

Michigan Geological Survey Report 9 from the K-12 Outreach Director, Peter Voice [May 9, 2014]

New Items:

1. Mar. 28th. Survey Meeting – presented Report 8.
2. Mar. 28th – Met briefly with Craig Johnson (Consumers Energy) to discuss CoreKids. Will contact him via email and he will forward our information to the Consumers Energy Foundation.
3. Mar. 28th – Debbie Zolynsky (Lake Shore High School) contacted me to ask about obtaining the Michigan Aggregate Module. I forwarded her contact information to Shada Biabani.
4. Mar. 28th – Scheduled school visit, Lake Shore High School, 11-12th grade. Hydrogeology module. 37 students and 1 teacher.
5. Mar. 28th – Scheduled DeEtta Crane’s classes from Greater Heights Academy, Flint Michigan for May 8th. She would like the Michigan Geologic History Module for the 4th and 5th graders and Natural Hazards: Volcanoes for the 2nd and 3rd graders.
6. Mar. 31st – Exchanged emails with Dr. Pnina Ari-Gur (Dept. of Mechanical and Aerospace Engineering) about possible collaboration – attempting to schedule a meeting with her for April 28th at 10:30 am.
7. Apr. 1st – booked hotel room for the Cranbrook Institute of Science Earth Week Festival and hotel room and flight for the North-Central Section 2014 Meeting for the Geological Society of America.
8. Apr. 1st – attended the Bill Signing at the MGRRE Facility
9. Apr. 1st – exchanged emails with Lisa Apfel (Cranbrook Institute of Science) discussing needs for the Earth Week Festival.
10. Apr. 1st – Scheduled School visit, Northwestern Middle School, Battle Creek. 136 8th graders and 1 teacher. Hydrogeology module. Nathan, Lindsay and Dawn represented CoreKids.
11. Apr. 2nd – I reached out through email to the New Genesis Academy – we had performed a summer event with their group last summer and I asked about whether they wanted to continue the partnership.
12. Apr. 2nd – Suzanne Lutwick contacted me – she informed me that we should hear back from Toshiba’s foundation in the next week. Honda’s Foundation will release its decisions on grant proposals at some point in May. She also informed me that she was working on an application for Dow-Corning’s Foundation.
 - a. I sent her a budget for ~\$50,000.
13. Apr. 3. Shaun Davis (Thornapple Kellogg Middle School) contacted me about scheduling a CoreKids event at his school (he had previously contacted me in Feb.). I replied with our current openings in the schedule and answered his questions about modules.
14. Apr. 3. Met with Sita Karki to discuss improvements and changes to the CoreKids Website
 - a. Sita forwarded me an email contact that had come through the MGS contact us form – a Mentor at the Morrow Community Center (Mt. Gilead, Ohio) had recommended a link to our geology resources page through CoreKids.
15. Apr. 3. Agreed to be temporary Faculty Advisor for the WMU Geology Club’s spring trip.
16. Apr. 4. Met with Anthony Boxleiter and Nick Panyard to discuss upcoming CoreKids events and the possibility of having them help out.
17. Apr. 4. Met with Ann Gilchrist to discuss the Cranbrook Environment/Climate Change activities
 - a. We are going to turn it into a new module to offer to classrooms.
18. Apr. 4: The American Honda Foundation rejected our proposal for funding for CoreKids.

19. Apr. 8-11: Cranbrook Institute of Science Earth Week Festival
 - a. Discussed upcoming dates of events with Lisa Appel as well as a letter of support for CoreKids (for fundraising purposes)
 - b. 1,456 attendees through the four days that we were present (all ages – but the children were mostly younger 5-10 years age)
 - c. Ann developed enough climate change and environmental resources for the festival to make a decent starting point for a new module for classroom visits
20. Apr. 9: Ann presented the Hydraulic Fracking Model to the Michigan Basin Geological Society April meeting. 45 participants.
21. Apr. 11: Gave a report of activities to the WMU Department of geosciences Advisory Council
22. Apr. 11: Tentatively scheduled a visit to Thornapple Kellogg Middle School May 22 and May 23 – 6th and 8th. Natural Hazards: Earthquakes Module.
23. Apr. 11: Tentatively scheduled a CoreKids visit to Upton Middle School May 12 and 13 for their 8th grade class. Hydrogeology module.
24. Apr. 11: Received update from Eric Wildfang (Mi Dept. of Environmental Quality) on the DEQ Earth Day event and the logistics for the event.
25. Apr. 11: Contacted by the The Coalition for Science After School organization – they would like to add CoreKids to their listing of STEM organizations that promote after school and summer science programming.
26. Apr. 11: Briefly discussed CoreKids summer activities with Nicholas Panyard and Sarah Blakely as possible part-time employment opportunities for them.
27. Apr. 14: Read through the DEQ information packet for the Earth Day Event
28. Apr. 14: Filled in the contract for the Michigan Mineralogical Society's annual show and sent a copy to Bob Nowakowski
29. Apr. 14: Working on scheduling a school visit for Mason Middle School after being contacted by Tiffany Henfling (7th and 8th grade). They are requesting the Natural Hazards: Impact Craters and Asteroids module.
30. Apr. 14: Sent out summer schedule to current CoreKids staff – working on scheduling staff members for specific May events.
31. Apr. 14: Met with Donald Clark (AAPG Distinguished Lecturer) – we discussed the Hydraulic fracking demo. He suggested some possible funding sources for developing the model further.
 - a. Suggested contact with Jim Gibbs, AAPG Foundation
32. Apr. 14: Contacted Lisa Appel (Cranbrook Institute of Science) to request the ticket sales numbers for last week's Earth Week Festival and for a status update on the Letter of Support. She sent me the updated totals and asked when I needed the letter by. I asked for it by next Monday (Apr. 21).
33. Apr. 15: Worked on organizing materials for Michigan Oil and Gas Meeting
34. Apr. 15: Ann led a scheduled school visit to the Detroit Public Safety Academy. 25 students and 1 teacher. Hydrogeology Module.
35. Apr. 16: I updated the CoreKids Overview Report.
36. Apr. 17: Michigan Oil and Gas Association Meeting
 - a. Discussed CoreKids program with the MOGA Education and Outreach Board.
 - b. Had 120 people stop at the CoreKids booth.
37. Apr. 21: Prepared materials for Michigan Department of Environmental Quality Earth Day Event – sent scheduling reminder to students who volunteered to help with the event.
38. Apr. 21: Sent email to Dr. Ari-Gur asking for details on our meeting on the 28th of April.
39. Apr. 21: Discussed MOGA meeting with Linda in terms of metrics

- a. Discussion of AIPG Grant Proposal and who writes what (Discussed with John Griffin at MOGA and he reminded me via phone message to send him a proposal).
40. Apr. 22: Michigan D.E.Q. Earth Day Event
41. Apr. 23: Contacted Eric Wildfang (Mi DEQ) to request event metrics for the DEQ Earth Day event. He will send them after they get all the information together.
42. Apr. 24-25: North Central GSA meeting
 - i. Gave talk on Apr. 25 in the Public Outreach Beyond the Classroom: "Geological Surveys, Museums and Parks
 - ii. Talk titled: "Expanding the Impact of the Michigan Geological Survey's CoreKids Program: Productive Partnerships with Non-profits and Regional Amateur Geology Groups"
 - iii. ~30 people attended the talk
 - iv. Everyone was quite excited about the Hydraulic Fracturing Demonstration Model and there was some discussion of the model.
- b. Informal discussions after session with Lisa Anderson (Il Geol. Surv.), Walter Gray (In Geol. Surv.), Joanne Klussendorf (Director, Weis Earth Science Museum), Shane Tucker (State Highway Paleontologist, University of Nebraska State Museum/Nebraska Dept. of Transportation), and Carol McCartney (Wi. Geol. Surv.).
- c. Group agreed to start an annual Public Outreach Session at North-Central GSA as well as a listserv
- d. Met briefly with Gary Hochman (NET Television – a PBS affiliate) at the break in the session to discuss potential collaboration
- e. Apr. 26. –I attended the Ashfall Fossil Beds State Historical Park – continued discussions of outreach with Lisa Anderson, Walter Gray and Shane Tucker. Also discussed outreach activities of the park with Rick Otto (Museum Superintendent).
43. Apr. 24-27 – exchanged several emails with Ann Gilchrist, Bill Mitchell and Sheri Crum (K.G.M.S.) discussing upcoming K.G.M.S. Annual Show and CoreKids' contributions to it.
44. Apr. 28: Received School visit request (forwarded by Kathy to me) from Kari Mack (El Sol Elementary, Kalamazoo) who would like the Dept. to be involved with their Science Night on May 29th. I responded to Kari that we could be available and sent her copies of our brochures.
45. Apr. 28: Met with Dr. Pnina Ari-Gur from the WMU College of Engineering to discuss joint outreach activities.
46. May 5: Scheduled School visit for May 29th with Kari Mack's Science Night at El Sol Elementary. The program will last from 5:30 to 7:00 pm.
47. May 5: Responded to an email from Tiffany Henfling (Mason Middle School) – they had already requested a CoreKids event and I sent them additional information.
48. May 5: Responded to an email from Sarah Bruha (Auburn Elementary, Avondale School district, Auburn Hills) on the possibility of a CoreKids event at her school this spring. I sent her possible dates and copies of our brochures.
49. May 5: Steve Barone forwarded me a message from Anessa Martin (Polk Elementary, Dearborn Heights District #7). I thanked him and sent Anessa an email with our available spring dates and copies of our brochures.
50. May 5: Kathy Wright forwarded me the contact information for Robin St. Arnauld (Portage Public Schools) – Robin requested information on Michigan Dunes in order to plan a fieldtrip for her class. I have also sent her our brochures for the CoreKids program.

51. May 5: Briefly met with Mohamed Sultan to discuss CoreKids funding. We agreed to set up a meeting with Jennifer Callahan and John Greenhoe (WMU Foundation) to discuss WMU's relationship with the DTE Foundation. I contacted Jennifer Callahan and will work with her and Kathy Wright to schedule a meeting. Jennifer is also going to bring in Suzanne Lutwick.
52. May 5: Heather Petcovic emailed me the date of the next MGRRE Online Education Portal Workshop – which will be May 23.
53. May 5: Ann reported estimated totals for the K.G.M.S. Annual Show – 1,100 on Friday, 900 on Saturday and 900 on Sunday (though the Sunday was just an estimate). She was going to contact Sheri Crum (K.G.M.S.) about the Sunday totals.
54. May 5: hired Cameron Manche to help out with Summer CoreKids events.
55. May 5: Updated the CoreKids Overview binder with revised metrics, updated event list and a copy of the GSA presentation.
56. May 5: Contacted Suzanne Lutwick – asked her to look into Western Digital Foundation Grants. She will do so. She checked it out and found that the grant had geographic limitations that we did not fall into.
57. May 5: contacted Dawn Caldwell, Zakk Waber and Nick Panyard with an updated schedule of corekids events.
58. May 5: Discussed outreach and the CoreKids program with Todd Mall and Rick Sandtveit (Trendwell Energy Corp.) as a precursor to Bill Harrison's upcoming meeting with the Michigan Oil and Gas Association Education Group (meeting set for May 15).
59. May 5: Kathy Wright forwarded me a message from Caroline Chuby who teaches 4th grade at one of the Detroit schools. I sent Caroline our brochures and a list of potential dates.
60. May 6: Updated CoreKids Summary Binder (digital copy) with revised metrics and GSA talk.
61. May 6: MGRRE Workshop Portal II moved to May 30 due to teacher concerns on previous date.
62. May 6: Debbie Zolynsky (Lake Shore Highschool) contacted me on status of core pumps demonstration set. I will get her a set by May 30th.
63. May 6: After discussing Waste Management's Foundation with John Yellich, I contacted Suzanne Lutwick to ask her about the possibility to apply to it.
64. May 7: Tentatively scheduled a K.G.M.S. club meeting for Nov. 4 at MGRRE. Bill Mitchell would like a brief discussion of Michigan Geology and the role that MGRRE plays, a tour of the facility and cores on display.
65. May 7: Forwarded Pnina Ari-Gur's contact information to Laura Cross as requested via email.
66. May 7: Wrote a description for the new Environment and Climate Change Module – included a list of MI Science Standards that the module meets.
67. May 7: Heather Petcovic sent invitations to teachers who attended the first Portal Workshop to attend the second Portal Workshop
 - a. Already received confirmations from Teresa Tucker (Great Lakes K-12), Ardis Herold (Gross Pointe North High School), Mark Klawitzer (Michigan Tech), and Debbie Zolynsky (Lake Shore High School), Lisa Wininger (Plainwell Middle School), Bill Dinkleman (Ottawa Area ISD)
68. May 7: Received an update from Eric Wildfang on the DEQ Earth Day event totals – they had fewer participants than last year. The text of his email is attached below the Event and Current Totals Records.
69. May 7: contacted Keith Agdanowski (K.G.M.S.) to discuss our upcoming CoreKids event on May 24th. I emailed him a list of logistics issues and my plans for the day trip to Grand Ledge.

70. May 7: Suzanne Lutwick replied to my email about Waste Management's Foundation. She thought it was a good idea to try submitting a proposal to them, so we are going to start working on it (No deadline for proposals).
71. May 7: Scheduled School visit at Moorsbridge Elementary School (Portage) with Robin St. Arnaud – 4 sessions of the Geologic History module, 100 students for June 2nd. I may also help out with their field trip to the Warren Dunes on June 3rd depending on scheduling.
72. May 7: I reached out to four contacts that Ann G. developed at the K.G.M.S. annual show: Evie Linebaugh (Amberly Elementary, Portage), Sarah Kalasky (Open Door Gallery, Sturgis), Onawa Terburg, and Margy Belchale. Belchale's email did not go through, so I asked for clarification from Ann.
73. May 7: Kathy forwarded me a message from Vicki Smith (Western Middle School, Auburn). I sent her copies of our brochures and potential dates this spring that our program is available.
74. May 7: Met with Kathy Wright to discuss catering for the May 30th workshop (MGRRE Portal II).
75. May 7: Met with Heather Petcovic to discuss some of the logistics for the May 30th workshop (MGRRE Portal II) and WMU's policy on minors on campus.
76. May 8: Scheduled School Visit, Greater Heights Academy, Flint, MI. 100 students (2nd – 5th grade). 2nd and 3rd grade did the Volcanoes module; 4th and 5th grades did the Michigan Geologic History Module.
77. May 8: Did a few logistics-related emails for the MGRRE Online Education Portal Workshop II.
78. May 8: Contacted Vicki Smith – she was requesting a school visit for next spring.
79. May 8: Suzanne Lutwick contacted me about Marathon's foundation and that she had reached out to them about applying for funds.
80. May 8: Bill Mitchell (K.G.M.S.) sent me updated totals for the K.G.M.S. annual show (~3,300 contacts) and he also gave very positive feedback on our staff and displays.
81. May 8: Sarah Kalasky sent a reply about our brochures – she will pass them on to the Sturgis District Library.
82. May 8: Scheduled a school visit to Avondale, Auburn Hills for May 27th. Waiting on details in terms of numbers. Michigan Fossils Module.
83. May 9: Emailed Shada Biabani (MI Aggregate Association) contact information for DeEtta Crane who was interested in MAA outreach program.

Current Totals

Total K- 12 Student Interactions – Youth Groups and School Visits (As of July 2013)	2,626
Total Adult Interactions (As of July 2013: Chaperones and teachers at events)	83
WMU Hydrogeology Field Trip; CMU Petroleum Geology Class (College Students); Saudi Arabia Geological Survey Visit; WMU Geology Club, MBGS Meeting, Michigan Oil and Gas Association Meeting	236
Conferences (Teachers Associations, Teachers Workshop; Other Professional Groups)	723
K.G.M.S. Seminar Series, etc.	3343
Cranbrook Institute Events (Rouge River Festival 2013, Fossil Festival, Earth Week Festival)	5,220
DEQ Earth Day Festival:	2,300

Total: **14,531**

Projected Totals of Upcoming Events

Scheduled School Visits:	596
K.G.M.S. Seminar Series May Event	30
Branch Co. Library System	150?
Kalamazoo Air Zoo Summer Events	40?
<u>Total Projected:</u>	<u>816</u>
<u>Total Projected + Actual</u>	<u>15,347</u>

a. Past Outreach Events (During Voice Tenure as Director, K-12 Outreach)

- i. July 30th – Cub Scout Group, Kalamazoo MGRRE Tour
- ii. Aug. 5th – WMU Hydrogeology Camp MGRRE Tour
- iii. Aug. 22nd – Lego Robotics League MGRRE Tour (Natural Hazards – Impacts Module)
- iv. Sept. 11-13th – Cranbrook Institute of Science Rouge River Festival (Hydrogeology Module)
- v. Oct. 4-6th – Michigan Earth Science Teacher Association/Michigan Alliance of Environmental and Outdoor Educators Annual Meeting
- vi. Oct. 14th – Loaned Module to Kalamazoo Geological and Mineral Society for a School Visit – Star Elementary, Plainwell
- vii. Oct. 21st – Scheduled School Visit - St. Mary Visitation School, Bryon Center (Michigan Geologic History Module)
- viii. Oct. 25th – Petroleum Geology Class, Central Michigan University – MGRRE Tour
- ix. Oct. 30th – Kalamazoo Reformed Heritage Christian School MGRRE Tour
- x. Nov. 1st – MGRRE Online Education Portal Workshop
- xi. Nov. 1st - Okemos High School Geology Class MGRRE Tour
- xii. Nov. 5th – Saudi Arabia Geological Survey MGRRE Tour
- xiii. Nov. 11th – Scheduled School Visit, Upton Middle School, St. Joseph (Michigan Geologic History Module)
- xiv. Nov. 12th and 14th – Scheduled School Visit, Gull Lake Middle School (Michigan Geologic History Module)
- xv. Nov. 16th – Kalamazoo Geological and Mineral Society Lecture Series – MGRRE talk and tour

- xvi. Nov. 18th – Scheduled School Visit, St. Francis School of Ann Arbor (Michigan Geologic History Module)
- xvii. Nov. 20th – WMU Geology Club Tour
- xviii. Dec. 11th – Scheduled School Visit, St. Francis of Ann Arbor (Natural Hazards – Earthquakes Module)
- xix. Dec. 12th-13th- Scheduled School Visit, Upton Middle School, St. Joseph (Natural Hazards – Earthquakes Module)
- xx. Dec. 26th – Dec. 30th – Cranbrook Institute of Science Fossil Festival (Michigan Fossils Module)
- xxi. Dec. 30th – Kalamazoo Air Zoo Digging Michigan Camp (Michigan Fossils Module)
- xxii. January 18th – WMU STEMulating Career Day (Michigan Geologic History Module)
- xxiii. Jan. 21st – Scheduled School Visit, Gull Lake Middle School (Natural Hazards: Earthquakes Modules)
- xxiv. Jan. 22nd – Scheduled School Visit, Gull Lake Middle School (Natural Hazards: Earthquakes Module)
- xxv. Jan. 25th – Dr. Hampton borrowed CoreKids equipment for outreach event with a Webelos Scout Pack.
- xxvi. Feb. 8th – Kalamazoo Geological and Mineral Society Seminar Series (MGRRE)
- xxvii. Feb. 11th – Grand Haven Public Schools – MGRRE Tour
- xxviii. Feb. 14th – Scheduled School Visit, Berkshire Middle School
- xxix. Feb. 28th – Schedule School Vist, Gull Lake Middle School
- xxx. Mar. 3rd - Scheduled School Visit, Gull Lake Middle School
- xxxi. March 5th – Scheduled School Visit, Hastings Middle School
- xxxii. March 6th -8th -Michigan Science Teachers Association Annual Meeting
- xxxiii. March 17th – Scheduled School Visit, Mattawan Middle School (Tom Howe)
- xxxiv. March 18th – Scheduled School Visit, Okemos High School
- xxxv. March 19th -20th – Michigan Section of the Petroleum Technology Transfer Council Spring Meeting
- xxxvi. March 28th – Scheduled School Visit, Lake Shore High School
- xxxvii. April 1st – Scheduled School Visit, Northwestern Middle School, Battle Creek
- xxxviii. April 8th-11th – Cranbrook Earth Week Festival?
- xxxix. April 9th – Hydraulic Fracking Demo at MBGS Meeting
 - xl. April 15th – Scheduled School Visit, Detroit Public Safety Academy [Hydrogeology Module]
 - xli. April 17th – Michigan Oil and Gas Association 12th Annual Michigan Petroleum Geology Conference
 - xlii. April 22nd -Michigan Dept. of Environmental Quality Earth Day Event
 - xliii. April 24th-25th -North-Central GSA Section Meeting
 - xliv. May 2nd –4th -Kalamazoo Geological and Mineral Society Annual Show
 - xlv. May 8th – Scheduled School Visit, Greater Heights Academy [Michigan Geologic History and Natural Hazards: Volcanoes Modules]

b. Upcoming Events

- i. May 12th – 13th – Scheduled School Visit, Upton Middle School [Hydrogeology Module]
- ii. May 22nd -23rd – Scheduled School Visit, Thornapple Kellogg Middle School [Natural Hazards: Earthquakes Module]
- iii. May 24th – K.G.M.S. Grand Ledge Trip
- iv. May 27th – Auburn Elementary School, Auburn Hills [Michigan Fossils Module]
- v. May 29th – Science Night, El Sol Elementary, Kalamazoo [Modified Michigan Geologic History Module]
- vi. May 30th - MGRRE Online Education Portal Workshop II
- vii. June 2nd (and maybe June 3rd) – Moorsbridge Elementary (Portage), St. Arnaud’s class [Michigan Geologic History and Sand Dunes]
- viii. June 18th – Quincy Branch, Branch Co. District Library [Natural Hazards: Volcanoes Module]
- ix. June 18th – Algansee Branch, Branch Co. District Library [Natural Hazards: Volcanoes Module]
- x. July 8th – Kalamazoo Air Zoo Eco Explorers Camp – on main campus
- xi. July 9th – Coldwater Branch, Branch Co. District Library [Natural Hazards: Volcanoes Module]
- xii. July 10th – Bronson Branch, Branch Co. District Library [Natural Hazards: Volcanoes Module]
- xiii. July 10th Sherwood Branch, Branch Co. District Library [Natural Hazards: Volcanoes Module]
- xiv. July 11th – Union branch, Branch Co. District Library [Natural Hazards: Earthquakes Module]
- xv. July 16th – Kalamazoo Air Zoo Eco Explorers Camp – at Air Zoo
- xvi. July 17th – Coldwater Branch, Branch Co. District Library [Natural Hazards: Earthquakes Module]
- xvii. August 12-16th – Michigan Science Teachers Association Annual Meeting

c. Fall Events (Tentative)

- i. Sept. 9-12. The Cranbrook Institute of Sciences Rouge River Festival
- ii. Oct. 10-12. Michigan Mineralogical Society Annual Show
- iii. Nov. 4. K.G.M.S. Club Meeting at MGRRE
- iv. Nov. 7-8. Gull Lake Community Schools Foundation – Sparks Series, Science and Engineering Fair.
- v. Nov. 8 Metropolitan Detroit Science Teachers Association Meeting

d. Working on scheduling

- i. Grant Public Schools
- ii. Walled Lake Girl Scouts
- iii. Mr. Brook’s Brownie Troop, Kalamazoo Area



- iv. St. Paul Catholic School, Grosse Pointe Farms
- v. Arcadia Elementary School 2nd graders – Rood Hall tour.
- vi. DEQ Office of Oil, Gas and Minerals – hydraulic fracking module demonstration
- vii. Mason Middle School
- viii. Polk Elementary School (Dearborn)
- ix. Caroline Chuby's class in Detroit area

Figure 1: Photograph of the CoreKids booth at the Kalamazoo Geological and Mineral Society's Annual Show. (Picture courtesy of John Yellich)

Distribution of Contacts as a function of Event Type through July, 2014

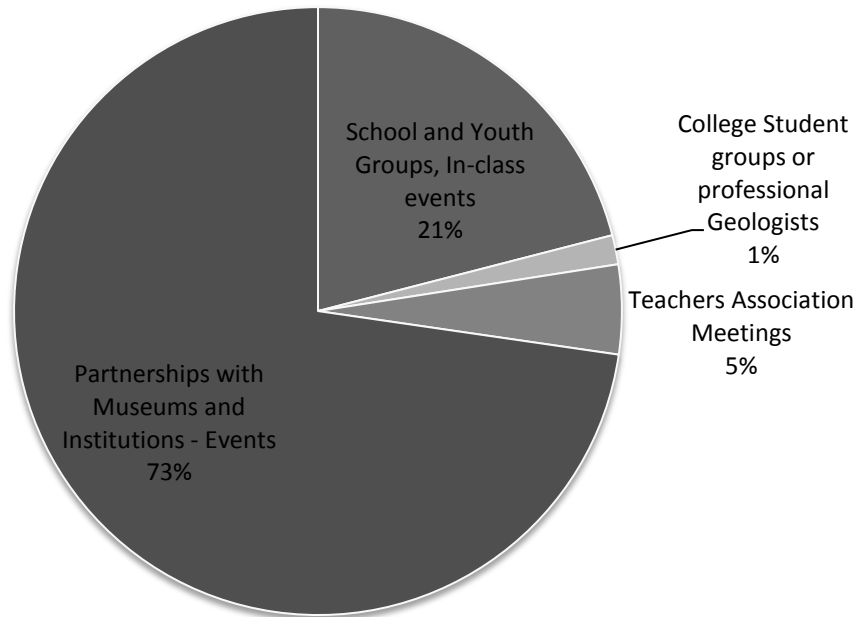


Figure 2: Classification of our contacts – note that 94% of our contacts are with the general public or K-12 students!

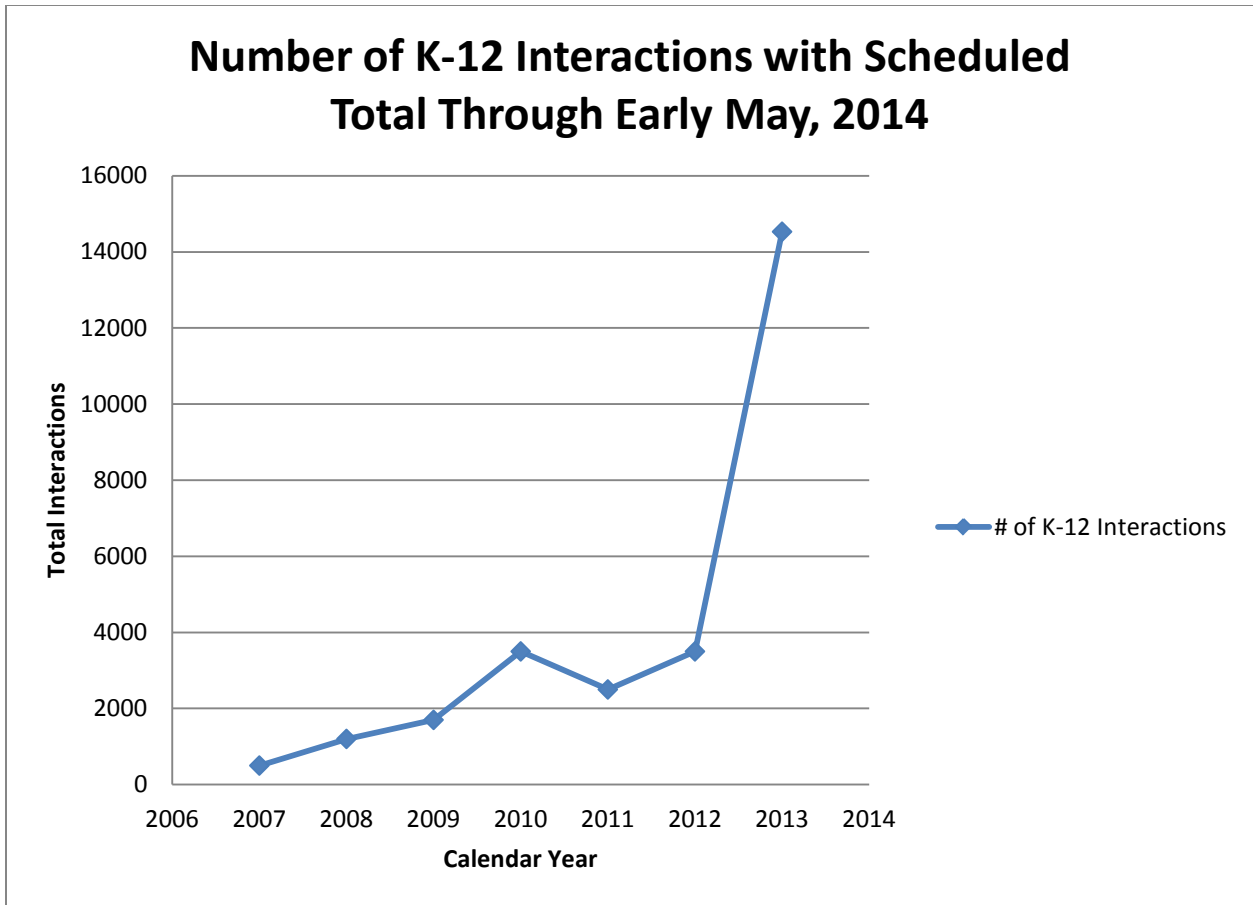


Figure 3: Historical summary of the CoreKids program in terms of reported contacts. Note that the 2013-2014 period has generated 54% of the reported contacts over the program’s lifetime.