

Michigan Geological Survey Report 20 from the K-12 Outreach Director, Peter Voice, Feb. 19, 2016

New Items:

1. Nov. 13th – presented Report 19 to the Director of the Michigan Geological Survey
2. Nov. 13th – discussed Michigan Basin Geological Society Outreach with John Yellich. I am going to prepare a presentation for the MBGS Officers
3. Nov. 14th – discussed space issues with Linda Harrison – emailed Tom Howe my request for space.
4. Nov. 16th – received update of metrics from the Marshall Middle Schools events – 420 students and 14 teachers.
5. Nov. 16th – Dawn Caldwell informed me that she lost her voice on the last event – I am working to reschedule the Nov. 17th event at Handy Middle School to give her time to recover.
6. Nov. 16th – received several emails and discussed with Dave Barnes the possibility of joint MESTA-MBGS events. I will work contact the MESTA officers and see what they think.
7. Nov. 16th – rescheduled the Handy Middle School 17th date to the 20th – found two staff available and received permission from the teachers.
8. Nov. 17th – worked with Zaid to make sure he had the necessary equipment for the Nov. 19th event at U of M.
9. Nov. 18th – worked on a draft newsletter item for the MI-AIPG Newsletter – a thank you to the society.
10. Nov. 18th – worked on an overview powerpoint on the CoreKids program – checked it with John Yellich.
11. Nov. 18th – forwarded the new overview powerpoint to the Suzanne Lutwick for use in her fundraising activities.
12. Nov. 18th – scheduled CoreKids event at the U of M Museum of Natural History. 59 students and 15 chaperones.
13. Nov. 19th – scheduled CoreKids event at Handy Middle School. Waiting on feedback for event.
14. Nov. 19th – exchanged emails with Annmarie Petrovsky about today and tomorrow's events – asked for feedback.
15. Nov. 19th – exchanged emails with Ruth Gullekson (Morely Stanwood Middle School) – logistics for upcoming event.
16. Nov. 19th – sent email to Tony Boxleiter – requesting feedback on the Economic Minerals Activities
17. Nov. 19th – sent email to CoreKids staff – asked that if they were not going to do events, that they send me an email, so I can remove them from my list.
18. Nov. 19th – discussed staffing with John Yellich – he had been approached by students who wanted to work at MGRRE.
19. Nov. 19th – exchanged emails with Brittany Burgess – she had feedback from this week's event and suggested some changes to our presentations.

20. Nov. 20th – scheduled CoreKids event, Handy Middle School. Between 2 days – 274 students and 3 teachers.
21. Nov. 20th – sent emails to the list of teachers who wanted to be teacher consultants on the MGRRE Portal proposal asking if they would like to continue being teacher consultants. Emailed Jason Hunter (Grand Haven High School), Debbie Zolynsky (Lake Shore High School), Ardis Herrold (Grosse Pointe North High School), and Keith Lang (Sturgis High school).
22. Nov. 20th – discussed MGRRE Portal Proposal staff with Bill Harrison and Heather Petcovic
23. Nov. 20th – worked on sorting and packing the CoreKids equipment for the move – packed 6 pallets.
24. Nov. 20th – briefly discussed logistics of upcoming events with Dawn Caldwell.
25. Nov. 21st – Shelby Hurst emailed me to say she could do the Dec. 7th event at Morely-Stanwood.
26. Nov. 22nd – Zakk Waber emailed me to say he could do the Nov. 24th event at Hudsonville
27. Nov. 23rd – Scheduled CoreKids event, Hudsonville Christian Middle School. Groundwater Module.
28. Nov. 20th-24th – re-organized the CoreKids area. Originally going to move to Rood Hall. After looking at space issues, we decided to remain at MGRRE. In order to stay at MGRRE, we used up a different corner of the main warehouse.
29. Nov. 24th – scheduled CoreKids event, Hudsonville Christian Middle School. Groundwater Module. Event total for both dates – 98 students and 1 teacher. Hudsonville Christian Middle School also provided a donation of \$200.00 to the CoreKids program.
30. Nov. 24th – received letter of support from Ardis Herrold (Grosse Pointe North) for the MGRRE Portal Proposal.
31. Nov. 24th – exchanged emails with Dave Chapman (Okemos High School) about a letter of support for the MGRRE Portal Proposal.
32. Nov. 24th – exchanged emails with Allison Vandriessch (Western Middle School) about logistics of upcoming event.
33. Nov. 27th – unpacked the CoreKids equipment into the new space at MGRRE.
34. Nov. 30th – received reference request from Lori Walston-Vonderharr (Il. Geol. Survey) for Tony Boxleiter – exchanged emails with Lori about the request.
35. Dec. 1st – scheduled CoreKids event, Western Middle School. Mi Geologic History Module. 120 students.
36. Dec. 1st – exchanged emails with Laura Cross (Kalamazoo Air Zoo) about upcoming event logistics – plan to discuss event at some point on Dec. 2nd.
37. Dec. 2nd – put together reference statement for Tony Boxleiter and submitted it to Lori Walston-Vonderharr.
38. Dec. 3rd – Discussed further logistics of Air Zoo event with Laura Cross and Dawn Caldwell.
39. Dec. 3rd – exchanged emails with Dawn Prell – she approved the addition of a CoreKids thank you letter for an upcoming Mi-AIPG newsletter.
40. Dec. 3rd – Exchanged emails with Breanne Lejeune – she was able to make some updates to the CoreKids webpage.

41. Dec. 3rd- Dec. 6th – provided recommended edits and comments for the DRK-12 NSF proposal for the MGRRE Portal.
42. Dec. 4th – scheduled CoreKids event, Grosse Pointe North – Mineral Mania Event. 128 children (K-5) + parents + Grosse Pointe North Students – roughly 200 participants. CoreKids had a station as part of the activities – theme was Economic Minerals and Rocks.
43. Dec. 7th – MGRRE Portal proposal submitted by Heather Petcovic.
44. Dec. 7th – Scheduled School visit, Stanwood Middle School. 78 students and 1 teacher. Geologic History Module.
45. Dec. 7th – Exchanged emails with Kathy Wright with regard to the CoreKids budget.
46. Dec. 9th – Scheduled CoreKids event. MGRRE Tour for Kalamazoo County Day School. 12 students and 3 adults.
47. Dec. 9th – discussed equipment and spring scheduling with Dawn Caldwell. Dawn borrowed the MI Geologic History Module to do a presentation to her daughter’s class.
48. Dec. 10th – Scheduled CoreKids event, Ballard Elementary, Niles, MI. 22 students and 1 teacher. Modified MI Geologic History Module.
49. Dec. 10th – exchanged emails with Kim Clancy about scheduling a CoreKids event at Gull Lake Middle School.
50. Dec. 10th – exchanged emails with Ruth Gulkeson (Stanwood Middle School) on feedback.
51. Dec. 11th – exchanged emails with Zakk Waber – he was working on scheduling an event with Delton Kellogg High School in Delton, MI.
52. Dec. 14th – discussed the Kingman Museum with Robb Gillespie as a potential collaborator with the CoreKids program. Forwarded brochures and other information to Robb to send on to the museum.
53. Dec. 15th – Received request from Mohamed Sultan to work on a document for the Office of Service-Learning – I told him that I would add it to my list.
54. Dec. 17th – exchanged emails with Ann Najera (North Hill Elementary School) about logistics/scheduling events.
55. Dec. 17th – signed up to be a judge for the WMU Lee Honors College Medallion Scholarship competition.
56. Dec. 17th – received update from Tracy Daugustino on the Informal Science Group organized by people at the MSU Museum of Science. I provided a brief bio-sketch and contact information to the group.
57. Dec. 18th – exchanged emails with Brittany Burgess (UM Museum of Natural History) – we are working on scheduling a joint event for Jan. 22nd.
58. Dec. 21st – exchanged emails with Carla Koretsky and Andro Mondala about possible collaborations.
59. Dec. 21st – sent email out to CoreKids staff requesting assistance for MGRRE in reboxing the WSU cores – as a way to earn extra money over the break.
60. Dec. 22nd – received scheduling update for the Martin Luther King Jr. activities on campus – sent out email to CoreKids staff to solicit assistants.

61. Dec. 22nd – exchanged emails with Heather Brey (EF Rittenmueller Middle School, Frankenmuth) about scheduling a CoreKids event at her school. I forwarded to her the new fee structure and copies of the CoreKids brochures.
62. Dec. 28th-29th – exchanged emails with Laura Cross about logistics of upcoming event.
63. Dec. 30th – event at Kalamazoo Air Zoo 16 students and 5 adults. Modified Michigan Fossils Module.
64. Jan. 2nd – exchanged emails with Mike Velbel (MSU Geology) and Bill Harrison about organizing a tour and class project for Mike's Sed./Strat. class at MGRRE.
65. Jan. 3rd – prepared materials for Yellich's use for his annual letter of report to Hal Fitch, State Geologist.
66. Jan. 4th – exchanged emails with Marty Goodman about the Tech-Savvy Conference and whether CoreKids could help out – I told her I would send her a reply after the semester calmed down.
67. Jan. 4th-5th – exchanged emails and phone calls with Mike Velbel to plan a MGRRE visit for his course. Tentatively planned for March 19th.
68. Jan. 7th – exchanged emails with Steve Kaczmarek about a NSF equipment grant proposal for a handheld XRF. We discussed ideas for using the equipment in K-12 outreach and Steve requested that I add some paragraphs to the proposal that provide an outline of how funds might be spent on K-12 outreach.
69. Jan. 8th- exchanged emails with Susan Amos about her home-school group's visit to MGRRE scheduled for Jan. 11th.
70. Jan. 9th – Updated Kaczmarek's proposal with outreach component – sent it to him.
71. Jan. 10th – exchanged emails with Mike Velbel (MSU) – rescheduled his class visit to Feb. 27th.
72. Jan. 11th – scheduled MGRRE tour – 34 people total.
73. Jan. 11th – exchanged emails with Brittany Burgess (U of M Museum) about logistics of upcoming event.
74. Jan. 11th – exchanged emails with Mohamed Sultan and Heather Petcovic – told them that the document requested from the Office of Service Learning did not apply to CoreKids. Heather agreed.
75. Jan. 11th – 12th – exchanged emails with Laura Weber in order to secure Certificate of Insurance for the DEQ Earth Day event as required by the DEQ to participate.
76. Jan. 12th – exchanged emails with Eric Wildgang about the DEQ Earth Day event – submitted Exhibitor application and certificate of insurance.
77. Jan. 12th – exchanged emails with Lisa Anderson about the deadline for North Central GSA abstract submission for the 2016 meeting. Discussed who in our network of colleagues we could ask for abstracts.
78. Jan. 13th-14th – worked on letter of Recommendation for a scholarship for Jay Kim.
79. Jan. 13th – received email from Tiffany White with logistics information for the MLLK Career Cruising Event.
80. Jan. 15th – exchanged emails with Erin Lewis (Kalamazoo Air Zoo) about scheduling an event for March 12th.
81. Jan. 16th – Martin Luther King Career Cruising Day event, WMU. 50 students and chaperones.

82. Jan. 17th – received update from the officers of the Michigan Basin Geological Society's outreach plans.
83. Jan. 19th – received a thank you email from Susan Amos (Home school group – event on Jan. 11th).
84. Jan. 19th – exchanged emails with Polly Root Sturgeon – new outreach coordinator at the Indiana Geological Survey. We discussed meeting at North-Central GSA to discuss joint activities.
85. Jan. 19th – exchanged emails with Kim Clancy about scheduling event at her school. I am working on scheduling events – tentatively Jan. 27th and Feb. 3rd.
86. Jan. 19th – exchanged emails with Tom Howe and Heather Petcovic about a joint abstract for my session at North-Central GSA.
87. Jan. 19th – received email from Danita Brandt that she would be unable to submit an abstract to my session at North-Central GSA.
88. Jan. 21st – wrote letter of recommendation for Shelby Hurst for doctoral studies at WMU.
89. Jan. 21st – exchanged emails with Polly Root Sturgeon – she declined the invitation to submit to my session at North-Central – but assured that she would try to attend.
90. Jan. 21st – exchanged emails with Brittany Burgess – event logistics and request to submit abstract to NC-GSA.
91. Jan. 22nd – Scheduled events at the University of Michigan Museum – 192 students.
92. Jan. 25th – wrote abstract for NC-GSA on the Augmented Reality Sandbox – exchanged emails with Tom Howe and Heather Petcovic to edit the abstract.
93. Jan. 25th – provided updates on CoreKids publications (abstracts) from 2015 to Bill Harrison as part of a report on MGRRE activities for John Yellich.
94. Jan. 25th – provided clarification on the Outreach text in S. Kaczmarek's NSF proposal.
95. Jan. 26th – exchanged emails with Kali Nichols – told her that I was unable to provide outreach activities in school any more.
96. Jan. 26th – submitted outreach abstract to the North-Central GSA Meeting – title:
INCORPORATING TECHNOLOGY INTO K-12 OUTREACH: LESSONS LEARNED FROM AN AUGMENTED REALITY SANDBOX
97. Jan. 26th – exchanged emails with Mary Jo Warwick (Washington Writer's Academy) about scheduling an evening event at her school – scheduled for March 2nd.
98. Jan. 26th – exchanged emails with Ann Najera (North Hill Elementary School) about no longer scheduling School visits outside of the Kalamazoo area.
99. Jan. 26th – exchanged emails with Brittany Burgess (U of M Museum) – updated logistics from scheduled event and tentative scheduling of CoreKids event on March 16th.
100. Jan. 26th – exchanged emails with Marty Goodman (AAUW Tech Savvy Conference) about event logistics.
101. Jan. 26th – sent email to Andro Mondala about scheduling a meeting to discuss outreach activities – he may use CoreKids as a model, plus there may be opportunity to collaborate as his interests are in soil geochemistry/biological remediation and engineering.
102. Jan. 26th – worked on logistics of the March 12th Air Zoo event with Erin Lewis.

103. Jan. 26th – sent email to Michelle Laing (Sashabaw Middle School) telling her that CoreKids would not be able to accommodate a visit to her school in the spring.
104. Jan. 26th – The January issue of the Michigan Section of AIPG included a thank you letter from CoreKids for their donation:
<http://mi.aipg.org/newsletters/pdf/2016%20MI%20Jan%20Newsletter.pdf>
105. Jan. 27th – exchanged emails with Andro Mondala about the CoreKids program and scheduling a meeting.
106. Jan. 27th – exchanged emails with Linda Harrison about her hiring of Zakk Waber and whether that would impact CoreKids or not.
107. Feb. 1st – wrote letter of recommendation for Steve Barone for the open adjunct faculty position at Grand Valley State.
108. Feb. 1st – discussed questionnaire on Service Learning with Brian Gogon and Mohamed Sultan. Put together a draft version with the questions answered – sent that to Heather Petcovic and Mohamed Sultan for comment.
109. Feb. 1st – exchanged emails with Laurie Klok (Gull Lake Middle School) about logistics of upcoming event.
110. Feb. 2nd – met with Andro Mondala (WMU, Chemical and Paper Engineering)
 - a. Discussed a NSF proposal he was working on
 - b. Discussed joint outreach activities on runoff, the hydrological cycle, and phosphorous
111. Feb. 3rd – met with Steve Kaczmarek to discuss the XRF proposal and the outreach component of the proposal.
112. Feb. 4th – exchanged emails with Karin Fender (Mattawan Public Schools) about possibility of scheduling an outreach event at her school. I am working on scheduling.
113. Feb. 5th – discussed on phone joint outreach activities with the Kalamazoo Nature Center with Jenny Brenneman. Also exchanged emails.
114. Feb. 5th – sent the filled in Community Engagement Questionnaire to Brian Gogan.
115. Feb. 5th – exchanged emails with Marty Goodman about the AAUW Tech Savvy Conference – she had a few forms for me to look at and return.
116. Feb. 5th – exchanged emails with Lisa Anderson – with regard to organizing our NC-GSA Session. I sent a few comments on organizing the talks.
117. Feb. 5th – exchanged emails with Kim Clancy (Gull Lake Middle School) – updated logistics for the Jan. 27th event (128 students) and she asked about setting up another event later in the spring on natural hazards. I will try to work with her on scheduling event.
118. Feb. 8th-9th – exchanged emails with Lisa Anderson and Hue-Hwa Hwang (North-Central GSA Technical Program Co-chair) – we were given the option to either decline 1 abstract and have 12 talks or do a partial session of talks and a partial session of posters. Lisa and I agreed to a 9 talk oral session and a 4 poster session concurrent with the oral session.
119. Feb. 9th – exchanged emails with Heather Petcovic about a hydraulic fracturing model that has been put together by the Air Water Gas Group at the University Corporation for Atmospheric Research program.

120. Feb. 10th –worked on scheduling events at Gull Lake Middle School, Mattawan Middle School and Washington Writers Academy – had to rearrange dates due to student schedules and teacher schedules.
121. Feb. 10th – scheduled event at Gull Lake Middle School – Michigan Geologic History module. 120 students.
122. Feb. 15th – wrote letter of recommendation for Jason Bell. Was notified by Natalie Murphy that she also needed a letter – waiting on the response from the group accepting applications to start her letter.
123. Feb. 16th – exchanged emails with Brittany Burgess (U of M Museum of Natural History) – she is on the board of the Michigan Alliance for Environmental and Outdoor Education – and asked if the MGS/MGRRE would like to be involved in some way with their 2016 annual meeting – she suggested either chairing a session of talks or perhaps a field trip. I asked her when she needed confirmation – and gave a few possible ideas.

Current Totals (July 1, 2015 and on)

Projected Totals of Upcoming Events

School events	1,569
Kalamazoo Air Zoo	46
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	TBD
Central Michigan Mineral Show	837
CMU Class	9
U of M Museum Events	266
Mineral Mania Event (Grosse Pointe North)	200
MLK Career Cruising Day	50

Other	34
<u>Total Actual:</u>	3,739
<u>Total Projected:</u>	
<u>Total Projected + Actual</u>	<u>3,739</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

Upcoming Events

- 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 2nd – Washington Writers Academy
- xxxviii. March 11th – Gull Lake Middle School – Earthquake Module
- xxxix. March 12th – Kalamazoo Air Zoo Joint Event
 - xl. March 16th – University of Michigan Museum Event
 - xli. March 16th – Gull Lake Middle School
 - 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. July 31st – Kalamazoo Nature Center – MGRRE tour + Museum