Great Lakes Sustainability

MEECS Two

The Michigan Environmental Education Curriculum Support Project (MEECS) has just received new funding through the EPA to update and supplement MEECS units.

The Michigan Department of Natural Resources and the Environment in conjunction with Michigan Geographic Alliance and Central Michigan University, have received a $250,000 grant from the US EPA as part of the Great Lakes Restoration Project. The project will provide for updating the units on Ecosystems and Biodiversity, Water Quality, Air Quality, Land Use and Energy Resources (largely oriented to upper elementary and middle school science classes), in addition to developing new material on Climate Change, Energy, and Great Lakes Sustainability Activities. The project will also continue to adapt materials for 3rd and 4th grade Michigan and US regions in the social studies curriculum.

Stay tuned. We’ll be offering some new workshops on the updated materials at a site near you sometime next summer.

NEW MGA WEBSITE!
Visit us at
www.cst.cmich.edu/mga

Look Inside!

- Professional Development Offerings p.2
- Upcoming Conference Events p. 3
- GAW pp. 4-5
- Maps Without Borders p. 8
- Order Free materials p. 10
LOOKING FOR PROFESSIONAL DEVELOPMENT FOR YOUR DISTRICT?

Come learn how to use new resources!

*Michigan Geographic Alliance has new resources for professional development.*

The World GeoHistogram helps teachers and students see major world events in time and location. At workshop sessions, each participating teacher will receive a GeoHistogram Poster, a set of placemat size GeoHistograms, and a Geography/History CD.

A new set of Michigan Posters and Maps have been adapted from the Michigan Environmental Education Curriculum Support (MEECS) to help teachers meet the 3rd and 4th grade GLCEs.

At professional development workshop sessions, each participating teacher will receive six large posters and a set of placemat size Michigan Land, Air and Water diagrams.

Michigan Geographic Alliance can offer professional development workshops for your teachers! Some topics available include:

- Global Issues
- World and US Geography/History
- World Regions
- U. S. Regions
- Michigan

Participants receive materials including maps, posters, CDs, lesson plans and activities. MGA provides resources, presenters, and ideas!

Call today to make plans!

1-800-279-1423
or mga@cmich.edu

More info at www.cst.cmich.edu/mga

We will work with you to provide high-quality, affordable workshops and materials to fit your needs and your budget. Choose from full-day, half-day, or after school presentations!
Upcoming Events:

October 26, 2010

**Mulling Over Michigan**
University of Michigan-Dearborn
Fairlane Campus
3:30 - 7:00 pm

This statewide Michigan studies conference is aimed at K-12 teachers and administrators, college and university educators and local historical groups.

http://www.hsmichigan.org/

November 4, 2010

**Bringing History Home:**
Local Stories, Global Contexts

Keynote: The Uncommon School:
Classrooms Without Borders
Dr. William S. Pretzer, Chief Curator of History,
National Museum of African American History
and Culture, Washington, D.C.

November 8-9, 2010

**Michigan Council for the Social Studies**
Annual Conference in Kalamazoo!

www.mcssmi.org

Sociologist and noted author Dr. James Loewen will be the keynote speaker at the MCSS Annual Conference in Kalamazoo on Sunday, November 7, 2010. Hear the man who brought us *Lies My Teacher Told Me*, which has sold over 800,000 copies. In addition, he will be doing at least two sessions on Monday, November 8, 2010.

November 15-19, 2010

**The 2010 Global Education Conference**

Online and free sessions will be held in multiple time zones and multiple languages over the five days. There is no formal registration required for the conference, as all the sessions will be open and public.

Info at http://globaleducation.ning.com
The Michigan coordinators of Geography Awareness Week 2010 are Teresa Judge and Sue Husiak. In addition to the electronic resources and suggested activities from NGS (see below), MGA is focusing on two main projects, and has produced resources for teachers and students.

**Tile map of the Great Lakes Watershed** Look at the map on the next page and name all the states or provinces in each of the Great Lakes’ Watersheds. Which watershed might be impacted by more people? In which watershed would the greatest number of political groups need to agree about protecting the water of the Great Lakes? This Great Lakes map puzzle and activities are a good way to engage students in learning about and preserving the freshness of our state’s precious natural resource. downloadable maps in three sizes with activities will be available from the MGA website. ([www.cst.cmich.edu/mga](http://www.cst.cmich.edu/mga)) Just look for the GAW Headlines on the Home Page!

**“GAW Walk to Water”**. How far would you have to walk to get water if you didn’t have a well or city water? How easy would it be to get enough water for all the daily activities we take for granted? Teachers are encouraged to challenge their student to think about the lack of freshwater in other parts of the world by walking to their nearest natural source of fresh water. Directions and activity pages for this awareness project can also be found on the MGA website ([www.cst.cmich.edu/mga](http://www.cst.cmich.edu/mga)).

**Participation Rewards!** If your class participates in either of these projects or one of the NGS projects, reporting back will give you a chance in a drawing for your choice of the following: NGS Family Atlas, a complete copy of the MEECS Water Quality Unit, or a set of Michigan Posters with activities. If you send us confirmation of publicity (newspaper articles and/or pictures) about your efforts, we’ll double your chances to win! You can submit your participation on the MGA website ([www.cst.cmich.edu/mga](http://www.cst.cmich.edu/mga)) “Current Projects/GAW” page or email us at mga@cmich.edu.

**From National Geographic!**

Dive into Fresh Water with National Geographic Society during Geography Awareness Week! Explore freshwater, one of the most critical issues of the 21st century. Families, teachers and students are invited to visit GeographyAwarenessWeek.org for games, activities, and lessons about freshwater.

Try your hand at a water footprint calculator to determine how much water your family uses—and find ways to conserve. Teachers can access a wealth of lesson plans about fresh water, including featured activities for use with new National Geographic Map-maker Kits. Educators and parents alike will find valuable lists of recommended books and films, as well as crossword puzzles and other family-friendly games.

The [GeographyAwarenessWeek.org](http://GeographyAwarenessWeek.org) website also features free downloads of National Geographic magazines, opportunities to participate in Blog-a-thon and a “Where’s that Water?” quiz, as well as tips for how to host a local Geography Awareness Week event.

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**GO GREEN!**

Check out how you can “GO GREEN” with this newsletter on page 12.
Where and How Much?

Help students understand the distribution and availability of the supply of water in the world.

PROCEDURE: Fill 5 one-gallon jugs with water (Hint: tint the water blue for easier viewing)
1) The 5 gallons of water represent all the water in the world (370 quintillion gallons). There will never be more or less.
2) Measure out 2 ½ cups into 4-cup measuring cup. This represents all the fresh water in the world (all the rest is salt water)
3) Measure out ¾ cup of the fresh water into one-cup measuring cup. This represents all the freshwater that is not frozen in the polar ice caps (all water in lakes, rivers, and groundwater, etc.)
4) Measure out 1 ¼ teaspoon of this into the small clear glass bowl. This is surface water in rivers and lakes.

One-fifth (1/4 teaspoon) of this water is in the Great Lakes.

Nearly 25 percent of Canadian agricultural production and 7 percent of American farm production are located in the basin.

The Great Lakes contain roughly 22% of the world’s fresh surface water: 5,472 cubic miles, or 6.0x1015 U.S. gallons. This is enough water to cover the 48 contiguous U.S. states to a uniform depth of 9.5 feet, but only supplies about 4.2% of the world’s drinking water.

Love GAW? More resources and activities will be available on the MGA/SpecialProject/GAW page this November (www.cst.cmich.edu/mga)! Join us for Geography Awareness Week!

Follow us on Facebook everyday for link to Fresh Water resources and websites for educators.
**Dual Awards!**

MGA Teacher Consultant **Jaye Lynn Trapp**, from Traverse City, has been recognized as the 2010 **Outstanding American History Teacher in the Grand Traverse Area** by the Daughters of the American Revolution (DAR) for her excellent work in bringing American History to life in the studies, lives, and minds of her students.

She also received the **Distinguished Teacher Achievement Award** from National Council of Geographic Education in 2010 for her geography integration and use of role-playing to improve student learning. She has presented at a number of state and national conferences and has also created an integrated curriculum for the Dennos Museum Inuit Studies Program.

“Jaye Lynn Trapp’s enthusiasm and commitment to her own learning, both about teaching and the subjects she teaches, have benefited her students so much over the years she’s taught for TCAPS,” commented TCAPS’ Director of Professional Development, Jim Linsell. “We are lucky to have such a dedicated, creative teacher in our schools.”

**Doing What Works**

A video lesson by MGA Teacher Consultant **Laurie Erby** (Saline Middle School) is highlighted on the U.S. Department of Education's website ([http://dww.ed.gov/](http://dww.ed.gov/)) called "Doing What Works". It’s under the Adolescent Literacy strand (Engaging Text Discussion) and talks about reading in social studies. It includes photos of students in her classroom working on a lesson in a unit on transboundary pollution. They are reading and discussing survivor stories from Chernobyl. Along with the photos and video, Laurie describes the lesson, and the handouts can be downloaded. Check it out to see “what works”!

"**Becoming Environmental Stewards**"

MGA Teacher Consultant **Joy McFadyen** (Bay City) helped her 5th graders build a rain garden at their school. "Becoming Environmental Stewards", soon to be published in Social Studies for the Young Learner, tells how the Hampton rain gardens were initiated, researched and planned by the students, and how each continuing class since the planting in 2007 has taken an active role in caring for the gardens and in educating the school and community. Rain gardens are one solution to the problem of storm water run-off.

**Outstanding Elementary Teacher**

MGA Teacher Consultant **Melinda Dickinson** (Sheridan Road Elementary, Lansing) received the **Elsie A. Maile Outstanding Elementary Teacher Award**. The Lansing School district sited her unique ability to establish a viable learning environment for her students, her evolving knowledge of instructional strategies and techniques, and her ability to foster collaborative relationships with her colleagues and parents.

"Without the hard work and dedication of our teachers, we would not be able to provide to our students the opportunities for learning and growth that will allow them to succeed in the future," Superintendent T.C. Wallace Jr. said.

**Congratulations!**

Teacher Consultant **Pam Mathias** (Louise Peacock Elementary School, Corunna) was recently named the **Corunna Teacher of the Year**.

Teacher Consultant **Vickie Weiss** (City School, Grand Blanc) was honored as the **Economic Educator of the Year** by the Michigan Council of Economic Education.

**GO GREEN!**

Check out how you can “GO GREEN” with this newsletter on page 12.
**TC TIDBITS and TRAVELS**

**Bev Feldkamp (Saginaw):** participated in a summer institute in Boulder, CO sponsored by TEA (Teaching East Asia) on China in the 21st century. Sessions focused on the challenges China will present to globalization in the coming years. Experts on China discussed issues relating to environment, trade, human rights, media, resources and current issues.

**Melinda Dickinson (Lansing):** attended the Colonial Williamsburg Teacher Institute in July as a Peer Facilitator and spent a week in DC as part of Lansing’s TAH Grant also in July.

**Vickie Weiss (Grand Blanc):** was a Summer Teacher Fellow at The Henry Ford this summer. It was an awesome experience...more of a history emphasis BUT lots of geography tie-ins.

**Laurie Erby (Saline)**

“I was honored to get to be the teacher who accompanied Saline 7th grader, Jacob Tanner to the National Geographic Bee this year. It was a truly amazing experience for us both, and we're busy gearing up for next year!”

**Lisa Koski (Lincoln Park):** participated in a NEH Workshop at The Henry Ford focusing on the American Industrial Revolution. In July and August she went back to The Henry Ford as a Teacher Fellow to research and work on projects for this upcoming school year.

**Kim Davison (Kalamazoo):** Geography is everywhere! Kim attended a Teachers Materials Camp, sponsored by ASM Materials Education Foundation. The creation of materials is the history and geography of Michigan – as well as the rest of the world.

The workshop involved 40 hours of hands-on instruction in the science behind how materials are made including forming crystals, forging aluminum, firing ceramics, and casting plastic, as well as visiting a glass-blower who made scientific glass. Great experiences, new information and piles of materials that teachers can use to make their lesson come alive - and, incredibly, FREE! ASM offer camps all over the country and they are already planning for next year. If you are interested in taking part in this wonderful opportunity, the URL is [www.asmfoundation.org](http://www.asmfoundation.org).

**Remembering Terry Kuseske**

The Michigan Geographic Alliance lost one of its most influential consultants when Terry Kuseske from Kalamazoo passed away September 2. He first attended the Basic Institute in 1991, and for several years was part of the team that provided GeoWest Workshops for teachers on the west side of Michigan. He lived in Kalamazoo, and was recently active in local government. Students, teachers, and the entire geography community were influenced by Terry, and he will be missed.
A NORTH AMERICAN PARTNERSHIP:

Maps Without Borders

Created through the cooperation of three national agency partners, the North American Environmental Atlas combines harmonized data from Canada, Mexico and the United States to allow for a continental and regional perspective on environmental issues that cross boundaries. Scientists and map makers from Natural Resources Canada, United States Geological Survey and Instituto Nacional de Estadística y Geografía (and other agencies in each country) produced the information contained in the Atlas.

The collection of viewable maps, data, and downloadable map files is available free of cost online at: www.cec.org/naatlas and the information is printed in three languages.

These maps from the North American Environmental Atlas – ranging from base maps of rivers and roads to detailed thematic maps – were developed through a trilateral partnership of national agencies and the Commission for Environmental Cooperation. They can be used to understand and manage the impacts of climate change, conserve key ecoregions and habitat, and understand the distribution of pollutants.

The North American Environmental Atlas is an interactive mapping tool to research, analyze and manage environmental issues in Canada, United States and Mexico.

The CEC uses maps in the Atlas to:

- Identify priority areas to conserve biodiversity
- Track cross-border transfers of pollutants
- Monitor CO2 emissions across major transportation routes
- Predict the spread of invasive species

In addition to the base map, there are four major categories of data: Terrestrial Ecosystems; Marine Ecosystems; Pollution and Waste; and Human Influence. For each of these categories, the map tool allows the user to turn on several different layers of data, see descriptions and legends of data, and download the data. Maps can be used in classroom presentations.

Michigan Geographic Alliance has supplies of the North America Land Cover map for teachers. See page 10 for ordering free materials from MGA.

GO GREEN!
Check out how you can “GO GREEN” with this newsletter on page 12.
The combined surface area of the Great Lakes is approximately 94,250 square miles, larger than the U.S. states of New York, New Jersey, Connecticut, Rhode Island, Massachusetts, Vermont and New Hampshire combined. The Great Lakes coast measures approximately 10,500 miles. (Grady, Wayne 2007).

TIME TO REGISTER FOR THE 2011 NATIONAL GEOGRAPHIC BEE!

The National Geographic Bee is a school competition for students in any grades four through eight. Excite your students about the world around them and reward those who excel in their knowledge of geography by giving them a chance to compete in a school geographic bee.

Schools registered by October 15, 2010 will pay $90 fee and will receive their contest materials in early November. Registration after October 15 will be $110. Go to www.nationalgeographic.com/geobee to get complete information and other dates and deadlines.

MGA goes to Savannah!

Several leaders and teacher consultants from Michigan attended the National Council of Geography Education annual conference in Savannah Georgia. Co-coordinators Joe Stoltman and Michael Libbee were joined by Teacher Consultants Cindy Bloom, Mary Evans, Clare Friend, Kristi Karis, Marty Mater, Jill McGinn, and Jaye Lynn Trapp. In addition to sharing Michigan educational resources, benefitting from outstanding presentations, and enjoying southern hospitality, several Michiganders were honored with NCGE awards. Jaye Lynn Trapp was recognized as a Distinguished Teacher (see p. 6), and Dr. Joe Stoltman, past NCGE president, was honored with a Special Recognition Award and atlas for his tireless efforts to promote geography education in Michigan and across the country.

Another Central Michigan University professor, Mark Francek, received an award for the best article in Geography Teacher (Exploring Global Climate Change Knowledge and Misconceptions for a Primary through College Aged Sample, 2010).

The freshwater video clip “Why Care About Water” featuring National Geographic Explorers, will be featured on the GAWeek website: www.MyWonderfulWorld.org/gaw
Free NGS Maps, Materials, and Activities

National Geographic Maps contain abundant information, but can be daunting to teachers and students. Lesson ideas developed by Michigan Geographic Alliance can help teachers simplify NGS maps for use in the classroom. Lessons are designed to be used by groups of students, so maps are offered in sets of five. To order materials, go to www.cst.cmich.edu/mga/order materials. Downloadable lesson plans for most of our maps are available under “online teacher resources” on the website. The following materials are currently on hand:

**Limit 2 sets per teacher**

- Africa: The Human Footprint
- From Sea to Shining Sea (Oceans)
- Soccer Unites the World
- The Dividing Link (Mexico and Central America)
- Changing Climate
- China (and the Forbidden City)
- Iran (and Persia)
- Middle East and IRAQ
- Southeast Asia (and the Khmer Empire)
- GAW materials

Alliance Co-coordinators Joseph Stoltman and Michael Libbee, along with geography educators from the Oregon Geographic Alliance and the National Council for Geography Education stand in front of an Inuksuk – an Inuit Stone statue used to mark trails across the Canadian North. They were attending a conference on Canada and the American Curriculum sponsored by the Canadian Embassy and the Canadian Studies Centers. Geography educators represented the largest single group at the conference.

See our website (www.cst.cmich.edu/mga) for suggestions about curriculum resources on Canada.

Geography has made us neighbors. History has made us friends. Economics has made us partners. And necessity has made us allies.  


The Great Lakes are affected by three prominent air systems: a very dry and cold arctic system which comes from the North, another dry, but warm Pacific system that comes from the West, and finally, the system that evens it all out, a warm, wet tropical system from the south and the Gulf of Mexico. (Science Daily, January, 14th, 2009.)
Scoping out Scale

Teaching students the skill of using scale is often done by asking them to compute the miles between two places. Here are some fun cities in the US for students to travel between: (and distances from Mapquest)

A National Geography Bee contestant after tough state finals:
From Superior (Wisconsin) to Humble (Texas) **1320 miles**

A description of a geography course throughout the semester:
From Easy (Indiana) to Difficult (Tennessee) **310 miles**

Lesson activities developed by newly trained MGA Teacher Consultants
From Bland (Florida) to Allgood (Alabama) **462 miles** OR
From Soso (Mississippi) to Brilliant (New Mexico) **1058 miles**

Geography students (and teachers) from September to June
From Melancholy (Mississippi) to Carefree (Arizona) **1480 miles**

Geography students (and teachers) from June to September
From Happy (Texas) to Bliss (Idaho) **1191 miles**

Middle school students in general:
From Odd (West Virginia) to Cool (California) **2526 miles**

Geography Teachers in general:
From Clever (Missouri) to Wise (Iowa) **470 miles**

More Interesting City Names
Pick two of these towns, plot a route between them, and tell why you would want to travel to this place.

<table>
<thead>
<tr>
<th>City 1</th>
<th>City 2</th>
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</thead>
<tbody>
<tr>
<td>Eclectic, AL</td>
<td>Hell, MI</td>
</tr>
<tr>
<td>Mystic, CT</td>
<td>Surprise, AZ</td>
</tr>
<tr>
<td>Dull, TX</td>
<td>Heaven, MA</td>
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<tr>
<td>Calm MO</td>
<td>Faith, SD</td>
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<tr>
<td>Hope, AR</td>
<td>Noble, OK</td>
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<tr>
<td>Somber, IA</td>
<td>Loyal, WI</td>
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<td>Glory, GA</td>
<td>Joy, IL</td>
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<tr>
<td>Utopia, FL</td>
<td>Devine, CO</td>
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<tr>
<td>Comfort, NC</td>
<td>Grand, CO</td>
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<tr>
<td>Liberal, KS</td>
<td>Paradise, UT</td>
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<tr>
<td>Delight, NC</td>
<td>Love, IL</td>
</tr>
<tr>
<td>Patience, PA</td>
<td>Tranquility, OH</td>
</tr>
</tbody>
</table>

Census in Schools [http://www.census.gov/schools/for_teachers/](http://www.census.gov/schools/for_teachers/)
Lesson Plans — Please check back often for new Census in Schools lessons and information to help teachers and students learn about the importance of the 2010 Census.

Teaching Ideas — Ideas for you to incorporate census information into the classroom. History, graphing, collecting and understanding data, and more!


African American Teaching and Learning Modules. [http://www.charleswrightmuseum.net/](http://www.charleswrightmuseum.net/) There are 4 modules which can be done in a lab setting or in work stations or up front by a teacher with an LCD projector or SmartBoard.

These interactive modules and additional materials (time-line, interactive map, glossary and teacher’s guide) all work together to provide students and teachers with the knowledge needed to meet the Grade 5 GLCE’s.

Carbon Calculator from LifeWeb and WCMC-UNEP
Interested in knowing the carbon content stored within a particular protected area in North America? The LifeWeb and WCMC-UNEP [www.cbd.int/lifeweb/carbon](http://www.cbd.int/lifeweb/carbon) have created an interactive carbon calculator that allows the user to calculate the initial estimates of carbon values for the protected areas found in the CEC’s database or any polygon drawn on a global map.

GO GREEN!
Check out how you can “GO GREEN” with this newsletter on page 12.
Headquartered at Central Michigan University

MICHIGAN GEOGRAPHIC ALLIANCE RECEIVES SUPPORT FROM THE NATIONAL GEOGRAPHIC Education Foundation

The Michigan Geographic Alliance newsletter is a semiannual publication. This newsletter is posted on our website, www.cst.cmich.edu/mga. In honor of trying to ‘go green’, you can choose your method of newsletter delivery: have it sent by email (pdf), continue to receive a paper copy, or read it on the site (Newsletter Archives).

Visit www.cst.cmich.edu/mga and CLICK “Join the MGA Information Family” to send us your current information. We would encourage all newsletter recipients to provide us with an update and tell us their preferred method of receiving MGA communications.

Please feel free to email your information or preference to: mga@cmich.edu or call 1-800-279-1423.

We invite your suggestions and articles for publication. Submissions should be sent to our address or emailed to mga@cmich.edu. If you have any questions or comments, please call 1-800-279-1423.

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