years). To extend these earthquake and tsunami records, Dr. Dura applies stratigraphic, sedimentary, and microfossil (diatom) methods to coastal sedimentary sequences to identify changes in ancient environments. Some of these changes can be recognized as signals of past faulting and tsunami flooding. This captures the variation of the largest events over space and time to help assess current and future hazards for coastal areas. (96 attended; 50 at reception)

Giles STEMposium

Wednesday, April 24, 2019, 6:00-8:00 at Giles High School, Pearisburg.

STEMposium offers different hands-on, interactive STEM exhibits. In 2018 we had an Earthquake exhibit, in 2019 the Hydro group took groundwater flow models. (70 kids, 50 adults)

ICAT Day

Monday, May 6, 2019 from 10:00-4:00 at the Moss Arts Center.

Museum Public Event: New Dinosaur Discovery

Monday May 6, 2019, 7:00-8:00 in Derring 4069. [Flyer](#)

World Premiere of the only fossil remains of a new species of a carnivorous DINOSAUR (we can't tell you more yet, until the official publication comes out on May 6th). Dr. Sterling Nesbitt and our Virginia Tech paleontologists are offering this unusual opportunity for you to be among the first in the world to see this discovery in person! The event will be on Monday, May 6, 2019 starting at 7:00 in room 4069 Derring, then moving downstairs to the Museum room 2062 for a meet-the-scientists reception. Flyer. Help us plan by registering on this [form](#).

Geosciences Graduation Open House

Saturday, May 18, 2019, 11:00-2:00 pm in the Museum, 2062 Derring.

An opportunity for students to bring their families by the Museum. Many students have studied and done group work for classes in the Museum, some have also worked on exhibits, conducted outreach programs, or led group visits, and they like sharing this with their loved ones. (

Memorial Open House for friends and colleagues of Dr. Bob Tracy

Saturday, May 25, 2019 from 10:30-12:00, presentation at 11:00.

A recognition and celebration of Bob's service and impact as the Director of the Museum of Geosciences from 2009-2019. (20? adults)

Alumni Open House at the Museum of Geosciences

Friday, June 7, 2019 from 1:00-4:00 pm.

In cooperation with the Virginia Tech Alumni Reunion, join us for an open house at the Museum in 2062 Derring Hall. See some of our new exhibits and acquisitions and talk with geoscientists about their research.

***Research a la Mode (RALM)** is a monthly venue for graduate students from different departments to come together and hear a talk by one of their peers. The main idea is to give graduate students an opportunity to practice communicating their research to an audience that is unfamiliar with their discipline in order to cut down on reliance on jargon and to simplify and clarify their presentation skills. RALM aims to help graduate students become better teachers, researchers, and communicators. Founded by Geosciences PhD candidate Lisa Whalen in 2015, in cooperation with the Center for Communicating Science.

***Hokiesaurus Presents:** Youth programs led by geosciences majors that give kids a chance to do hands-on activities, meet a geoscientist, and learn more about geosciences as an academic and career path. Our Geosciences students decide topics and activities that are exciting to them, then work on their presentation in consultation with Museum staff.

2. Museum of Geosciences Group Visit Report August 2018 through May 2019

Number of groups visiting – 31 visits from 22 different schools (some were larger classes split up into smaller groups)

preschool - 1

4th grade - 6

4th and 5th grade together – 1

5th grade – 15

middle school – 3

high school – 5

Total numbers – 626 visitors,
including 520 students
106 adults, including at least 40 teachers

10 trained volunteers put in a total of 40+ hours helping to lead the visits

Priya Bose
Grant Euen
Erin Kelly
Shelby Kline
Katie Krueger
Morrison Nolan
Jordan Pritchard
Kelsey Tate
Khanh To
Natalia Varela

Content –

5th grade SOL-based scavenger hunt – 5 visits
shorter basic scavenger hunt -- 2 visits
rock cycle activity geared to 5th grade – 8 visits
mineral properties -- 4 visits
Virtually all groups see the fluorescent exhibit and discuss fossils.
All groups but preschool use the OmniGlobe.

3. Scroll down for GeoFair Report

GeoFair 2018

Internal Report

By Erin Kelly (2018 GeoFair Coordinator)

Table of Contents

- Summary
- Learning Stations
- Passport Pamphlet
- Station Map
- Volunteers
- Sales Rooms
- Reflections
- Next Year
- Further Info

2018 GeoFair Summary

The 2018 GeoFair and Mineral Sale had over **900 guests** of all ages who participated in 11 learning and craft stations related to geosciences. It was the busiest GeoFair yet! This is possibly due to the BugFest not being on the same weekend. Also, people really seemed to like the It was an overall fun time for Family Weekend visitors and the community to come out and support the Virginia Tech Museum of Geosciences and Geology Club.



Hokiesaurus made an appearance at GeoFair this year! Many guests took pictures with him

Aly Hoeher flashes a smile while kids create gumdrop crystals at her station



Lyn Sharp helps make rock pets with some guests

Dana Korneisel explains a paleontology fact to a young guest

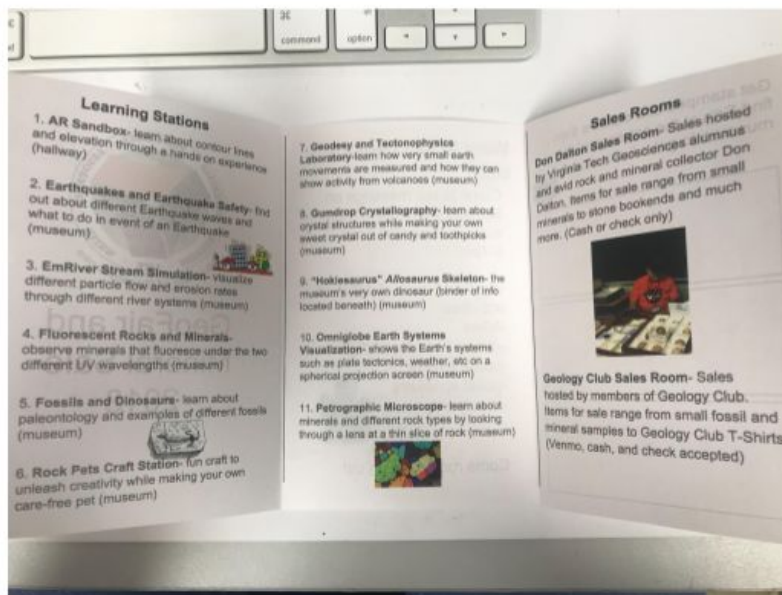
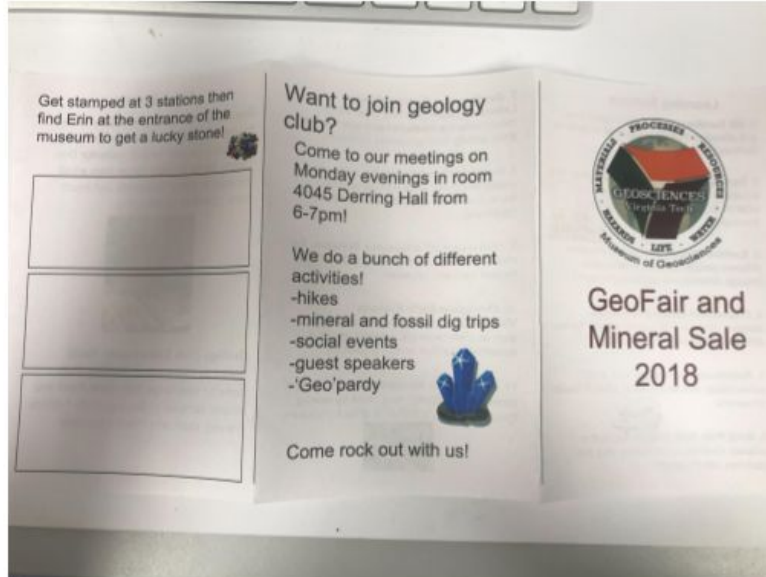


Learning Stations

1. **AR Sandbox**- learn about contour lines and elevation through a hands on experience
2. **Earthquakes and Earthquake Safety**- station about different Earthquake waves and what to do in event of an Earthquake, information about the recent quake just over the border in WV.
3. **EmRiver Stream Simulation**- visualize different particle flow and erosion rates through different river systems
4. **Fluorescent Rocks and Minerals**- observe minerals that fluoresce under the two different UV wavelengths
5. **Fossils and Dinosaurs**- station about paleontology and examples of different fossils
6. **Geodesy and Tectonophysics Laboratory**-learn how very small earth movements are measured and how they can show activity from volcanoes
7. **Gumdrop Crystallography**- learn about crystal structures while making your own sweet crystal out of candy and toothpicks
8. **“Hokiesaurus” Allosaurus Skeleton**- the museum’s very own dinosaur (binder of info located beneath)
9. **Omniglobe Earth Systems Visualization**- shows the Earth’s systems such as plate tectonics, weather, etc on a spherical projection screen
10. **Petrographic Microscope**- learn about minerals and different rock types by looking through a lens at a thin slice of rock
11. **Rock Pets Craft Station**- fun craft to unleash creativity while making your own care-free pet

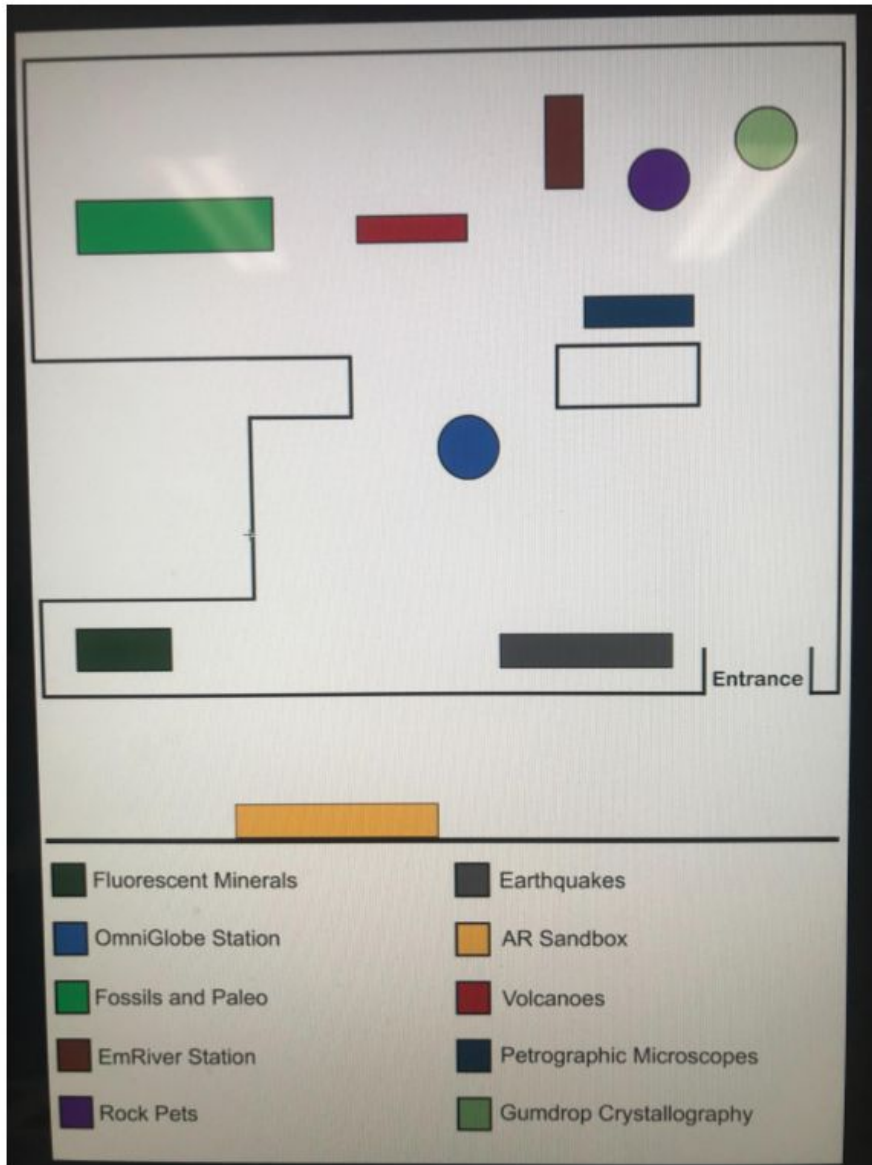
Passport Pamphlet

This was new for this year. It was extremely popular among all the guests, everyone wanted free lucky stones!



Station Map

This was also new for this year. Not many people used it so I don't think it will be necessary for next year. Either that or it should be printed even larger or included in the pamphlets for next year so more people will notice it.



Volunteers

Students

Erin Kelly
Stacey Law
Lisa Whalen
Michael Mellett
Max Schwid
Natalia Varela
Sebastian Kaempfe
Jessica DePaolis
Grant Euen
David Bunin
Lauren Martin
Ryan Faris
Hunter Cornwell
Devin Hoffman
Dana Korneisel
Morrison Nolan
Carly Heltzel
Aly Hoehner
Priya Bose
Ron Navarro
Kirkland Broadwell
Ella Davis
Katie Krueger
Mason McCabe
ThaoVy Nguyen
Tahiry Rajaonarison
Roberto Gorjon
Josh Jones
Camille Do
Jordan Pritchard
Thomas Hale

Faculty/Staff/Others

Llyn Sharp
Don Dalton
Geno Iannacone
Gary Glesener
Dr. Brian Romans
Sarah Windes
Joe Jurinski
Dr. Sarah Stamps
Lidia Guerra

We had a total of 40 people help out with the event in 2018. We had 42 people in 2017 so close to the same amount.

Sales Rooms

Proceeds from sales support the Museum of Geosciences' education and public outreach efforts. For 2018 the net contributions from this event were over **\$6500**.

Don Dalton Sales Room- Sales hosted by Virginia Tech Geosciences alumnus and avid rock and mineral collector Don Dalton. Items for sale ranged from small minerals to stone bookends and much more. Don Dalton made a donation of \$4200 to the Museum of Geosciences account in the Virginia Tech Foundation.

Geology Club Sales Room- Sales hosted by members of Geology Club. Items for sale ranged from small fossil and mineral samples to Geology Club T-Shirts. The Geology Club made a donation of \$2332 to the Museum of Geosciences account in the Virginia Tech Foundation.

Reflections

Erin Kelly (Senior, Geosciences)

"The second time around coordinating the GeoFair was much easier. I had a better idea of what needed to get done which helped with my time management and organization skills surrounding this year's GeoFair. I'm glad the passport pamphlets were made this year because I got to interact with the visitors more by handing them out and helping everyone pick out a lucky stone. Overall it was an awesome experience and I'm glad I got to do it again!"

Camille Do (Junior, Geosciences)

"Volunteering for this event was made easy thanks to Erin's guidance and training. The setup and sales procedures were straightforward, and all of the instructions were easily accessible. It was great to see so many eager volunteers and visitors at the GeoFair, and I can't wait to help again next year!"

Mason McCabe (Junior, Geosciences)

"Getting to help setup and contribute to the Geofair was so fun and fulfilling. Setting up was made easy because of Erin's involvement and previous experience with this event. Everyone I got to work with and talk to at the event were all so friendly. The best part was getting to show people the fascinating parts of geoscience and getting to see how amazed people were by what geoscientists do. The Geofair is a great opportunity for the Geoscience department to reach out and show Virginia Tech how awesome our department is!"

Next Year:

- order more lanyards!
- make sure fluorescent rock kit light is working (broken at end of GeoFair 2018)
- make sure enough cobbles and rock pet bling/glue (Need glitter glue! Very popular!)
- should be plenty of candy for gumdrop crystallography
- add a new station? (hydrogeology-aquifers hehe)
- all station, wayfinding, and sales room signs in GeoFair binder behind safe that holds keys (station stampers and checklists from 2018 are also in there)
- print out more than 200 pamphlets (if doing that again)
- set a date to have volunteers respond by (email undergrad and grad student listservs if not enough volunteers through geology club)
- officers in geology club primarily in charge of helping with sales rooms (especially treasurer)
- getting volunteers for setup is difficult, send multiple emails
- email nire0125@gmail.com with any questions for next year or ask Lyn!

