

Michigan Green Schools Recognition Program

Environmental Stewardship Activities

To earn a Michigan Green School designation, schools must **do at least 2 activities in each of the four categories** listed below and have their application approved by their county coordinator. These new categories and activities will go into effect on July 1, 2009 pending approval by the Michigan Legislature.

Three Levels of Achievement:

Green School earns 10 points

Emerald School earns 15 points

Evergreen Schools earn 20 points

Category I: Reduce /Reuse/ Recycle / Use of Renewable Resources at School

1. The School/Students reduce use of resources: (explain)

The student environmental group in the high school has just kicked off “The Year of Using Less”(“10” is half of “20” in the year 2010) with a drive to promote the use of personal reusable water bottles rather than continue to throw away/recycle plastic beverage containers. Their presentation was based on the following web-based graphic: <<http://www.onlineeducation.net/2009/12/10/the-facts-about-bottled-water/>> A school water bottle has been designed and will be sold through the school’s “Spirit Shop”; all faculty and coaches have already received these water bottles to set an example for the students. The Admissions Office has ordered enough of these water bottles to give to each new student as a way to start them on the path of personal water bottles.

2. The School/Students coordinate a recycling program for (highlight your choices):

- | | | |
|-------------------------|---------------------------------|-------------------------|
| ▪ office paper | ▪ newspapers/magazines | ▪ cardboard |
| ▪ plastic water bottles | ▪ computers & electronic wastes | ▪ fabric / clothing |
| ▪ metal / cans | ▪ batteries | ▪ CDs / DVDs |
| ▪ printer cartridges | ▪ cell phones | ▪ glass |
| ▪ Other: Styrofoam | ▪ Other: Motor Oil | ▪ Other: Outdated books |

In addition, the parent organization of the school conducted a Book and Media Drive during the fall. Books, videos, and DVDs in good condition were recruited and sorted for possible resale through a locale book-reselling business. If materials couldn’t be sold, the best were taken to the Reuse center and the remainder was taken to the drop-off facility on Ellsworth Road. The parents presented a program at an all-school assembly to show how the project was beneficial on many levels, including the reduction of landfill trash, and making books available to interested people who are on a lower income.

3. The School/Students compost food / organic wastes at school.(explain)

Coffee grounds, fruit, and vegetable wastes are composted from the faculty room. All 9th grade students have studied composting and set up experiments to test variables important to establishing a composting program for our dining room. They conducted a survey of dining room trash over several days to get a base line of volumes of various kinds of trash. From the volume of compostable trash collected each day, students now have an idea of the size of the composting program we are undertaking. Two or three different styles of compost bins/piles will be set up as soon as the ground thaws. In addition, the sixth

grade has made a commitment to vermicomposting, to start the education process sooner and have it work through the school.

4. The School/Students conduct a Waste-Free Lunch Program.(explain)
The middle school Environmental Club planned and carried out a No-Waste Lunch competition in early December as a way to introduce the concept of Waste-Free Lunch; homerooms of a given grade were competing against each other. More such lunches are planned for this second semester.
5. The School/Students adopt a policy of buying recycled, biodegradable, locally produced, and/or less toxic food, school supplies, etc.(explain)
The Maintenance Department has switched to all green cleaning supplies and all fully-recycled-content paper supplies and trash bags.
The administrative offices have all school publications printed on recycled content paper.
Reusable bags are promoted by the business office by using the school shopping bag for each student's books and supplies at the start of the school year.
6. A project (designed by school) is approved by county coordinator by December 1st of each year: (please explain)

Category II: Energy

7. The School (at least one teacher) teaches a unit on alternative energy.
Energy is a key focus of units in most of the science courses, but is the theme of the entire year in the 8th grade curriculum. It is in this course that students have a long unit on alternative energy: "In the final 8th grade unit, "Where will the energy come from for everything in my house to be powered in the future?" energy is explored by further investigating electricity and the dependency we have on it as a society. Through teacher and student designed investigations and lessons, students explore the benefits and challenges of various alternative energy sources for producing electricity. Students engage in an exercise to generate an energy plan that would supply energy for the masses and defend their proposal. Students then determine the energy required to run the appliances in their homes and the cost to do so by examining their own energy bills. Students utilize actual data that our school's wind turbine, solar panels and geothermal units generate to explore the costs of installing a variety of alternative energy sources in their homes and determine how many years it would take for the cost of the installation to be profitable for them."
8. The School uses alternative energy, renewable fuels, or specialized energy-efficient technology in its operations.
The Class of 2007 raised funds to donate a Savonius Wind Turbine to the school which has been operating for a couple of years. Soon to go on-line is a geothermal heating/cooling system for a new addition to the building (the wells were being drilled in February). Also as a part of the new addition, solar panels will be installed on part of the roof that will allow students to run experiments with angle of panels as well as type of solar collectors used. The flat expanses of the new addition will be covered with a green roof.
9. The School implements an energy savings program and may track the results.
Energy savings are obtained with thermostat set-backs, programmed for different zones of the building; conversion to high-efficiency fluorescent tubes; and installation of occupancy sensors in all restrooms, computer labs, and several storage areas, with more such installations to come. When existing appliances and equipment are replaced, Energy Star appliances are purchased whenever possible. We have just submitted an application to the Michigan Renewable Schools Program for their Energy Efficiency grant, to have the older parts of the school professionally audited for energy efficiency and develop from that a list of improvements with the cost/payback ratios for each.
10. Students perform energy audits at home and educate their families/community.
See the section just above, Question #7. Some of this is done in the 8th grade science curriculum.

11. Students are involved in a project or event to promote improved vehicle fuel efficiency.
12. The school sponsors an alternative energy presentation, project, or event.
13. A project (designed by school) is approved by county coordinator by December 1st of each year: (please explain)
 1. Members of the high school Environmental Club have created Google Maps of all the families in each grade level, which have been posted on the school's internal website. Parents interested in carpooling possibilities can open these maps and click on the bubbles from their neighborhood to get names and addresses of families to contact.
 2. The school has just recently (December 2010) been designated a Waste Knot Partner in Washtenaw County.

Category III: Environment

14. The School / Students participate in activities promoting the health of the Great Lakes watershed

Our 7th grade science curriculum focuses on the theme of water, which includes a study of the small stream that arises on our property and feeds into Fleming Creek, then the Huron River, and ultimately Lake Erie. From the 7th grade Science course description: “*How clean is the water behind our school?*”, an interdisciplinary project, focuses on earth science, biology, chemistry and environmental science concepts within a sustainability framework. Concepts include water quality, pH/acids/bases, solutions, thermal pollution, turbidity, density, watershed, topography, point and non-point source pollution, water distribution etc. Using sensors attached to portable technology tools students collect pH, temperature, conductivity and dissolved oxygen data at a nearby stream. They also collect a variety of qualitative data. Students collect and systematically analyze data during the fall and again in the spring and look for patterns and trends to determine the quality of the stream for supporting life. They also look at how their actions outside in the mini-watershed can adversely affect the quality of the stream. The project culminates with an interdisciplinary public speaking unit where students connect their science learning with the local community as they share their knowledge through formal presentations. “
15. The School teaches a unit on environmental issues facing Michigan.
16. The School has a garden project (vegetable, rain garden, native plants, butterfly, etc.).

Through the organization and planning of a parent volunteer, students worked and planted a Project Grow plot at Matthaei Botanical Gardens last spring and summer and will do so again for 2010. All of the harvest went to Food Gatherers and the St. Andrews Breakfast program. This year, a senior student will be involved in the organization and planning as a part of her senior project.
17. School has a wild/domestic animal habitat project (birdhouse, bat house, apiary, agricultural sciences, or other project approved by the county coordinator).

Our sixth grade continues to monitor the bat houses and birdhouses that were mentioned and documented in our 2008-2009 application.
18. Students participate in a local community environmental issue by doing activities such as: letter-writing, attending public hearings, raising funds to protect land, community outreach/education, etc.

Every fall, our 7th grade completes a class service learning project with Natural Area Preservation of Ann Arbor. This past September, they worked at Barton Park on a trail-chipping project to help prevent muddy run-off into the Huron River. Here at Greenhills, the same students have continued their work on making trails on school property (described in last year's application) that connect with our neighbor to the north, Glacier Hills Retirement Community. Two bridges were constructed to enable visitors from the Retirement Community easier access to the trail system.

19. A project (designed by school) is approved by county coordinator by December 1st of each year:
_____ (please explain)

Category IV: Miscellaneous Projects

20. The School/Students have adopted an endangered species and informs others.
The school has a membership in Roots and Shoots, the environmental organization set up through the Jane Goodall Foundation. Through that organization, students actively organize fundraisers to support The Orangutan Foundation. In the fall of 2009, one of the 9th grade girls made presentations to all of the middle school classes on the plight of orangutans and the role that palm oil plantations have in that, and then organized a fundraiser dance for the middle school students. \$800 was raised for The Orangutan Foundation from this effort.
21. School/Students host an environmental or energy speaker, event, field trips, etc.
The high school environmental club has worked with a group of graduate students from the School of Natural Resources at the University of Michigan to learn strategies for educating people in a way that more effectively promotes behavior change, especially on environmental issues. They are keeping these strategies in mind as they plan “The Year of Using Less” events and campaigns.
We have also arranged for a guest speaker for the whole school on Earth Day (see below).
22. The School/Students have an active club participating in environmental activities.
Both the middle and high schools have very active environmental clubs that meet weekly.
23. The School demonstrates preparation for an Earth Day event (Earth Day is April 22).
We have a special schedule on Earth Day that allows us to have a guest speaker for an hour. We have arranged with Dr. Andy Hoffman from the U-M School of Natural Resources and Ross School of Business to be our featured speaker. He is the co-director of the Erb Institute and has interests in developing strategies for sustainability.
24. A project (designed by school) is approved by county coordinator by December 1st of each year:
(please explain)

Application completed and submitted by:

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