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annual golf outing
helped fund the following
educational experiences
for hundreds of youth
throughout Michigan.**



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We couldn't raise the Education Grant dollars without you!

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Multi-Hole Sponsors:



"Remember Dave, it's not the winning that's important... Well actually it is, I'm just trying to make you feel better..."



received **22 grant requests** in excess of **\$46,600**

Selected 7 for a total of **\$15,281** in grant money...

Evaluations took into consideration:

1. Hands-on environmental experiential education
2. Quality/uniqueness of the educational experience (underserved populations)
3. Geography and populations
(4 corners NSEW & greatest impact #'s)
4. Effort is made to fully fund programs to ensure viability of the program

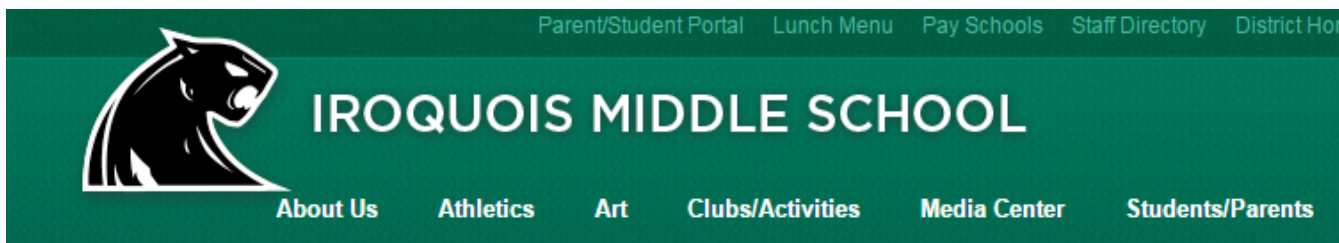


The recipients of the 2015 MAEP grants are:

<u>Chippewa Valley Schools</u> (SE Mi) CRWC Streamleaders	\$949.00
<u>Detroit Public Schools / Drew Transition Center</u> (Detroit) Urban soil science and gardening	\$2,262.00
<u>Dollar Bay</u> (U P) Environmental impact of mining	\$2,407.00
<u>Friends of the Rouge</u> (SE Mi) Rouge Education Program	\$2,500.00
<u>MAEOE (Mi Alliance of Env and Outdoor Ed) Teacher Conference</u>	\$1,000.00
<u>Mid-Michigan Environmental Action Council</u> (Lansing) Water Quality Program	\$2,274.00
<u>U of M Dearborn</u> (SE Michigan) Outdoor Ed for Visually Impaired	\$1,930.00
<u>Zeeland Public Schools</u> (West MI) Outdoor Classroom	\$2,500.00

TOTAL

\$15,281



Six years of classroom teaching and tutoring experience in math, science, and literacy classes at Iroquois Middle School in the Chippewa Valley Schools. Earned Bachelors of Science in Elementary Education from Oakland University, and Masters of Education in Principalship from Saginaw Valley State University. Member of the Michigan-Shiga Student Exchange Committee, participated in the New Zealand Teacher Exchange Program, and received Oakland University's Keeper of the Dream Award. Professional interests include instructional technology, curriculum development, and educational leadership. Personal hobbies include biking, reading, and traveling. Enjoys spending time with family, friends, and colleagues.



Mr. Mike Lerchenfeldt
7th & 8th Grade
Math and Science
Teacher

**AWARDED \$949.00 to participate in
CRWC Stream Leaders Program**



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Stream Leaders

Classroom Water Quality Monitoring Program For Students

Stream Leaders gives students an in-depth understanding of their natural world and how it affects them, while promoting interdisciplinary learning.

Students learn skills that are useful and relevant outside of school, and are encouraged to become informed, responsible citizens and life-long learners.

The Stream Leaders program is intended to provide students with an educational experience in water quality monitoring, data interpretation, and citizen action, as well as provide general information to local officials concerning water quality.

First, students and teachers get in the river and examine the chemical constituents of the river, inventory physical stream-side conditions and land uses that may affect water quality, and sample the aquatic biological communities to evaluate the health of the river.



CHARLES R. DREW
FIRST INDEPENDENCE
BANK



Drew Transition Center

Serving Special Needs

Charles R. Drew Transition Center is a vocational center for Moderate and Severely Cognitively Impaired, Visually Impaired, Hearing Impaired, Physically Impaired, Otherwise Health Impaired, and students with Autism. Drew, which serves post-secondary special education students ages 18-26, is a one-of-a-kind center-based educational facility that has created a continuum of services for students with disabilities to ensure students have access to an age-appropriate learning environment. We believe the transition process is best experienced through authentic life training and real world connections. Students are prepared for the world of work and to become productive citizens with the necessary skills that will increase their quality of life.



DETROIT
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SCHOOLS

Some of our offerings:

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- Working Bank
- Laundry Facility
- Beauty Salon
- Retail Clothing Store
- Convenience Store
- Fitness Center
- Post Office
- Food Program
- Music
- Dance
- Glee Club
- Media Clubs
- Special Olympics
- Outdoor Hoop House
- Community Garden



Enroll a child today! Call: 313.240.4377 or visit detroitk12.org/enroll



SEE IT BELIEVE IT
DETROIT PUBLIC SCHOOLS

MICHAEL CRAIG

PRINCIPAL AVEDISIAN, THE ENTIRE
DREW STAFF AND TEACHERS AND
STUDENTS, THANK YOU FOR
YOUR SUPPORT!!



Drew Transition Center Michael Craig Teacher of the Year 2015



2015 TEACHER OF THE YEAR

Awarded \$2,262.00

URBAN & HYDROPONIC GARDENING Hands-on Experiential Education and Skills Training for individuals with impairments

2c. Educational objectives.

There are numerous educational objectives to be taught with each of the project components in our school community garden plan. After an exhaustive search through many data bases in Michigan and beyond, we have adopted, for our vocational, work skills-based special education school building, the curriculum standards and guidelines from the Denver, Colorado Urban Gardens organization. Established in 1985 to assist residents in creating sustainable, food-producing neighborhood garden programs, the Denver Urban Gardens operate over 145 community gardens throughout the Denver area, providing expertise to communities and curriculum recommendations to school garden programs through combined efforts with the Colorado Department of Education and the Colorado School of Public Health. The Denver Urban Gardens curriculum investigation into health, earth and life science curriculum that is best suited for our students meets the needs of our students. The

In addition, our Year-Round, In-School Community Garden project will allow for the recognition of the many benefits offered by using Hydroponic growing methods. With the NFT (Nutrient Film Technique Hydroponic Table, students will experience, in a real-life setting, how Hydroponics differ from growing food in soil mediums by understanding that:

- Increasing students' daily intake

- You can create a hydroponic garden in any indoor space
- You have complete control over the nutrient balance given to plants
- Hydroponic growing uses up to 2/3 less water
- Hydroponic growing is less expensive than soil-based growing
- Hydroponic gardens are far more productive for their size, producing better tasting, more nutritionally sound produce
- Growing season is year-round



Drew Transition Center Mini-Doc

<https://www.youtube.com/watch?v=aG6lobWp51Y>



Environmental Education Lab Initiative (EELI)

Awarded \$2,407.00



US NEWS AND WORLD REPORT

DB-TC is a repeat bronze award winner of U.S. News & World Report's Best High Schools honor. The Best High Schools project identifies the country's top-performing public high schools. The goal is to provide a clear, unbiased picture of how well public schools serve all of their students – from the highest achieving to the lowest achieving – in preparing them to demonstrate proficiency in basic skills as well as readiness for college-level work. We are proud to be among the best in multiple years' data rankings.



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Our focus – hands on, inquiry based environmental education.

Living in an area full of natural beauty, with lingering environmental damage from copper mining, we are in a unique position to study causes and effects of pollution, as well as mitigation of current and future environmental impact.

Lab equipment would allow our class to work on solutions to the environmental damage in our area.

Our work would involve student water sampling and analysis, both in the field, at a nearby remediated Superfund site, and back at our school lab with the lab equipment funds.

Our desired outcome is for students to develop meaningful, deep connections between science concepts and real world applications. Ultimately, our goal is for students to recognize the importance of proactive environmental stewardship.



Before this lab work, our Life Science teacher was able to take some of our students to Torch Lake nearby for onsite water quality testing. We will continue to use our new equipment in our lab studies. The students are very much enjoying technology. They are finding it very intuitive to use and I am seeing a deeper conceptual understanding already as a result. I cannot express how fundamentally this lab technology assists us in a hands-on, inquiry approach to Environmental Education. We are so very appreciative!



Jenny Butler-Meade
Math & Science Teacher
Dollar Bay-Tamarack City Area High School

Rouge Education Project

What is the Rouge Education Project?

The Rouge Education Project (REP) is a multidisciplinary, school-based initiative to raise awareness of pollution in the Rouge River among K-12 students, and encourage them to take action to restore and protect the river. The project's focus is the study of the Rouge River: its history, current issues, how to **monitor** its health, how to restore it, and how to become its steward. As a water quality monitoring and watershed education project, the REP engages students' interest, concern, and commitment through real-world education. The project also builds school-community-university partnerships through corporate sponsors, corporate volunteers, and **trained volunteers** who assist teachers participating in the REP. The project is coordinated by Friends of the Rouge.

Schools and teachers [click here](#) for more information about the REP!

Who participates in the REP?

All public and private elementary, middle and high schools within (or with an interest in) the Rouge River watershed are eligible to participate in the REP. The program began in 1987 with 16 high schools, and has had as many as 100 elementary, middle and high schools participate in a given year. Typically, 30-40 schools join annually.

What does participation in the REP involve?

Schools participating in the REP learn background information about the Rouge River watershed in the classroom, and then take a field trip to a unique sampling site along the river on "Monitoring Day." At the site, students take multidisciplinary steps to investigate the health of the river. They monitor up to nine **chemical parameters**, conduct a survey of the physical conditions, and sample for **benthic macroinvertebrates** (aquatic organisms). From their results, they calculate a standardized numerical value that indicates the relative health of the river section surveyed. What do students gain? Check it out [here](#).

**Multidisciplinary
Hands-on experiential
Real-world education
30 – 40 schools annually**

Awarded \$2,466.00

How is the REP financially supported?

The REP is financially supported by corporate sponsors, foundations supporting environmental education, and other grants received by Friends of the Rouge.

The program also relies on small contributions from participating schools.

Thank you to our 2014-2015 sponsors:

- Consumers Energy Foundation**
- Daughters of the American Revolution (with endorsement from the local Colonel Joshua Howard Chapter, Dearborn)**
- LUSH Cosmetics Charity Pot**
- Masco Corporation Foundation**
- Michigan Association of Environmental Professionals**
- Quicken Loans**
- Arch Environmental Group, Inc.*
- Garden Club of Dearborn*
- 4M Industries, Inc.
- General Motors: Romulus Engine
- Hubbell, Roth & Clark, Inc.

**contributed \$2,500 or more

*contributed \$1,000

How can I get involved?

The first round of applications begins in August. Applicants have already been received for 2015-2016.

Once all applications are received, they will be reviewed and the Program Manager will follow up with the applicant. Resources are limited and not

Learning about Watersheds





Promoting environmental literacy through education.



2015 Conference

110 Conference Attendees - reached UP educators, professors, and environmental professionals!



MAEOE received a \$1,000 MAEP Grant



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Okemos
High School

Awarded
\$2,274.00



Teacher Dave Chapman

- Physical Science
- Advanced Earth Science

Clubs & Extra-curricular Work

- * Earth Club/Students for Environmental Action
(environmental club)
- * Oceanography Club
(Great Lake Ocean Science Bowl)
- * Greenhouse Club
- * Science Department Chair

Lake Lansing Limnology Program

MSU Sailing Center now offering program where people go out on Lake to test and analyze water quality.



2a. Name of the environmental project.

LIMNO: Lake Investigations & Michigan Nature Observing

2b. Description of the project.

Participants will be taken out on Lake Lansing by boat and carry out a number of limnology tests and observations. Sampling will be done in at least 2 locations for comparison. Pre and post trip discussions and observations will compliment the trip to help participants understand the ecological health of the Lake and its stage in eutrophication. Focus will be small lake ecology, human impacts on such lakes, consequences to human use of the lake, and some basic science.

This grant will be used to train volunteer docents, take youth leaders on a trip, acquire some needed equipment, and create a quality, sustainable inland lakes program in mid-Michigan.

Observations and measurements taken on the lake will include: nitrates, phosphates, total dissolved solids/conductivity, temperature, dissolved oxygen, depth, color, turbidity, *e. coliform*, sediment types (with grab sampler), and categorizing of productivity with plankton tow, observation of macrophytes, and identification of macro-invertebrates collected with leaf traps. Invasive species will also be identified and discussed.

2c. Educational objectives.

Participants will be able to:

- A. Describe the current ecological health and trophic state of the Lake.
- B. Describe at least four standard limnology tests/observations, explain the significance of each, and what types of professionals use these tests.
- C. Describe both natural and human made events that impact the lake in terms of health and eutrophication.
- D. Explain how changes in health and eutrophication can impact the uses of a lake by humans.



Environmental Interpretive Center



UNIVERSITY OF MICHIGAN-DEARBORN

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National Federation of the Blind of Michigan

Changing what it means to be blind in Michigan

Awarded \$1,930.00



Michigan Parents of Children
with Visual Impairments

Michigan Parents of Children with Visual Impairments

MPVI

an affiliate of the National Association for Parents
of Children with Visual Impairments (NAPVI)

http://www.michigandifferencemakers.com/Donna_Posont



That's why Donna earned the title of "Difference Maker."

DONNA'S STORY

Donna Posont arrived to University of Michigan–Dearborn as a blind, nontraditional student.

Needless to say, Donna faced some challenges early on in her college career.

That includes learning how to operate a computer with speech software in order to communicate with her professors.

But Donna wouldn't let anything stand in the way of her dreams. So she pressed on toward her goal of sharing her love of nature with other blind people.

"By pursuing my dream of learning nature and sharing the information, I also had instilled confidence in blind children that they could be successful at interacting with their natural environment," she said. "I have made a difference in the lives of others by providing opportunities and activities that have increased their awareness of the world they live in."



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[Policies](#) [Licensing Requirements](#)



2a. Name of the environmental project.

Beyond Batty

2b. Description of the project.

Beyond Batty: Weekend experiential learning about bat behavior, reproduction, habitat, food sources and building bat houses.

This weekend will be held at Camp Tuhsmeheeta which is a residential camp near Greenville, MI originally designated as an outdoor classroom for blind students. This environment of 300 acres in the woods with cabins, dining hall, woodshop, lakes and trails, is the perfect place to begin to understand bat behavior. Because the camp has all one would need for a weekend of fun while learning, it has been selected as habitat for the weekend experience.

Blind students and their families can travel from around Michigan to be immersed in educational activities, games and interactive lectures that promote bat awareness. After understanding the importance of protecting bats in our environment students will have the opportunity to build bat houses to have mounted at the camp or take home to help with mosquito populations in their own yards.

A woodshop complete with tools and vice grips lends to the need to hold this weekend event at Camp Tuhsmeheeta. It is important that blind students experience woodworking and gain confidence in their abilities to contribute to environmental success.

2c. Educational objectives.

1. Provide knowledge about various bat species including behavior, reproduction, habitat, food sources.
2. Promote awareness of different forestry habitats such as deciduous and coniferous woods.
3. Engage senses other than sight for environmental understanding, for example, listening to woodpeckers.
4. Gain confidence in mobility skills while traveling the trails as blind participants.
5. Motivate stewardship of the environment.
6. Create opportunity for ecological discovery.
7. Ignite a sense of wonder for the natural world.



Riparian Enhancement Brower Drain

Awarded \$2,000.00



Mead-Johnson Nutritionals created this wetlands property and donated the 3.4-acre plot on 100th & Riley to Zeeland Public Schools in 1994. This wetland site was enhanced in 2000 by Zeeland High School building trade students and teachers. It will be used for scientific observation and classroom instruction. Funded by a \$20,000 grant from the Community Foundation of the Holland/Zeeland Area, the project drew help from a number of community organizations, including the Macatawa Area Coordinating Council, the Holland Homebuilders Association, Zeeland Lumber, Ace Builders of Zeeland and Zeeland Chamber of Commerce. The picturesque educational setting consists of the pavilion, ponds, trails and boardwalk bridges that allow for the contemplation of nature and scientific study

Zeeland Public Schools Wetlands Demonstration Site (2002)

The Zeeland Public Schools Wetland Demonstration Site was one of the very first implementation projects completed by the MACC. The project was carried out in partnership with Mirant and Mead Johnson and funded through a grant from the Michigan Department of Environmental Quality. Since its completion in 2002, the wetland demonstration site along the Brower Drain on Zeeland Public Schools (ZPS) property has provided a living classroom for ZPS students. The 2.1 acre wetland system, comprised of the east and west wetlands just south of Riley Street, makes for a wonderful walk. The wetlands class at ZPS wrote and published a [ZPS Wetlands Trail Guide](#) to help identify the wetland plants that are visible. Click here for an [aerial view](#) of the site.



The site was dedicated in May 2003 with a ribbon cutting ceremony that consisted of speeches by local Senator Wayne Kuipers, the Superintendent of ZPS, the MACC, the Watershed Project, and student representatives that were involved in the design, construction, and development of the site. ZPS was also named the "Watershed Stakeholder of the Year, 2003" and presented with an award during the ceremony.



Zeeland East Wetlands Plant Trail Guide



The Zeeland East Wetland Area is a five-acre property, which was donated to Zeeland Public Schools by Mead Johnson and transformed into a functional wetland/outdoor learning center/community recreation area.

This wetland area contains an open pond wetland, two streams, hiking trails, observations decks and an outdoor classroom area.

Students from grades kindergarten through twelve use the area for hands on real life learning experiences and many people from the community use the trails for biking, hiking and observation of the flora and fauna in this beautiful setting.



Since 2003, Jennifer Soukhome has taught a wetland ecology course that uses the area as their main classroom.

The students are able to learn about the environment by observation and hands on work instead of from a text book in a classroom.

They collect data on many attributes of the area, see the impact of a growing population on the plants and animals and share their knowledge and skills by becoming the wetlands teachers to elementary and middle school students.

A Zeeland West High School science teacher has turned the labs she uses to teach students about wetlands into a manual that can be used by all high school science classes.

Mrs. Soukhome has started an Advanced Placement Environmental Science class (APES), which after learning about remediation and restoration wrote a property management plan for the Zeeland East Wetland.

The APES students spent time analysing data collected by previous years Wetland Ecology students in the areas of plant diversity, water quality and macroinvertebrate diversity to guide them toward making a list of improvements that could be made on the property.

They spent time researching viable goals using Michigan Department of Natural Resource wetland property management guide as they planned out their goals for the property.

They then wrote their goals, objectives and actions steps and presented the property management plan to our upper administration.

The district's high school principals, superintendent and director of buildings and grounds all are in support of the property management plan.

The students then had their property management plan vetted with senior certified ecologists from Hope College, a local college in our area, which Mrs. Soukhome has worked with for ten summers.

The Brower Drain, which is one of the streams on this property, is part of the Macatawa Watershed. This watershed area has received local, state and federal attention with the goal to lower the phosphate levels in Lake Macatawa, which drains into Lake Michigan. The riparian soil and streambed soil, like all the soil in this watershed, is high in phosphorus. Much work has been done by Hope College and community organizations to limit the amount of sediment making its way to Lake Macatawa, thereby, lowering the phosphate levels.

This project aims to increase the biodiversity of the Zeeland Public Schools East Wetland by re-establishing native vegetation there, which, in addition will help lower phosphate levels in the local watershed by decreasing erosion.

Students will be responsible for the initial plantings and monitoring them. They will also collect biodiversity data that will be displayed in GIS maps. Fencing will be put in place to prevent trampling of the vegetation by hikers and bikers.

Wetland Ecology Calendar

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Wetland Ecology
 Wetland Ecology

Today November 2015

Print Week Month Agenda

Sun	Mon	Tue	Wed	Thu	Fri	Sat
Nov 1	2 Wetlands- Outside	3 Wetlands-Outside	4 Wetlands- Outside	5 Wetlands-Inside	6 Wetlands- Inside	7
8	9 Wetlands-Inside	10 Wetlands- Quiz	11 Wetlands-Outside	12	13	14
15	16 Wetlands	17 Wetlands-Outside	18 Wetlands	19 Wetlands- Quiz	20 Wetlands- Outside	21
22 Wetlands	23 Wetlands	24	25	26	27	28
29	30 Wetlands	Dec 1 Wetlands	2 Wetlands	3 Wetlands	4 Wetlands	5

9:30 PM
11/30/2015

10 days out of 19 spent outside in September
 11 days out of 20 spent outside in October
 6 days out of 20 spent outside in the wetland in November

CONGRATULATIONS

MAEP 2015 GRANT RECIPIENTS!!!

**MAY
THE
FORCE
BE WITH
YOU**

Thank you for educating our next generation...

