

maeoegram

Promoting Environmental Literacy Through Education

Vol 27 Issue 3



Climbing Wall at Camp Tuhsmeheeta - Story on Pg 04

Letter from the President



If you're an informal educator like me, summer camps and special events are in full swing for you during this busy time of year! For formal educators, you may be using your summer for professional development, earning extra income, prepping for the next school year, or just catching up on much needed vacation time! Whatever your activities, it's easy to get overwhelmed with all these important summertime obligations. Work to keep things in perspective with these tips:

Enjoy the little things. Even if you can't escape on an epic vacation this summer, you can soak up the sun at your local beach, take a hike or bike ride, spend quality time with family, or pack up a picnic to take to a park near you. These easy activities reduce the stress of planning a long getaway, but allow you take advantage of these beautiful days.

Slow your roll. It's easy to get caught up in summer parties, trips, work, and everything in between. Minimize your obligations by only committing to one or two things per week. I recently tried to attend a baby shower and graduation party in one day. Boy, did I regret it! You can also try biking or walking somewhere that you would normally drive, which leads me to this next tip...

It's about the journey, not just the destination. I recently had a 3-hour drive up to Higgins's Lake (I wasn't necessarily looking forward to sitting in the car that long). However, it turned out to be so relaxing! I stopped at a state park along the way to walk around and even made sure to enjoy a meal at a locally owned diner, instead of one of the usual fast-food places. Keep your road-trips fun and engaging, allow yourself plenty of time and you won't regret it!

I need to remind myself to take my own advice this summer! Time is flying by. I hope to run in to some of you throughout my adventures. Remember to take time for yourself and refresh before the fall season. You can also look forward to getting together with your MAEOE friends in October at the annual conference at CMU.

For questions or feedback regarding MAEOE, please reach out to me via email at asmith@fhgov.com.

Warm Regards,
Ashlie Smith

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Promoting Environmental Literacy
Through Education



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Outdoor Adventure Day... A Success in Nature!

Jill Teegardin / Junior High Teacher, Holy Trinity Catholic School



Twigs snapping beneath worn sneakers, paddles gently tapping the sides of canoes, a bell ringing and kids cheering after their determined friend makes it to the top of the climbing tower, birds chirping and squirrels chattering as tweens spend time reflecting in their personal quiet spots; these, and many other sounds, could be heard as the students of Holy Trinity Catholic School were immersed in an Outdoor Adventure Day this past May. These sounds were evidence that students were engaged in their outdoor adventure experience and that the day was a success!

Whether it was a “first time” experience or regular routine encounter in the outdoor, every student left day camp having connected to nature in some way.

This year was the second one that an environmental education day was planned for the junior high students at Holy Trinity Catholic School in Comstock Park. It was the first year that a mini-grant was secured from the Michigan Alliance for Environmental and

Outdoor Education. With the money from the grant and numerous volunteers, the Outdoor Adventure Day was completely cost free for the forty participating students. The day camp was held at Camp Tuhsmeheta, located west of Greenville. This camp is operated by the State of Michigan (Department of Education) and is one of the best kept secrets, for educators, in mid-Michigan. The camp staff operated the climbing wall for us, but the other camp sessions were planned by the school.

The day consisted of students working their way through five stations. They were at each station for 50 minutes. Stations included: canoeing, hiking, climbing wall, journaling and wildlife tracking. Stations were led by a variety of volunteers: teachers, camp staff, a Michigan DNR wildlife specialist, parents, and a YMCA aquatics director (who made her way from Chicago for the day). Each of these volunteers were committed to having youth experience the outdoors in an authentically, fun and engaging way. Without these volunteers, our day camp would not have been a success.

The goals of the camp were established with Michigan's Environmental Literacy Plan (MI ELP) in mind. The hope was to provide a positive outdoor learning experience, for all participants, in a nature-rich environment. Another goal was to promote physical activity in a natural setting. Camp Tuhsmeheta provided the perfect setting for reaching these goals and the programs that were planned, allowed the goals to be met. Students left feeling excited about their personal experiences. Some canoed and/or hiked for the first time, others were excited to make it to the top of the climbing wall, while others heard a pileated woodpecker, and journaled about it, like never before. Whether it was a "first time" experience or regular routine encounter in the outdoor, every student left day camp having connected to nature in some way. They had the opportunity to be physically active while exploring the natural world around them.



Like most of you reading this article, I believe that children and adults should spend quality time in nature. I have a poster, in my classroom, which states: *Be the change you wish to see in the world. ~ Mahatma Gandhi.* As an educator, I have the opportunity to expose and engage my students and their parents to the wonders of nature. If I feel that children and adults should be spending more time in nature, why don't I provide opportunities for them to do it in a safe and secure atmosphere? The MAEOE mini-grant allowed me to do just that. With countless hours of planning, willing volunteers and having a facility to hold our day camp, immersion in nature happened. Not only was I grateful for this opportunity, my students and parents were too. Thank you!

Educating About Invasive Species

Jeffrey L. Ram, Wayne State University, and Joan Chadde, Michigan Technological University

Educating students about invasive species can serve the dual purpose of meeting science content and science and engineering practices requirements for Michigan Science Standards and protecting the Great Lakes from new invasive species. A new state-wide project co-led by Wayne State University, Michigan Technological University, and the Belle Isle Conservancy will provide workshops for educators (<http://sun.science.wayne.edu/~jram/MISGPworkshopRegistration.html>) and internet-based activities (<http://detroitaquarium.weebly.com/kids-corner.html>) for incorporating invasive species into classroom curricula.

“While many invasive species in the Great Lakes arrived by ballast water which the general public can’t directly do much about, educating students and their families can greatly impact the introduction of non-native organisms and diseases through pet and other commercial routes and potentially reduce or prevent the spread of invasive species that are already here,” observes Jeff Ram, Wayne State University professor and researcher.

New invasions that damage our environment are so intertwined with science, economics, history, and geography that they form the perfect nexus for cross-curricular teaching. Amy Emmert, the director of field trips and other educational activities at the Belle Isle Aquarium in Detroit, thinks that “map-making, artwork, adaptation, food webs, maritime transportation, and writing can all be part of learning about invasive species. Civic responsibility becomes the theme when the topic is ‘why should we care about new organisms in our environment.’”

A grant to Wayne State University from the Michigan Invasive Species Grant Program, co-coordinated by the Departments of Natural Resources, Environmental Quality and Agriculture and Rural Development, is funding a series of five workshops across Michigan titled: ***Achieving Michigan Science Standards using Invasive Species Lessons in Your Classroom***. The workshops target elementary and middle school educators (grades 3–8). The first workshop was held in Detroit in July. The remaining workshops will take place at four locations in October and November:

- Oct. 6th at the Michigan Alliance for Environmental & Outdoor Education Conference in Mount Pleasant;
- Oct. 13th at the Northern Michigan University Seaborg Center in Marquette;
- Nov. 4th at the Saginaw Valley Math & Science Center in Saginaw; and
- Nov. 8th at Grand Valley State University in Grand Rapids.

Workshop participants will each receive a \$150 stipend for attending a workshop, or the stipend may be used to cover sub pay and other expenses of attending the workshop. In addition, workshop participants have the option of earning \$200 per new lesson plan created, and \$300 to make conference presentations about their lesson.

Organization of the teacher workshops is coordinated by Joan Chadde, Director of the Michigan Tech Center for Science & Environmental Outreach (MTU-CSEO).

In addition to the workshop offered from 9-noon, Friday, October 6th at the Michigan Alliance for Environmental and Outdoor Education (MAEOE) conference, an informational session on ‘Resources for Teaching About Invasive Species’

will be presented on Friday afternoon at the MAEOE conference. The project will provide many opportunities statewide for teachers to obtain useful classroom materials and exchange ideas about educating students about invasive species.

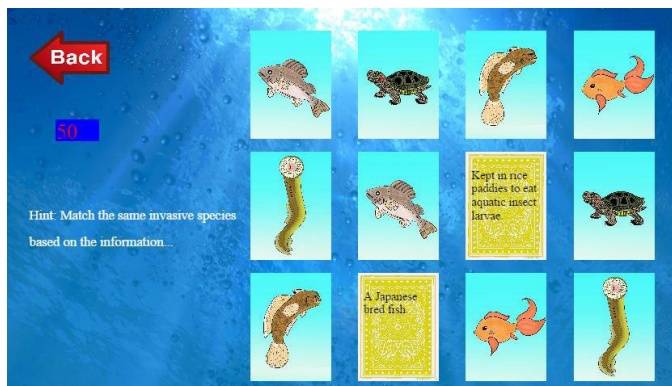
The project will also create on-line educational materials for educators and students everywhere to use that can be accessed from the “Kid’s Corner” section of the Belle Isle Aquarium website (<http://detroitaquarium.weebly.com/kids-corner.html>).

The newest game is a multilevel “matching/memory” game called “Catch Invaders!” in which students have to match names of invasive species with descriptions of the havoc they’ve caused, their biology, how they got here, and so on. The “Kid’s Corner” page also has links to games from elsewhere on the internet (“Invaders!” by Plum Landing is especially fun).



Dr. Jeff Ram shows the invasive species tank at the Belle Isle Aquarium

This project is funded in part by the Michigan Invasive Species Grant Program through the Michigan Departments of Natural Resources, Environmental Quality, and Agriculture and Rural Development.



New lesson plans created by teachers following the workshops will be posted on the Belle Isle Aquarium website under the “Educators” tab during the 2017-2018 school year.

For more information about the educator workshops, contact Joan Chadde at jchadde@mtu.edu. Ideas and suggestions for more invasive species games can be shared with Jeff Ram at jeffram@gmail.com. To find out more about field trips at the Belle Isle Aquarium, contact Amy Emmert, emmerta@belleisleconservancy.org.

Ranger Steve's Nature Niche: Porcupine and Cougar

When working as a ranger at Bryce Canyon National Park, I conducted field research on mountain lions (cougars) in the park. During the summer months, the highest plateaus in North America were home to the lions, porcupines, and me. At 9,000 feet elevation, I found tracks in one of the few areas with a surface water pond on limestone bedrock. It was a rare drinking hole for deer, lions, and other wildlife.

During the seven years I worked there, I never heard of unattended cows being taken by a lion in the national forest where ranchers grazed cows in summer. Come fall the ranchers drove cows to 6000 feet elevation. Deep snow, lack of food, and excessive cold would leave cows high, dry, and dead in winter on plateau tops.

South from the park's Yovimpa Point where California condors now fly, one can see 80 air miles across a near wilderness to the north rim of Grand Canyon National Park. One paved road crosses the south expanse and unpaved trails zig zag the terrain.

Lions follow deer south into the wilderness, or they move east off the Paunsegunt Plateau or neighboring Aquarius Plateau (10,000 feet) into Tropic Valley. Lions have legal protection but poaching occurs by ranchers who think laws do not apply to them. Lions heading east have a better chance of being poached but those heading south have better survival chances.

Energy companies desired to strip mine coal to the south of the park for more than 50 years instead of developing alternative energy sources. Coal proposals have been blocked but renewed pressure to strip mine is occurring. Coal strip mines could eliminate lions from Bryce Canyon. Over a decade ago I traveled to Washington, D.C. to promote protection of the proposed Red Rock Wilderness, but the bill still languishes in committee.

Life is difficult for predators in nature niches where they need adequate food, accessible water in an arid landscape, and places to hide. People have fears that have some justification but dangers from predators are unlikely compared to other health threats like driving or falling from a ladder.

Only people threaten lions, but starvation and dehydration are dangerous, too. Ranch water impoundments can be valuable but bring lions close to people. They tend to seek water in night stillness.

While tracking a lion, I found scat and broke it apart to discover what it had been eating. Porcupine quills were present. Literature reports lions prey on porcupines and I had found physical evidence. They avoid quills by eating from the belly where no quills are present. First the lion must kill the porcupine while trying to avoid being struck by a tail swing or quills raised high on the back. Quills cannot be thrown but they dislodge easily.

Porcupines move slowly but their armor helps protect them. When quills enter skin, mouth, or tongue, the quills puff up like a balloon because air sealed inside cannot escape. Pressure from the quill's squeezed end in the skin causes quill swelling. The sharp end that punctured the skin is covered with scale-like shingles on a roof that face away from the quill point. Those scales prevent easy removal because the shingles hold it fast.

To remove quills, clip them to release air pressure and pull with pliers. Do not try this with a lion because you might not survive. Pets do not seem to learn to avoid porcupines. Every dog in our family has gotten quills at least once. Ody Brook, whom the sanctuary is named after, bit one in our yard one night in Bemidji, Minnesota. I did not notice until he came into the house. It is important to remove quills quickly. The delay allows quills to work deep. One in his gum worked too deep to remove. One year later, I noticed something

sticking out of his lower eyelid. A close look revealed it was the gum quill emerging. I pulled it despite Ody's objection. That story ended well without it entering his eyeball.

I read some quills migrated into a lion's heart and were deemed a likely cause for its death. Porcupines are moving south as forests reclaim Michigan. One has been seen at Ody Brook and some are resident at the Howard Christensen Nature Center in Kent County.

Natural history questions or topic suggestions can be directed to Ranger Steve (Mueller) at odybrook@chartermi.net - Ody Brook Nature Sanctuary, 13010 Northland Dr. Cedar Springs, MI 49319 or call 616-696-1753.

SAVE THE DATE!

We invite you to help us celebrate



You will enjoy networking with environmental & outdoor educators who are passionate about their profession.

There are also many professional development opportunities and fun activities to choose from:

WORKSHOPS: EE certification - Strand 1, CPR (youth & adult), Diversity & Inclusion, MEECS, Peace & Ecology, MI Energy Sources, Invasive Species

EXPERIENTIAL BREAKOUT SESSIONS: conservation, stewardship, technology

FIELD TRIPS: CMU climbing wall/ropes course, Vestaburg Bog & Bird Banding, Zibiwing Center, Deerfield Nature Park, Chippewa River Paddle Trip

SOCIAL EVENTS: Friday night off-site at Hunter's Ale House Cask Room, Saturday Reception, Awards Dinner, & Hospitality Room

Come join in the fun!

OCTOBER 6-8, 2017

www.maeoe.com



Help with NGSS Engineering Design: Integrating Climate Science with Problem Solving

Educators of all stripes have talked a lot about science education including real world applications and interconnecting various disciplines. Next Generation of Science Standards (NGSS) offers us an opportunity to do that. In fact it compels us to do that. The high school level engineering design sections has a series of standards which stipulate that students will “analyze a major global challenge” to identify criteria and evaluate possible solutions (HS-ETS1-1 and 1-2 and 1-3). The global challenge is not specified. It could be starvation, inadequate water, future energy supplies, limitation of raw materials, climate change, population growth, or new diseases. All have merit. But if climate change is chosen it could be linked very productively with Earth Systems, Climate, and Human Sustainability standards listed elsewhere. For example, HS-ESS2-4 says students are to “use a model to describe how variations in the flow of energy into and out of Earth’s systems results in changes in climate.” Standard HS-ESS2-6 says to “develop a quantitative model to describe the cycling of carbon among the hydrosphere, atmosphere, geosphere, and biosphere.” And HS-ESS3-6 includes the use of “computational representation to illustrate the relationship among Earth systems and how these relationships are being modified due to human activity.” (There are more connections, particularly with sections on energy, electromagnetic waves, and electromagnetism.)

Constructing meaningful instructional strategies, as we all know, takes knowledge of the subject and reflection on the process. Wading into topics like climate science is, for many teachers, unfamiliar

territory. But it is a fascinating field of science, with physics, chemistry, biology, and earth science components. Adding the engineering/problem solving piece makes the topic even more relevant and compelling.

Some help is available – at least with assisting teachers to gain knowledge about climate science. The American Meteorological Society offers teachers a free on-line course on climate science. It runs for 13 weeks: once in fall (September – early December) and repeated in spring (end of January – April). Each week a different topic is addressed (through readings, on-line presentations, and activities). The amount of time varies from teacher to teacher due to different levels of prior knowledge. But participants say you should expect to put in 4 to 6 hours a week. Textbook, lab activities, extensive web site, some supplies, and three graduate credits are all **free** for teachers accepted into the class. But there are a limited number of slots for teachers each semester. Interested teachers are encouraged to apply early.

As part of the course you are encouraged to discuss course content with colleagues and think about how parts of the course can be integrated into what you teach. This is the perfect way to explore addressing NGSS as you modify your curriculum to meet the standards. At the end of the course you are asked to produce a lesson – useful to you – that would engage your students in learning about climate science.

Below is a more detailed description of the course and how to apply.

Climate Course (Climate in the Earth System):

This course identifies the factors that determine and define climate. The connections are made between climate and solar input, temperature, humidity, precipitation, and severe storms. Methods of measurement and modeling of climate, both recent and ancient, are discussed. The question of global climate change is discussed in the context of science research. The Climate web site is: <http://www.ametsoc.org/amsedu/ecs/home.html> and more information about the course at <http://www.ametsoc.org/amsedu/ECS/index.htm1#apply> . The application form can be found at: <http://www.ametsoc.org/amsedu/ECS/BLANKAPP.pdf>.

You can submit your applications for the Climate course to:

Dave Chapman
2637 Raphael
East Lansing, MI 48823
Voice: (w) 517- 706-4886 (h) 332-8123
Fax: 517-351-9786
Email: dave.chapman@okemosk12.net ; chapmad@comcast.net

There are two other on-line free courses from AMS: about Oceans and about Meteorology:

Ocean Course (DataStreme Ocean): This is primarily a physical oceanography course which includes, among other things, physical and chemical properties of water, ocean plate tectonics, currents, tides, ocean-atmosphere interactions, Great Lakes, basic marine ecology, and the role of the ocean in climate. The DataStreme Ocean web site is: <http://www.ametsoc.org/amsedu/ds-ocean/home.html> and more details about the course at <http://www.ametsoc.org/amsedu/DS-Ocean/index.htm#apply> . An application form is found at <http://www.ametsoc.org/amsedu/DS-Ocean/BLANKAPP.pdf>

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Weather Course (DataStreme Atmosphere):

Basic concepts of meteorology are the focus of this course. They include separate chapters on weather measurements and tools, composition of the atmosphere, heat and temperature, air pressure, humidity, clouds and precipitation, wind, air circulation, air masses and fronts, hazardous storms, and weather forecasting.

The DataStreme web site is: <http://www.ametsoc.org/amsedu/dstreme>. To find out more about his course, go to <http://www.ametsoc.org/amsedu/DataStremeFrames.html> . An application form is found at: <http://www.ametsoc.org/amsedu/dstreme/extras/blankapp2.pdf> .

In Michigan you can submit your applications for DataStreme Atmosphere to the contact information listed above.

There are two comprehensive summer courses: one about weather (Project Atmosphere) at the National Weather Service Training Center in Kansas City and the other about Oceanography (The Maury Project) at the U.S. Naval Academy in Annapolis. For more information about these programs go to: <http://www.ametsoc.org/AMSedu> .

Internship Abroad in Michigan

Leigha Vashaw
MDEQ Summer Intern District

Really enjoying the beauty of Michigan, he described how the state actually has wide open forests, fields, state parks, and waterbodies, whereas in the Netherlands, the population is too dense for such areas.

This summer, the Michigan Department of Environmental Quality's (MDEQ) Public Affairs and Outreach hosted a team of 21 interns. One of the interns had traveled from the Netherlands to Lansing, Michigan to gain experience in water management.

Sem Oosse first came to the United States as a tourist with his family, visiting the Everglades in Florida. During his short time here, he became interested in American culture and politics and decided he wanted to learn more. While searching the web for US internships, Sem found the MDEQ as the first result. Having already been interested in water quality and management since age 16, he was intrigued with Michigan's Great Lakes and the Flint Water Crisis. So Sem applied and began his internship on February 1, 2017.

Having lived in the Netherlands his entire life, Sem wanted to travel abroad to gain a sense of independence and worldly experience. He described it as an adventure to travel an entire ocean away from home. The Netherlands is smaller than Michigan, but has 7 million more people than Michigan; Sem described his country as more dense and clustered. He was familiar with buildings, homes, businesses, and stores being so closely built together back home; adjusting to the longer travel distance and transportation in Michigan proved difficult. And so was learning the English language. His easiest adjustment was being surrounded by peers of the same age group while working at the MDEQ.

Of course, Lansing wasn't the entirety of his Michigan experience. Taking advantage of his opportunity, Sem has

traveled up and down the mitten, visiting all of the Great Lakes as well as a trip to Canada. Really enjoying the beauty of Michigan, he described how the state actually has wide open forests, fields, state parks, and waterbodies, whereas in the Netherlands, the population is too dense for such areas. Also compared to the Netherlands, he described Michiganders as being very friendly and open, always willing to talk, help, and acknowledge each other.

The MDEQ internship itself broadened his experience; it didn't focus on just one area of work at all times. While his main area of focus was water management, he was also in charge of projects that focused on Native American cultural relations, data management, marketing, and outreach. As his internship was drawing to an end, he told his team that while he had greatly enjoyed his time there, he was glad to be going home. When asked if he would ever like to come back to Michigan, he said that if given the chance to come back to the United States, he would want to visit the southern states to study and compare their culture to the north. But if the opportunity to travel back to Michigan arises, he would love that too.

Sem said he definitely recommends the internship to other people, especially foreigners who wish to study abroad. He expects more people from the Netherlands currently attending US colleges and universities to apply for the MDEQ internship. *"I first came to the US as a tourist, but in the past five months, I felt like I really **lived** in the US,"* he concluded.

APPLY NOW!

STUDENT SCHOLARSHIPS AND EDUCATOR STIPENDS AVAILABLE FOR THE CONFERENCE

Student scholarship and educator stipend applications are now available on the MAEOE website. The applications can be found on the [MAEOE website](#) under the Conference tab. Scholarship and Stipend recipients will receive a reduced conference registration plus a one-year membership with MAEOE.

Michigan undergraduate and graduate students, formal classroom teachers and non-formal educators are eligible to apply. Applicants will need a letter of support from a professor, advisor, or supervisor. **The deadline to apply is September 18th.** Applicants will be notified by September 28th. Scholarship and Stipend recipients will be asked to volunteer at the conference.

This year's conference will be held at the Bovee University Center at Central Michigan University in Mount Pleasant, MI, October 6-8. The conference theme for this year is **"30 Years of Environmental Literacy"**. The conference has an exciting new format this year with a great variety of field trips, workshops and sessions being offered.

For more information about scholarships, please contact Brittany Burgess at brchunn@umich.edu or call 734-647-6421.

Turn The Key To Be Idle Free

Implementing No Idle Zones in schools helps the environment and improves student's health

Emily Gee and Emily Stewart



Cars produce 12% more emissions when idling than they do while driving, thus releasing toxic chemicals into the air that are especially harmful to children. Monitoring at schools has shown elevated levels of air toxics such as benzene, formaldehyde and acetaldehyde during school pick-up time, when parents and school buses wait for students while leaving their engines running. Children's lungs are still developing, and when they are exposed to elevated levels of toxic pollutants, they have an increased risk of developing asthma and

other chronic respiratory and cardiovascular illnesses. In addition to being the largest cause of school absences, asthma is also the third leading cause of hospitalization among children under 15.

Fortunately, educators, students and parents are working to address this dangerous and unnecessary air pollution, creating a healthier environment by implementing No Idle Zones on school campuses. Such zones encourage parents to turn off their parked car engines while waiting for their

kids in afterschool pick-up lines, resulting in lower emissions and a less toxic school environment. Establishing a No Idle Zone not only benefits air quality, but it is also a great way to involve students in environmental protection and to instill environmental values in their broader school communities. There are many student leaders who have already shown extraordinary initiative by bringing these zones to their school communities.



One Student's Impact & No Idling Regulations
 Four years ago, Antonio, a student in our Grades of Green program, implemented our No Idle Zone activity at his middle school in Long Beach. He became so passionate about air quality that he continued working to develop No Idle Zones while in high school. Grades of Green introduced Antonio to California Assembly member David Hadley, the Clean Air Coalition, and the South Coast Air Quality Management District, who were blown away by Antonio's passion to decrease carbon emissions and improve the health of schoolchildren. Inspired by Antonio's dedication to clean air, Assembly member Hadley then authored a statewide resolution to encourage schools across California to

implement No Idle Zones on campus. Now in his senior year, Antonio has made a lasting impact on students across the state of California, and witnessed his vision being put into action when he travelled to Sacramento to see the resolution pass unanimously on the State Assembly floor. It became California's first statewide resolution to encourage No Idle Zones in schools, and 6 million students now breathe cleaner air.

California is just the latest of 29 states to pass school idling regulations, and the United States is part of a growing number of countries across the globe that are demanding cleaner air for their children. In the province of Ontario, Canada, regulations were passed as early as 2002 to prohibit idling for more than three minutes, with fines beginning at \$75. In accordance with the Environmental Act of 1995, the United Kingdom allows local authorities to cite drivers twenty euros for unnecessary idling, with some government leaders petitioning lawmakers to increase the fines.

As more communities adopt idling regulations, teachers and students are implementing No Idle Zones on school campuses and spreading awareness about why idling is harmful to our students and the environment.

Below are our tried and true steps to creating and sustaining a No Idle Zone at your school:

1. Create a Student-Led Grades of Green Team
 Obtain the support of the principal, fellow

teachers, students, and parents. Invest time into creating a team at your school to support and sustain the activities you implement.

2. **Connect with District and City Leaders**
Spreading awareness about your school's goal to create a No Idle Zone will educate your community about air quality issues and environmental stewardship. Add No Idle Zone facts into the school's e-newsletter, social media, and morning announcements. Begin reaching out to members of your city council or school district to garner support and spread the news about the good work you're doing! Take your student-led, grassroots movement to the next level by reaching out to civic leaders who may be interested in supporting your campaign or raising more awareness at the city-level. Share the love and encourage other schools within your district to create a No Idle Zone. Combine your efforts with representatives from other schools implementing No Idle Zones and approach your school district as a group to gain support.

3. **Create Clear and Consistent Signage:**
Ensure the school community is aware of your efforts by creating a permanent sign at the student pick-up area.

No Idle Zones also empower students to motivate parents to reduce their carbon footprint. According to Hamilton County Environmental Services and Air Watch Northwest, one vehicle drop-off and pick-up at a school results in a cumulative 3 pounds of pollution per month emitted into the air.

Additionally, 19 pounds of carbon dioxide are produced for every gallon of gas used. Limiting a vehicle's idling time is a no-brainer, because it not only dramatically reduces air pollutants and children's exposure to them, but it also saves drivers money by increasing fuel efficiency. It takes ten seconds worth of fuel to re-start a car, so idling for longer than ten seconds uses more fuel than turning off and re-starting a car engine, and pollutes the air in the process. In fact, on average, each person wastes 1-2 tanks of gas every year by idling.

Creating a No Idle Zone is one of the best ways to teach students about emissions and how they affect air quality. Students participating in establishing a No Idle Zone campaign gain experience as first-hand air quality advocates and feel empowered and inspired to reduce their carbon footprint. For example, students at Robinson Elementary School in Manhattan Beach held a No Idle Zone rally last February where they held up "Idle Free Zone" banners and handed out "good tickets" to parents who turned off their engines while waiting in the pick-up line after school. For a single environmental initiative, creating a No Idle Zone bestows many simultaneous benefits, from reduced carbon and toxic pollution emissions and a reduction in associated health risks for vulnerable children to increased fuel efficiency and environmental awareness across all sectors of the school community. The best part of implementing a No Idle Zone? Students learn and instill environmental values all while making a positive impact on the environment today.

Emily Gee helps oversee the School Engagement Program at Grades of Green in El Segundo, California. Her background is in environmental science and advocacy communication. Emily Stewart is an intern and Program Advisor at Grades of Green, and has a degree in Environmental Studies and Government from Bowdoin College.

Grades of Green

Grades of Green offers free, step-by-step instructions, downloadable resources and one-on-one support to implement their No Idle Zone Activity, and 40+ other environmental activities, on school campuses worldwide. Grades of Green also offers a free, downloadable No Idle Zone banner on our website (www.gradesofgreen.org) that you can use to start a No Idle Zone at your school!

Notes:

1. <http://www.lung.org/lung-health-and-diseases/lung-disease-lookup/asthma/learn-about-asthma/asthma-children-facts-sheet.html>
2. <http://www.gradesofgreen.org/green-activity/no-idle-zone/>
3. For more information about Robinson Elementary's No Idle Zone efforts, please visit: <http://www.gradesofgreen.org/assemblymember-david-hadley-joins-robinson-elementary-school-for-no-idle-zone-assembly/>

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A Wild Summer

Shauna Hanisch-Kirkbride

Back in April, as the end of spring semester approached and I was nearing 15 weeks of freedom from the classroom, I was envisioning a summer with a lot of time spent “where the wild things are.” I live in the northern part of mid-Michigan where we’re blessed with an abundance of lands open to the public—state forest, Little Forks Conservancy preserves, city and county parks, and more. Vast national forests and beautiful state parks aren’t too far away either so when it comes to potential hiking and camping adventures we’re truly spoiled for choice.

Back in the spring I envisioned numerous trips to some of my favorite areas and trails, exploring the wilder parts of northern Michigan in my trusty Subaru—my happy place is anywhere in the natural range of balsam fir, black spruce, and thimbleberry. But like a black fly hatch can ruin a much anticipated outing, life can get in the way of our plans. A vegetable garden and fruit trees were planted and, of course, these require attention. Odd jobs around the house, the ones that had been largely ignored during the school year, screamed for completion. Two of my three favorite hiking companions (the four-legged, tail wagging kind) are getting up there in years and one has been plagued by a progressive neurological disease that has her in a wheelchair with really no hope of recovery—we still walk but they are slower and shorter trips than we used to do. Then there was my summer reading list and some writing I’d hoped to get done.

May and then June had come and gone and my husband and I and our dogs had traveled to the Leelanau for a weekend and had taken our annual vacation in the form of a Lake Superior circle tour that took us through three states, one province, and miles of glorious country. Good times, but my vision of wildness was fading away as August and the start of a new semester grew closer. My longing for time spent in the not-too-distant north woods was extinguished by the realities of managing a household and caring for family. There is a certain sadness and disappointment in that reality-check.

Then one day I was looking out on my backyard through the picture window in our living room and I caught myself admiring its, well, “wildness.” My heart swelled as I realized what a little nature sanctuary we’ve managed to create on our little piece of ground. Every day I watch cardinals, chickadees, red-winged blackbirds, finches, grosbeaks, woodpeckers, and more come to feed, drink, and bathe. I watch the chubby-cheeked chipmunks and red and grey squirrels scamper and eat what the birds don’t get to first. Cottontails graze the grass and enjoy the clover that we planted and that bloomed so beautifully this year—baby bunnies are part of the picture now too. Pileated woodpeckers chortle off in the distance. I don’t see them often, but deer run through our front yard, and have on occasion, annoyingly, been known to nibble on our newly planted apple trees.

...[O]ne day I was looking out on my backyard through the picture window in our living room and I caught myself admiring its, well, "wildness."

Aside from my own domain, I can drive five minutes and be on sandy soiled state forest land filled with red and white pine, oak, birch, maple, wild blueberries, and even cranberry bogs. As I walk, I follow deer prints that travel the same trail I do and am always aware in the back of my mind of the chance of running into an inhabitant of the bruin kind. (I'll admit it's both thrilling and a little unnerving that we've been seeing increasing evidence of black bear activity in our area over the past year.) I also have a number of opportunities to hone my naturalist skills by going on walks with other nature lovers organized by our local Chippewa Nature Center. There is a nice camaraderie in walking the woods with other people who geek out at knowing the local flora and fauna. Opportunities to deepen my understanding and awareness of the wildness around me abound and I can't help but be appreciative of that.

Many before me have discovered this same truth: wildness is a frame of mind. It doesn't even have to be something you drive for hours to find. I lived in Washington, Idaho, and Montana before I came to settle in Michigan and I will always miss the grandeur of the mountain West, as well as the wild, rocky shores of

Lake Superior in the U.P. that are so close to me, and yet so far. It seems the whole country wants to live in Portland, Seattle, or Denver these days – wild and free spirits are drawn to places like that. Midwestern wildness is different, more subtle, less sublime grandeur and more woods and water.

The bright side is I live in a place where I seldom get stuck in traffic, I have a nice house with a pint-sized mortgage, and I'm surrounded by places to walk and explore that never get overcrowded. I have a little-less-than-a-half acre lot surrounded mostly by woods that I can, like a modern day Aldo Leopold without the acreage or quite the ambition, restore year by year to increase its wildness and attractiveness to wildlife. I live with one foot in civilization and the other in a backyard "wilderness" that is to me beautiful and special, small though it may be. That's a pretty good place to be, though I'm still determined to get up to the Keweenaw to pick some thimbleberries before summer is over!

Place-based Education Conference

**Thursday, November 9, 2017, 8:00am
to Saturday, November 11, 2017, 2:00pm**
Place-based Education Conference

This three-day, one-of-a-kind event inspires and supports a community of thinkers and doers who see great promise in the power of place-based learning. The conference provides a setting for sharing, networking, learning, and growing—all with a goal of helping young people discover, learn about, and improve their own communities and environments.

This conference offers:

- **Traveling dialogues** - while visiting different community and school sites, we'll use the "power of the place" to fuel intergenerational discussion about a key question
- **Nationally renowned keynote speakers**
 - Dr. Carolyn Finney, professor of geography at University of Kentucky and author of *Black Faces, White Spaces: Reimagining the Relationship of African Americans to the Great Outdoors*
 - Dr. Roseanne Fortner, former Director of the Center for Ocean Science Education Excellence [COSEE] Great Lakes
 - Julia Putnam, Principal and Co-Founder of the James and Grace Lee Boggs School in Detroit
- **Traditional conference sessions**
- **Dragonfly Award Banquet** - a recognition and celebration of an individual's or organization's contribution to place-based education

WHEN:

Thursday, November 9, 2017 at 8:00 AM EST-to-Saturday, November 11, 2017 at 2:00 PM EST

WHERE:

Eastern Michigan University Student Center
900 Oakwood St.
Ypsilanti, MI 48197

WHO:

This conference is a MUST for:

- Formal and non-formal educators of any subject or grade level (K–16) who want to inspire students through meaningful, relevant learning experience.
- School administrators who want to establish a curriculum and related instructional practices that focus on place and forge strong partnerships with the community.
- Staff of foundations, organizations, or community leaders interested in education, environmental stewardship, or youth/community development.
- Others who want to learn more about place-based education, environmental stewardship, and the Great Lakes region

How to apply/register:

REGISTER NOW!

Visit <http://placebasededconference.com>

There's something for everyone—including you! Join us!

The 2017 Place-Based Education Conference is sponsored by the Great Lakes Stewardship Initiative and hosted by the Southeast Michigan Stewardship Coalition at Eastern Michigan University.

Thanks to an amazing partnership between EMU and the Washtenaw County Solid Waste Division, this will be a **ZERO WASTE event!**



Student Video Promotes Awareness of Great Lakes Marine Debris

While plastic monsters invade Michigan's Great Lakes and inland waterways, Alpena Elementary students create video to foster awareness of this issue among their local community.

Brandon Schroeder, Michigan State University Extension, Michigan Sea Grant; Olivia Rose, Huron Pines AmeriCorps member serving NEMIGLSI; and Tracy D'Augustino, MSU Extension

What is marine debris? It's essentially human-made trash – large and small – that finds its way to oceans, our Great Lakes and inland waterways. A group of fifth-grade students from Alpena, Mich., want to help everyone understand what

it is and what can be done to fight this problem. They created a movie and offer ideas about how everyone can contribute toward solutions. Watch their student-created film at: <http://bit.ly/Plastics101>.

The National Oceanic and Atmospheric Administration (NOAA) has championed an initiative to foster awareness, understanding, and citizen engagement in a growing issue of marine debris in our oceans and inland waterways. Through the Northeast Michigan Great Lakes Stewardship Initiative (NEMIGLSI) network, Michigan Sea Grant, Michigan State University Extension, and the NOAA Thunder Bay National Marine Sanctuary are



The class meets their favorite dog, Stinky Feet!

partnering with schools, educators, and youth leaders to raise local awareness about this Great Lakes problem.

How did these students get involved?

In fall 2016, Bob Thomson's [Ella M. White Elementary](#) fifth-grade students visited Thunder Bay River, where they used nets to trawl for plastics, and were shocked to find microplastics in our Northeast Michigan watershed. After analyzing samples from the river, fifth-grader Tucker Bright said, "If there are this many microplastics in this little sample, just imagine how many there are in the Great Lakes!" To raise awareness about finding plastics in the river and finding solutions to this problem, these Alpena Public Schools students developed a film, "Plastics 101."

Through the NEMIGLSI network, they worked with community partners, including [Huron Pines AmeriCorps](#), Michigan Sea Grant, and Thunder Bay

National Marine Sanctuary, to complete the film. The effort also was supported by [DonorsChoose.org](#) through [Tom's of Maine Green Your School Campaign](#).

Before filmmaking, the students researched the topic of marine debris and found that microplastics are a problem in both our Great Lakes and oceans. The students consulted with fisheries expert, Brandon Schroeder (Michigan State University Extension, Michigan Sea Grant Educator), and expert, Dr. Sherri Mason (Professor of Chemistry, The State University of New York at Fredonia), to verify their research. Next, the students outlined the films' goals and began creating a storyboard. The students also crafted props, recorded audio, captured video footage while having fun and learning.

'Plastics 101'

The film "Plastics 101" emerged with entertaining insights into the troubles of a throwaway culture and the effects on the Great Lakes and oceans. Students also learned about potential career options while applying classroom learning goals. Thomson said, "The video provided a perfect opportunity to develop a cross-curriculum project that focused on targets from English Language Arts, Science, and Social Studies." Thomson recently was named [2017 Michigan Science Teacher Association Elementary Science Teacher of the Year](#).

Students also learned more about how their actions impact their community and ultimately the world. When plastics are improperly disposed, they could end up in a local stream, river, or the Great Lakes by the wind, rain, and through storm drains. Students were surprised to learn plastics absorb toxins, such as DDT, PAH and PCBs, and that these toxins can enter our food web through plastics. Since plastics don't biodegrade, they don't go away; they simply photodegrade into tiny pieces that can be consumed by plankton or small fish and then move up the food chain. To showcase solutions to this problem, the students highlight how to take action and protect our Great Lakes and ocean.

"Plastics 101" now will serve as an educational tool through the [Northeast Michigan Earth Day Bag Project](#), an effort where third-, fourth-, and fifth-graders learn about the harms of single-use plastics to our Great Lakes and ocean and solutions to this growing problem. After watching a series of short films and discussing the information, students across northeast Michigan will decorate paper bags with conservation messages (e.g. Refuse to Single Use; Protect our Great Lakes), which will then be distributed to customers at local grocery stores on Earth Day, April 22, 2017.

Michigan Sea Grant and Michigan State University Extension serve in providing leadership for the NEMIGLSI network, which is part of a larger, statewide network and partnership, the [Great Lakes Stewardship Initiative](#) (GLSI). Established

in 2007 with funding from the [Great Lakes Fishery Trust](#), the GLSI supports place-based stewardship education in schools and communities across Michigan. Partnerships are invaluable in our endeavor to support stewardship of our Great Lakes and natural resources. Through the NEMIGLSI network, and [applied place-based education strategies](#), our students may perhaps prove the most inspirational educators of all in addressing important Great Lakes issue such as marine debris.

[Michigan Sea Grant](#) helps to foster economic growth and protect Michigan's coastal, Great Lakes resources through education, research and outreach. A collaborative effort of the [University of Michigan](#) and [Michigan State University](#) and its [MSU Extension](#), Michigan Sea Grant is part of the [NOAA-National Sea Grant](#) network of 33 university-based programs.

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Strategies for Enhancing Diversity & Inclusion in Formal and Informal Environmental Education

The Diversity & Inclusion (D & I) Committee of the Michigan Alliance & Environmental Education formed in January 2016. The Committee is chaired by MAEOE board members Nick DiCresce and Zakiya Jackson. The Committee's goals include:

1. Increasing the diversity in the MAEOE membership.
2. A more diverse representation on MAEOE's board.
3. Increasing diversity in the groups/communities that MAEOE serves and works with.
4. Enhancing the ability of all MAEOE members' to work with diverse audiences.

To help attain these goals, the D & I Committee is hosting a workshop from 9-noon, Friday morning, Oct. 6, at the MAEOE Conference. The workshop facilitator will be **Robert Simmons**. Mr. Simmons works with the consulting firm Ed Change (<http://www.edchange.org>). He is an educational equity consultant based in Detroit, Michigan. Robert's doctoral dissertation explored the experiences of African American teachers. His current research agenda is focused on exploring the experiences of African American teachers and urban education. Robert taught middle school science in Detroit, MI, in the Detroit Public Schools, as well as 2nd grade and 4th grade in the Dominican Republic and Minnesota. Robert's experience as an award winning science teacher, nominated twice as the national teacher of the year, adds to his expertise and understanding of what it takes to be a successful teacher in urban schools and working with African American students.



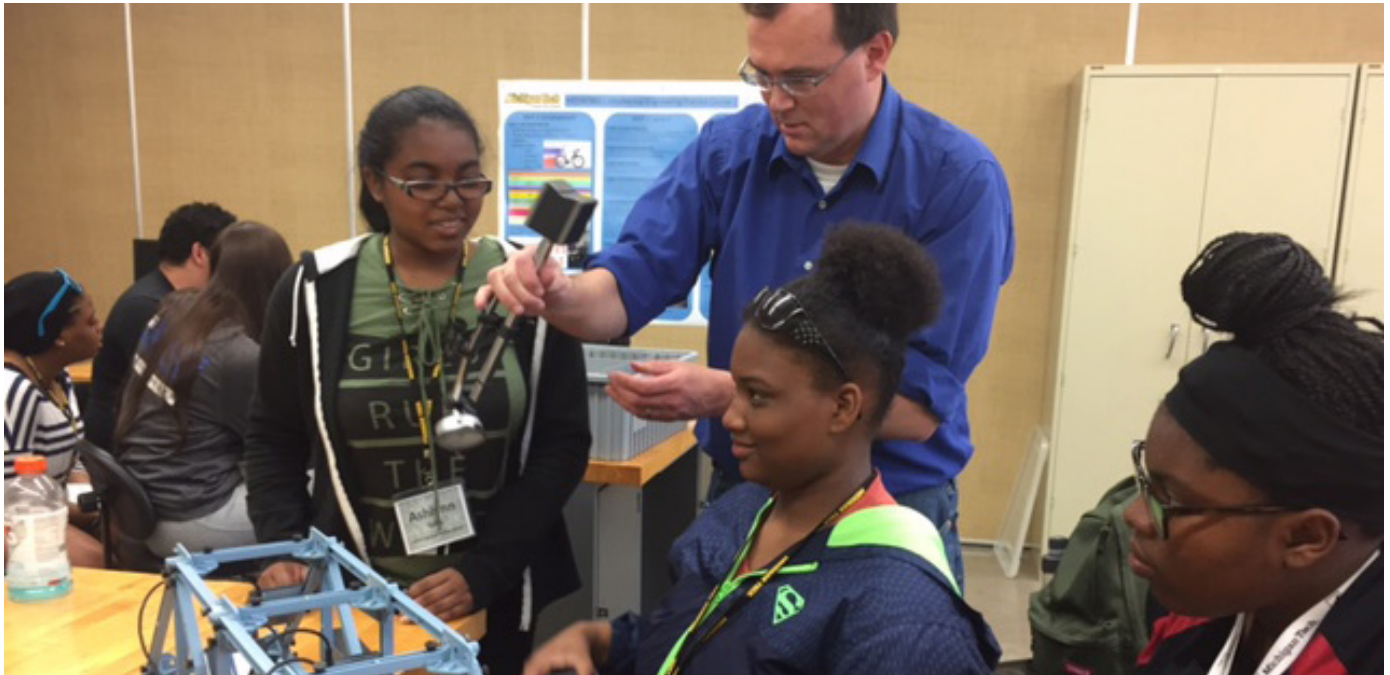
Robert is a contributing author to *White Teachers in Diverse Classrooms: Creating Community, Combating Racism* (2006).

The workshop will focus on best practices for engaging urban youth in discussions about the environmental gifts and challenges in their communities, but will elevate problem based learning and service learning as critical tools of engagement. Teachers, youth development professionals, and non-formal educators will become equipped to better understand the perspectives of urban youth. The workshop is funded by Global Kids.

The workshop will be followed by a panel discussion from 2:00-2:45 pm, Friday afternoon on **Learning from Experience: Diversity in the Outdoors**. Panelists include Mike Reed, trip leader for the Detroit HS Natural Resource Career Exploration Program; Dr. Grenae Dudley, CEO for Youth Connections Career Academies; and Garret Dempsey, Chairperson, Detroit Inspiring Connections Outdoors for the Sierra Club. Panelists will present strategies to increase interest and diversity in natural resource career paths and/or outdoor recreation.

Exploring Natural Resources and Engineering Careers in the UP

Joan Chadde



Fifteen diverse high school students from Detroit and southeast Michigan explored Natural Resources and Engineering careers from June 26 through July 1st at Michigan Technological University and in the Upper Peninsula. The program is in its third year.

The first stop for the students was at the MI Department of Natural Resources RAM Training Center in Roscommon for an overnight stay and sessions in fisheries and conservation. On Day two, students visited Pictured Rocks National

Lakeshore to interact with the National Park Service and Hiawatha National Forest interpretive specialists and explore this beautiful area.

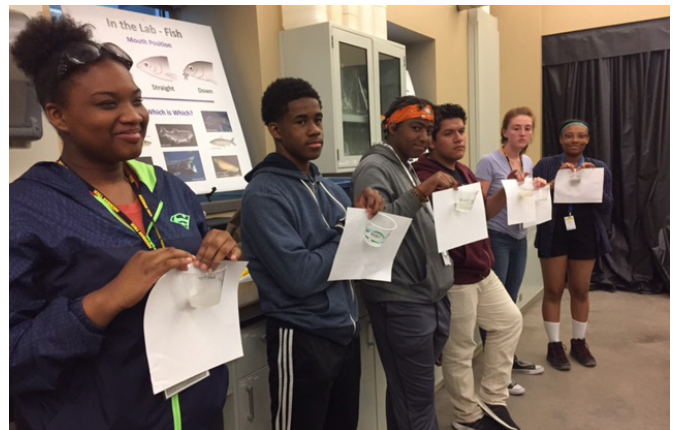
“MAINLY WHAT I WANT TO DO IS ANIMAL PROTECTION, STUDY, AND PRESERVATION AND MOST OF THESE THINGS ARE MANY CORNERS OF THE FIELDS I WANT TO GO INTO.”

Students spent four nights on the campus of Michigan Technological University where they investigated invasive species, forest biomaterials, and Native American perspectives on natural resources with faculty scientists and staff at the School of Forest Resources & Environmental Science. The high school students spent a half day on MTU's research vessel Agassiz sampling the sediment for benthic organisms, collecting plankton, and measuring dissolved oxygen, temperature, and water clarity. Faculty from Mechanical Engineering, Civil & Environmental Engineering, and Electrical Engineering engaged students in hands-on engineering explorations, including bridge building, wastewater and drinking water treatment, sustainable transportation.

One student observed, "My favorite activities were...listening to Dr. Pasi Lautala talk about sustainable transportation and his interest in civil and environmental engineering, going on different hikes, learning about trapping and identifying fish, as well as learning about all the different fields that keep the forests intact and ways to protect them. I especially enjoyed learning about forest resources with Dean Terry Sharik, Jerry Jondreau, and Dr. Tara Bal; water treatment with Dr. Daisuke Minikata; and the food of course!"

In response to a question about what actions are they likely to take after returning home, another student commented, "I mostly want to do tracking and locate animals like Joe Panci, conservation officer with the Ottawa National Forest. Mainly what I want to do is animal protection, study, and preservation and most of these things are many corners of the fields I want to go into."

The program is coordinated by Joan Chadde, Director of the Michigan Tech Center for Science & Environmental Outreach, along with Lisa



Perez, U.S. Forest Service Urban Connections, Mike Reed, Detroit Zoological Society, and Bruce Ross, Michigan Department of Natural Resources, along with Kevin Frailey, MDNR. Funding for the program comes from the following Michigan Tech entities which cover the Detroit HS students' transportation, meals, and lodging: Michigan Tech School of Forest Resources & Environmental Science, College of Engineering, Departments of Civil & Environmental Engineering and Mechanical Engineering, Michigan Tech Transportation Institute, Admissions, Housing & Residential Life, and Great Lakes Research Center, along with the Michigan Department of Natural Resources.

For more information, contact: Joan Chadde at 487-3341 or jchadde@mtu.edu.

Michigan Technological University is an Equal Opportunity Educational Institution/Equal Opportunity Employer, which includes providing equal opportunity for protected veterans and individuals with disabilities.

LSNC's Great American Backyard Campout

PROGRAMS LIKE THE CAMPOUT ALSO HELP VISITORS SEE THAT THE NATURAL WORLD IS NOT AS HAZARDOUS OR FOREIGN AS SOME MAY THINK.



Drum beats echo off the sumac trees on the edge of Black Pond Woods as families enjoy picnics or challenge each other in lawn games. All around are exclamations of “Over here!” and “Look at this!” and “What do you want to do next?” It’s Leslie Science & Nature Center’s (LSNC) annual Great American Backyard Campout event.

Nestled in the heart of Ann Arbor’s north side, LSNC is the perfect place for families who are new to camping and outdoor recreation to practice

pitching a tent, using a map to navigate a trail, or cooking on an outdoor fire without getting too far from the comforts of home. In addition to learning outdoor skills, LSNC staff hopes participants will develop an appreciation for recreation and the environment as a result of their experience. “We want folks to get the chance to build a skill—like using a compass and maps on our orienteering course—while also doing new things as a family like playing the drums together, building shelters out of wood, or roasting a perfect marshmallow,” says LSNC’s Camp & Public Programs Director, Etta

Heisler. “The combination of skill-building, novelty, and fun is what makes the experience memorable.”

Programs like the Campout also help visitors see that the natural world is not as hazardous or foreign as some may think. “When people come to this event and get a chance to take a hike or identify native bats and birds, they realize ‘Oh, I can do that!’” reflects MacKenzie Maxwell, LSNC’s School Programs Manager and MAEOE member. “It’s so important that families come and do this together because they take that knowledge with them into the summer and feel more comfortable taking advantage of Michigan’s other amazing parks and camp grounds. There is so much to do in our state, but when people don’t know how to



dress appropriately or know how to use a map, it is a huge obstacle for them.” Participants at this year’s Campout learned about Michigan wildlife and local recreation opportunities in a clue-and-compass-based orienteering course supported by a MAEOE environmental education grant. Kids and adults alike learned how to “put Red in the shed and follow Fred” and solved clues about Monarch migration patterns, the Huron River, and more.

In a survey, participants indicated that they were looking forward to camping more, going into nature



to observe wildlife, and spend more time outside as a family as a result of their positive experiences at the Campout.

LSNC’s staff would love to hear from MAEOE members looking to share ideas or collaborate on similar events in the future. “We hope other nature centers will reach out to brainstorm or exchange stories of what has worked for them,” says Maxwell. “We’re all trying to help folks get outside and engaging with their environment and we can do that much more effectively if we are working together.”

LSNC’s Great American Backyard Campout started years ago as a partnership with National Wildlife Federation’s [Great American Campout](#), but has since evolved into an independent program. Contact information for LSNC staff is listed on their website: <http://lesliesnc.org/about-us/people>

MAEOE Meet-ups Rock!

Scot F. Martin

“I DON'T CARE HOW OLD YOU ARE, PEOPLE LOVE GRAVEL PITS”

The second MAEOE Meet-up of 2017 started over food and coffee at the Grand Traverse Pie Company in western Ann Arbor. Plenty of time was given to catch up with friends and acquaintances and to make new ones. From there we took a short drive to Fox Science Preserve in Ann Arbor.

“I don't care how old you are, people love gravel pits,” exclaimed Washtenaw County Parks Naturalist Shawn Severance.

This particular gravel pit, found in the extreme western edge of Ann Arbor is part of the Washtenaw County Parks system. When it was a working gravel quarry it was used to reclaim gold from sand. Yes...truly, as well as for use in building I-94 among other roads.

So, on a sunny early May Saturday morning our group of nineteen adults and three children walked down from the parking lot to the abandoned pit. I confess I was expecting sedimentary layers and fossils galore. I was disappointed. What I found was a relatively flat (with the exception of three gravel mounds), open space that was much larger than I expected.

Beauty and fascination, however, sometimes must be sought rather than simply handed out.

Dave Szczygiel, environmental educator for the Ann Arbor School District, gave us a brief geological overview of the property. He shared that he visited the site as a child, when it was still operating, and he and his brother played among the monstrous machines. He added that over 50,000 students have visited the preserve during the last fifty years.

Before we moved on, we learned that the University of Michigan planted species and found that black locust did the best in the gravelly soil. Dave explained that we were about 100 feet below the original surface and looking at the nearby houses to the south, we could see they were high above us in the distance.

The preserve allows students (and anyone really) to do rock and mineral study, learn about and examine erosion, and plant succession. Invasives, of course, had moved in with autumn olive and spotted knapweed sprouting numerous about the quarry floor.

We were treated to stories about the quarry, for instance, there were a couple of women who planted Petoskey stones for the various school groups to find, much to the chagrin of Szczygiel. Our senses were engaged as well as we inhaled the oily scent trapped in the limestone scattered about, felt the slimy surface algae that for years I had thought was some kind of scat, and viewed the dropstone varvite, a fossilized moment when a rock had fallen and penetrated the layers of sediment.

The children probably found climbing on the boulders the highlight of the visit.

Fox Science Preserve is a quiet, open, and interesting place to bring school groups or even just a friend. With over sixty acres to meander around, it would be easy to spend an hour in study or quiet reverie.

Don't forget to explore the two ponds at the entrance. For information on scheduling a field trip, email parks@ewashtenaw.org.

A Call for Conference Silent Auction Treasures

An annual conference favorite, the Silent Auction will open for business again at this year's conference. Don't forget to start planning on what you can bring to this year's silent auction. By donating vintage or new items, you will help support MAEOE's grant and outreach programs. MAEOE is also soliciting auction items from businesses and local organizations to help support our mission of environmental literacy. If you know of a business or an organization that is willing to donate to the silent auction, please contact Christy McGillivray at xtymcg@gmail.com or by phone 313-393-2200.

Bring your treasures to the Silent Auction Room at this year's conference. When you arrive, take your unique items to the auction area and complete a simple auction form. You can declare the value of the item for tax purposes as well.

The auction will be open Friday through Saturday evening during the conference. Winning bidders should be ready to pay for their items on Saturday Night after the Awards Ceremony. The auction will close just before the Saturday evening ceremony. Bid early and often so you can assure that you can take home that one of a kind treasure that will enhance your teaching style.

Thank you for your support of MAEOE.
The Finance Committee

