

Michigan Geological Survey Report 21 from the K-12 Outreach Director, Peter Voice, June 27, 2016

New Items:

1. Feb. 19th – presented Report 20 to the Director of the Michigan Geological Survey
2. Feb. 19th – exchanged emails with Mike Velbel (MSU) about logistics for planned MGRRE visit by his class.
3. Feb. 22nd – exchanged emails with Zakk Waber – he wanted to borrow equipment from CoreKids for a lesson plan exercise for a class activity – I okayed the request.
4. Feb. 22nd – exchanged emails with the CoreKids staff about scheduling the AAUW workshop.
5. Feb. 22nd – exchanged emails with Tom Howe about the Science Olympiad on WMU campus – told him that I was unavailable for the date in question.
6. Feb. 22nd – exchanged emails with Preston Tesar (student Mattawan High School) – he wanted a senior seminar mentor in paleontology. I requested some clarification about what the activity entailed and told him that yes I would be able to have him visit Geosciences/MGRRE for a day. Waiting to hear confirmation from him.
7. Feb. 24th - exchanged emails with Breanne Lejeune about scheduling a departmental “Outreach and Marketing” committee meeting – tentatively scheduled for Wed. March 2nd.
8. Feb. 24th – scheduled school visit. Michigan Geologic History Module. Mattawan Middle School. 155 students.
9. Feb. 26th – scheduled school visit. Michigan Geologic History Module. Mattawan Middle School. 150 students.
10. Feb. 26th – exchanged emails with Mike Velbel (MSU) about logistics of his class’s visit to MGRRE.
11. Feb. 24th and 26th – discussed possibility of MGRRE tour with Heather Petcovic for her WMU Rocks and Minerals Course. Via email, set up a date to look at cores for preparing an exercise for the class. Meeting – scheduled for March 4 and class visit tentatively scheduled for March 23.
12. Feb. 26th – worked on rescheduling the March 16th Gull Lake event – found students available on March 8th and received permission from teacher to reschedule.
13. Feb. 26th – exchanged emails with Emily Ziegler (Washington Writers Academy) about logistics of upcoming event.
14. Feb. 26th – received email from Robin St. Arnauld (Moorsbridge Elementary School, Portage) about scheduling an event with her school. I sent her a tentative confirmation on the 29th – but explained that I no longer had the staff to do a separate trip to the Van Buren State Park dunes with her class.
15. Feb. 27th – Scheduled MGRRE tour. Michigan State University Department of Geological Sciences Sedimentology and Stratigraphy Class. 31 students and 1 faculty member.

16. Feb. 28th – exchanged emails with Marty Goodman – provided her with draft forms for the AAUW workshop presenter forms – told her that I would get the full forms with biographical details of presenters to her by March 1.
17. Feb. 28th – received notice that the MESTA winter journal was available – it had an update on the fall conference and CoreKids was prominently mentioned and illustrated in the conference report. Sent article to senior staff at MGS and Dept.
18. Feb. 28th – received update from Metropolitan Detroit Science Teachers Association newsletter – their fall conference had ~500 participants – many who visited the CoreKids booth. Updated the current totals to reflect the conference total.
19. Feb. 28th – exchanged emails with Karin Felder (Mattawan Middle School) – thanking her for the feedback from the event.
20. Feb. 29th – emailed Brittany Burgess (UM Museum) about the March 16th event – confirming that I can send staff.
21. March 1st – exchanged emails with Robin St. Arnauld (Moorsbridge elementary school) about scheduling an event.
22. March 3rd – exchanged emails with Emily Ziegler about the logistics for the rescheduled Washington Writers Academy Science Fair.
23. March 5th – received Katie Dvorak’s paperwork for the AAUW event – forwarded it to Marty Goodman with Hannah’s paperwork.
24. March 7th – met with Zaid and Hannah to go over the Earthquakes module in preparation for the March 8th event at Gull Lake Middle School.
25. March 8th – scheduled school event at Gull Lake Middle School. Earthquakes module. 128 students.
26. March 8th – discussed event logistics with Erin Lewis (Kalamazoo Air Zoo).
27. March 8th – 10th – exchanged emails with John Griffin and Katie Abraham (American Petroleum Institute – MI Section) about possibility of funds for CoreKids – they responded that they were highly supportive, but that the funds available at National API were cut deeply this year. They asked us to reapply next year.
28. March 9th – scheduled school event at Washington Writers Academy – approximate number of students and parents ~100. Also met with a Kalamazoo District Librarian who gave me the contact information for their Children programs Librarian.
29. March 10th – exchanged emails with Kala Luzia (Kalamazoo Public Library, Child programming librarian) about meeting to discuss possible collaboration.
30. March 10th – met with Natalie Murphy and Shelby Hurst to discuss the Earthquakes module for the upcoming event at Gull Lake Middle School.
31. March 10th – received feedback and pictures from Emily Ziegler about the Washington Writers Academy Event.
32. March 11th – scheduled school visit, Gull Lake Middle School. Earthquake module. 130 students.
33. March 11th – exchanged emails with Kristi Kusek (Fennville Charter School) about possibility of scheduling a corekids visit to her school.

34. March 11th – exchanged emails with Kyle Gray (National Association of Geoscience Teachers, Journal of Geoscience Education Assistant Editor) about possibility of reviewing a manuscript on using core in education.
35. March 11th – renewed membership in NAGT
36. March 12th – scheduled event with Kalamazoo Air Zoo canceled due to car problems.
37. March 12th – exchanged emails with Brittany Burgess (U of M Museum of Natural History) about upcoming event.
38. March 14th – exchanged emails with Ann Gilchrist – she had a contact at The Kazoo School that was interested in having someone come in and talk to her students.
39. March 15th – exchanged emails with Erin Lewis (Kalamazoo Air Zoo) about rescheduling the event from March 12th – working on a date in May.
40. March 15th – wrote letters of recommendation for Jay Kim and Jason Bell (CoreKids staff) for several departmental scholarships.
41. March 15th – exchanged emails with Heather Petcovic about her class's upcoming visit to MGRRE – edited her lab handouts for the exercise.
42. March 16th – scheduled event with U of M Museum of Natural History.
43. March 17th – exchanged emails with Kate Ripley (The Kazoo School) about possibility of a CoreKids visit to her school.
44. March 17th – Breanne Lejeune scheduled the next Outreach and Marketing Faculty Committee meeting for Geosciences – tentatively March 30th at 12:30 pm.
45. March 17th – exchanged emails with Staci Andrews (don't know which school – but she is a teacher at an elementary school in Kalamazoo) about possibility of scheduling a CoreKids visit to her school.
46. March 17th – exchanged emails with Heather Petcovic, Bill Harrison and Kathleen Baker (Director, WE Upjohn Center for the Study of Geographical Change) about possibility of scanning core samples with the Upjohn Center's equipment – we will work on a meeting in early May to discuss the process and perhaps due to a pilot run in support of the MGRRE Portal proposal.
47. March 17th – exchanged emails with Breanne Lejeune about scheduling a meeting to discuss the BroncoCon event.
48. March 17th – exchanged emails with Sara Syswerda who is compiling a database of PreK-12 science programs and the MI Ed. Standards they meet.
49. March 18th – exchanged emails with Erin Lewis (Kalamazoo Air Zoo) about rescheduling – event rescheduled to May 7th.
50. March 18th – exchanged emails with CoreKids staff to discuss upcoming event logistics.
51. March 18th – met with Breanne Lejeune to discuss migrating the CoreKids website to the new CMS platform that WMU uses. We agreed to put off the migration until May – I will work on putting together a list of changes in content, etc.
52. March 18th – exchanged emails with Brittany Burgess (U of M Museum of Natural History) about the logistics of the March 16th event – 185 students attended the Museum event with CoreKids activities.

53. March 18th – exchanged emails with Kathleen Baker (WMU Geography) about potential meeting to discuss scanning cores.
54. March 23rd – MGRRE tour for the Western Michigan University Rocks and Minerals Class (15 students).
55. March 23rd – Met with Bill and Linda Harrison, Kathy Wright and Breanne Lejeune to discuss Geosciences participation in the BroncoCon event.
56. March 23rd-March 24th – discussed scheduling of MAEOE event with Kathy Wright, Brittany Burgess and John Yellich – tentatively scheduled for October 16th.
57. March 24th – exchanged emails with Breanne Lejeune about the BroncoCon event – reviewed draft version of the poster display for CoreKids at the event.
58. March 25th – MGRRE Tour for the Tesar Family – including visit to WMU Museum and Historical Class (2 guests)
59. March 28th – MGRRE tour for the Western Michigan University Historical Geology Class (16 students).
60. March 28th – exchanged emails with Kate Ripley (The Kazoo School) about possibility of scheduling a CoreKids event with her school. I sent out email to staff to solicit people for either April 26th or 28th.
61. March 28th – exchanged emails with Kristen Mulder and Robin St. Arnauld (Moorsbridge Elementary) about possibility of scheduling an event for June – I asked to hold off until I knew what the budget for CoreKids looked like.
62. March 28th – sent the MAEOE field trip form to Brittany Burgess and Ashlie Smith.
63. March 29th – exchanged emails with Linda Harrison about the mineral cards that MGRRE was developing for the BroncoCon event.
64. March 30th – met with the WMU Geosciences Outreach Committee – discussed community development within the department.
65. March 30th – exchanged emails with Tom Howe and Bill Harrison about the department's rock crusher – and whether we could use it for making the mineral cards.
66. March 31st – exchanged emails with Lisa Anderson about our upcoming North-Central GSA session.
67. April 1st – exchanged emails with Jerry VanNocker (KGMS) about the logistics for the KGMS annual show and the school day component.
68. April 1st – exchanged emails with Lisa Anderson and Michelle Walk about possibility of presenting a workshop in St. Ignace on the geology of Michigan.
69. April 2nd – exchanged emails with Sheila Simpson about the Tech Savvy Conference logistics.
70. April 4th – exchanged emails with Kathy Wright and Linda Harrison about WMU's summer camp program.
71. April 5th – received notice that a draft program for the Tech Savvy Conference was available for review from Margo Noss – looked over it.
72. April 5th – exchanged emails with Breanne Lejeune about CoreKids brochures and other logistics for BroncoCon event.
73. April 6th – attended Geosciences Faculty Meeting – gave update on CoreKids program.
74. April 7th – received update of logistics from Eric Wildfang for the DEQ Earth Day event.

75. April 10th – BroncoCon event at WMU Alumni Center.
76. April 12th – exchanged emails and discussed with Breanne Lejeune and Thomas Howe photos of the Schmaltz Museum – in preparation for my talk at North-Central GSA.
77. April 14th - exchanged emails with Kathy Wright – she had a request for a list of all K-12 events that CoreKids had run this year.
78. April 14th – emailed Eric Wildfang to withdraw from the Earth Day event – CoreKids was unable to find staffing for the event.
79. April 15th – exchanged emails with Kathy Wright and Linda Harrison about the WMU STEM Recruiting Initiative meeting.
80. April 15th – exchanged emails with Lisa Anderson – she had set up a lunch reservation for the North Central GSA meeting for the GO-MPS group.
81. April 19th – North Central GSA – co-chaired with Lisa Anderson the GO-MPS session
 - a. Slate of 9 talks, 4 posters
 - b. Presented talk titled “Incorporating Technology into K-12 Outreach: Lessons Learned from an Augmented Reality Sandbox
 - c. Met with Polly Sturgeon (new outreach person for Indiana Geological Survey) – Polly will take over the GO-MPS session chair for the 2017 meeting.
 - d. Met with Jennifer Obrad (Illinois Geological Survey) – to discuss their lexicon platform
82. April 18th – exchanged emails with Ryan Foster (Kalamazoo Air Zoo) – informed him that I would get back to him, once I knew what my summer budget is.
83. April 25th – exchanged emails with Kate Ripley (The Kazoo School) – her school wanted to provide a donation – so I walked her through the process.
84. April 26th – Scheduled event at the Kazoo School, provided \$50 donation. Hydrogeology module, 15 students and 1 teacher.
85. April 26th – exchanged emails with Megan Anderson about brochures and other materials for Tech Savvy Conference.
86. April 28th – exchanged emails with Breanne Lejeune about the CoreKids website.
87. April 28th – exchanged emails with Steve Venner and Breanne Lejeune about an old core kids email account – and whether to delete it or not. Breanne thought it might be related to the website maintenance and counseled that we keep it.
88. April 29th – May 1st – Scheduled CoreKids event – KGMS Annual Show. Waiting on Metrics of the event.
89. April 30th – scheduled event at Tech Savvy Conference in Gaylord. 36 students. Modified Hydraulic Fracturing Module.
90. May 2nd – received feedback from Kate Ripley (The Kazoo School) for the event.
91. May 2nd – exchanged emails with Erin Lewis (Kalamazoo Air Zoo) about logistics of upcoming event.
92. May 2nd – met with Mohamed Sultan to discuss WMU STEM Initiative Meeting – prepared a set of slides based on my North Central GSA Talk.
93. May 3rd – received budget update from Kathy Wright for CoreKids

94. May 3rd – sent Robin St. Arnauld and Kristen Mulder (Moorsbridge Elementary School) – let them know that an event was possible if they wanted to schedule one.
95. May 3rd – exchanged emails with Ryan Foster and Laura Cross (Kalamazoo Air Zoo) about scheduling two summer camps in August – that it was possible based on my budget.
96. May 3rd – exchanged emails with Valerie Barnes (Big Rapids Rock Club) – she asked if I could send her 300 Michigan Beach Stone posters – I said that would be fine.
97. May 3rd – exchanged emails with Brittany Burgess – scheduled CoreKids event at the U of M Museum of Natural History for May 18th.
98. May 4th – received thank you email from Marty Goodman with regard to CoreKids participation in the Tech-Savvy Conference.
99. May 5th – received update from Linda Harrison on the Michigan Oil and Gas Association’s support for CoreKids.
100. May 6th – exchanged emails and discussions with Mohamed Sultan with regard to slides for upcoming STEM outreach meeting on campus.
101. May 6th – met with Mohamed Sultan, Carla Koretsky, Linda Harrison, Sherine Obare, Jane Baas and Siobhan Williams to discuss 9-12 grade outreach in STEM – as a possible tool for recruitment for WMU.
102. May 6th – exchanged emails with Ryan Foster and Laura Cross (Kalamazoo Air Zoo) – confirming scheduled August events.
103. May 7th – Scheduled event – Kalamazoo Air Zoo Cub Scouts event – 13 children.
104. May 9th – exchanged emails with Suzanne Lutwick about the Cliffs Foundation Grants.
105. May 9th – received update from NSF on the MGRRE Portal Proposal – it had been rejected.
106. May 10th – sent reply to Jennifer Townsend on scheduling next STEM outreach meeting for WMU.
107. May 11th – exchanged emails with Polly Sturgeon (Indiana Geological Survey) and Renee Sparks (Calvin College Geology) discussing North-Central GSA 2017 meeting and whether to submit a session proposal for the GO-MPS group.
108. May 12th – exchanged emails with Andro Mondala (WMU Chemical and Paper Engineering) – scheduled meeting to discuss his NSF proposal.
109. May 13th – exchanged emails with Ardis Herrold and Andrea Williams (MESTA) – update on CoreKids program.
110. May 11th-13th – exchanged phone calls and emails with Tiffany Micketti (Delta College) about possibility of building a set of core pumps for them.
111. May 13th – sent announcement of the Michigan Geological Bibliography to Andrea Williams – she forwarded the link and announcement to the MESTA mailing list.
112. May 17th – exchanged emails with Susanne Biteman (MI DEQ) – she requested information on sites from the Voice –Harrison 2014 MBGS guidebook.
113. May 17th – received confirmation from Ashlie Smith (MAEOE) about MGRRE tour as a field trip for their fall conference.
114. May 18th – exchanged emails with Bill Mitchell (KGMS) about a possible donation to CoreKids – I provided the mailing instructions and payment options to him.

115. May 18th – exchanged emails with Mohamed Sultan and Linda Harrison in preparation for the May 19th WMU STEM meeting. I will present the same slides to the larger audience.
116. May 18th – prepared draft presenter form for the MESTA meeting – forwarded to Heather Petcovic for her feedback.
117. May 18th – received metrics update from Jerry VanNocker (KGMS) for the KGMS Annual show. 4, 824 attendees.
118. May 18th – Scheduled CoreKids Event – U of M Museum of Natural History. Waiting on metrics. (Tentative numbers - 250 students).
119. May 19th – WMU STEM meeting – presented overview of CoreKids program to representatives of the Lee Honors College, WMU Admissions, and Department Chairs from College of Arts and Sciences and College of Aviation. Discussed campus-wide outreach activities and initiatives.
120. May 20th – exchanged emails with Brittany Burgess – she reported metrics from the May 18th event – 274 participants.
121. May 20th – met with Heather Petcovic and several Mallinson Institute people to go through materials donated to the Earth Science Education program.
122. May 20th – sent a completed presenter form to Andrea Williams (MESTA) for the 2016 Field Conference.
123. May 20th – sent email to Dave Barnes, John Yellich and John Shook (Michigan Basin Geological Society) – updating them on my plans for the 2016 MESTA Meeting.
124. May 22nd-24th – Exchanged emails with Breanne Lejeune, Heather Petcovic and Linda Harrison on scheduling departmental outreach meeting – tentatively scheduled for May 24th.
125. May 25th – exchanged emails with Bill Harrison for MI Oil and Gas statistics – added them to the historic mineral production files for my MESTA materials.
126. May 26th – met with Heather Petcovic, Breanne Lejeune, Linda Harrison and Mohamed Sultan to discuss departmental outreach activities - summer camps, student involvement in outreach, etc.
127. May 28th – exchanged emails with Robin St. Arnauld (Moorsbridge Elementary School) – about logistics for upcoming event.
128. June 3rd – received researchgate request for the slides from the NC-GSA 2016 talk “Incorporating technology into outreach...” – I uploaded the presentation and several others to my researchgate account.
129. June 6th – Moorsbridge elementary school – scheduled event, MI Geologic History module. Approximately 96 students and 4 teachers.
130. June 7th – exchanged emails with Kathy Wright about MESTA Conference logistics and budget information.
131. June 7th – WMU Scholarworks uploaded a slightly modified version of the bibliography to their website – now the bibliography comes up in google searches and in my google scholar account references.
132. June 8th – exchanged emails with John Luczaj – he is writing the Roadside Geology of Michigan book.

133. June 8th – exchanged emails with Nicholas Baxter – asked for clarification about an event that he was hosting – he had invited CoreKids to participate.

Current Totals (July 1, 2015 and on)

Projected Totals of Upcoming Events

School events	2,348
Kalamazoo Air Zoo	59
Big Rapids Rock and Minerals Club	20
WMU Hydrogeology Field Camp	28
Branch Co. Library Program	70
Cranbrook Institute of Science Rouge River Festival	80
National Fossil Day, MSU Science Museum	400
MESTA Night at the Museum and MESTA Annual Conference (approximate values)	130
MDSTA Annual Conference	500
Central Michigan Mineral Show	837
College classes (CMU, MSU, WMU)	72
U of M Museum Events	725
Mineral Mania Event (Grosse Pointe North)	200
MLK Career Cruising Day	50
Tech Savvy Conference	36
KGMS Annual Show	4,824
Other	36
<u>Total Actual:</u>	10,445
<u>Total Projected:</u>	

Past outreach events July 1, 2015 and on

- i. July 9th – Kalamazoo Air Zoo – Campus visit
- ii. July 23rd – Branch Co Library events
- iii. August 6th – Presentation to the Big Rapids Rocks and Minerals Club
- iv. Sept. 18th – Rouge River Festival, Cranbrook Institute of Science
- v. Sept. 19th – Booth at WMU Department of Geosciences 50th anniversary event
- vi. Oct. 2nd – Kalamazoo Reformed Heritage Christian School – MGRRE Tour and Michigan Geologic History Module
- vii. Oct. 10th – MESTA Annual Conference
- viii. Oct. 13th Star Elementary, Plainwell – Bill Mitchell Borrowed Core Pumps
- ix. Oct. 17th – National Fossil Day Event at MSU Museum
- x. Oct. 20th – MESTA Evening of Science, U of M Museum of Natural History
- xi. Oct. 23rd – Central Michigan Lapidary and Mineral Society Annual Show
- xii. Oct. 28th – Kentwood Public Schools – MI Fossils.
- xiii. Oct. 30th – Old Redford Academy High School– Mi Geol. History Module
- xiv. Oct. 30th – MGRRE Tour, CMU Petroleum Geology Class
- xv. Nov. 6th – Greater Heights Academy – Michigan Geol. History Module
- xvi. Nov. 7th – MDSTA Annual Conference
- xvii. Nov. 12th –Marshall Upper Elementary School – Mi Geol. History Module.
- xviii. Nov. 13th – Marshall Upper Elementary School – Mi Geol. History Module
- xix. Nov. 18th – U of M Museum of Natural History
- xx. Nov. 19th – Handy Middle School – MI. Geol. History Module Nov. 20th – Handy Middle School – MI. Geol. History Module.
- xxi. Nov. 23rd – Hudsonville Christian School – Groundwater Module
- xxii. Nov. 24th – Hudsonville Christian School – Groundwater Module
- xxiii. Dec. 1st – Western Middle School visit – Mi Geol. History Module
- xxiv. Dec. 4th – Grosse Pointe North High School Mineral Mania Event– Economic Minerals.
- xxv. Dec. 7th – Stanwood Middle School – MI Geol. History Module
- xxvi. Dec. 9th - Kalamazoo Country Day School – MGRRE tour.
- xxvii. Dec. 10th – Ballard Elementary School, Niles MI. MI. Geologic History Module
- xxviii. Dec. 30th – Kalamazoo Air Zoo Joint Event
- xxix. Jan. 11th – Home School Group tour of MGRRE
- xxx. Jan. 16th – Career Cruising Day – MLK event on Campus
- xxxi. Jan. 22nd – U of M Museum event – MI Geologic History Module
- xxxii. Jan. 27th – Scheduled School Visit, Gull Lake Middle School. Michigan Geologic History Module

- xxxiii. Feb. 10th - Scheduled School Visit, Gull Lake Middle School. Michigan Geologic History Module
- xxxiv. Feb. 24th – Mattawan Middle School – Michigan Geologic History Module
- xxxv. Feb. 26th – Mattawan Middle School – Michigan Geologic History Module
- xxxvi. Feb. 27th – Michigan State University Sedimentology Class visit to MGRRE
- xxxvii. March 8th – Gull Lake Middle School
- xxxviii. March 11th – Gull Lake Middle School – Earthquake Module
- xxxix. March 9th – Washington Writers Academy
 - xl. March 16th – University of Michigan Museum Event
 - xli. April 26th – The Kazoo School – Hydrogeology Module
 - xl.ii. April 29th-May 1st – Kalamazoo Rock and Mineral Annual Show
 - xl.iii. April 30th – AAUW Tech Savvy Conference – booth at conference
 - xl. iv. May 7th – Kalamazoo Air Zoo make-up event
 - xl. v. May 18th – U of M Museum of Natural History – Scheduled partnered event
 - xlvi. June 6th – Moorsbridge Elementary – Michigan Geologic History Module

Upcoming Events

- xl. vii. July 31st – Kalamazoo Nature Center – MGRRE tour + Museum
- xl. viii. Aug. 1st – Kalamazoo Air Zoo
- xl. ix. Aug. 29th – Kalamazoo Air Zoo
 - l. Oct. 14th – MAEOE MGRRE Tour

KGMS Event Metrics:

Description of Attendees	Thursday	Friday	Saturday	Sunday	Totals
Children before 4 :00 p.m.		675			675
Teachers and Chaperones before 4:00 p.m.		225			225
General Admissions - Children		105	279	371	755
General Admission - Adults		434	1423	875	2732
Volunteers	29	51	63	57	200
Dealers	35	37	40	40	152
Demonstrators	1	12	12	10	35
Other non-ticketed attendees (displays, exhibitors, guests)	13	7	17	13	50
Total:	78	1546	1834	1366	4824