SPRING 2014 EDUCATORS NEWSLETTER

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Walking trails are open to the public every day from dawn to dusk.

Bunker Interpretive Center (BIC) hours

**Academic year:**
M–F 9 a.m.–5 p.m.

**Summer:**
M–F 8:30 a.m.–4:30 p.m.

Closed weekends and holidays.
Admission to the trails and BIC is free.

1750 East Beltline Ave. SE
Grand Rapids, MI 49546

GARDENING FOR NATURE: Creating Sustainable Landscapes for School, Home & Business

This conference outlines the principles and techniques involved in creating sustainable landscapes for the school outdoor learning lab, home garden, or business property. The event is designed for educators, home owners, and grounds managers interested in using native plant species to develop urban habitats. There are special educators-only sessions during the conference, which include lots of hands-on ideas about how to use native gardens as outdoor classrooms, and advice from teachers who have succeeded in creating native gardens at their schools. Landscaping with native plant species is shown to provide place-based learning experiences for all ages, improve biodiversity, reduce water and chemical use, and lower maintenance costs.

When: Saturday, June 14, 2014 at 8 am - 4:30 p.m.

Sponsor: Ecosystem Preserve & West Michigan Cluster of the Stewardship Network

Where: Bunker Interpretive Center

Cost: Stewardship Network members $35, Non-members $45. Includes a mobile workshop, lunch and refreshments.

Registration: Pre-registration is required by June 4, as space is limited to 60 participants.

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REGISTER TODAY FOR SPRING
PROGRAMS

Spring program topics for Pre-K to 6th grade include: Sensory Adventures, Amazing Animals, Beech Maple Forest Exploration, and Wildflowers in the Spring. These programs provide information about our local ecosystem and the flora and fauna of West Michigan, encourage stewardship, and help students develop a sense of place.

Spring programs run from April 22 - May 16. Programs are 90 minutes in length, and cost $3 per student. Currently, National Heritage Academy Schools are eligible to attend our programs free of charge, thanks to a funding grant.

For more information visit our website, or contact Julie Wilbourn to register your class. To register, we will need your name and school, desired program topic, grade level, number of students and adults, preferred dates/times, and the best way to contact you.

Like our programs? Tell others about us! Feel free to forward this e-mail to your colleagues, and spread the word that the best way to learn about the natural world is by spending time in it.

INSPIRING IDEAS FOR THE CLASSROOM

Each newsletter, we will share with you some our favorite ways to get students outside learning about the natural environment. You do not need to have forests or fields surrounding your school; school yards can work just as well for experiential learning. Our school yard activities are hands-on, require few supplies, and are easily adaptable to meet your students’ needs. Additional ideas and photos of art projects and storybooks can be found on our
CITIZEN SCIENCE: REAL WORLD APPLICATION FOR K-12 STUDENTS

Having just taught a workshop about citizen science, I want to share with you some of my favorite ways for you to incorporate citizen science projects into your classroom. These projects offer an ideal opportunity to engage students in the scientific process, create meaningful links to real-world applications of knowledge, and promote global collaboration skills. Many of the programs also help you to incorporate STEM related activities into the classroom.

~ Jeanette M. Henderson, Program Manager

What Is Citizen Science?

Citizen science is the public's participation and collaboration in scientific research to increase scientific knowledge and literacy. Through citizen science, people with little or no prior experience or training share and contribute to data monitoring and collection programs. Citizen science projects may include wildlife-monitoring programs, online databases, visualization and sharing technologies, or other community efforts. Citizen scientists range in age and scientific background, however, all citizen scientists enjoy learning more about the natural world. Many citizen science projects have a strong focus on supporting classroom instruction, and offer teaching tools to accompany the projects. As a teacher, participating in citizen science programs also builds your own scientific knowledge. You and your students can participate at the local, regional, and national levels, and even virtually.

Benefits of Incorporating Citizen Science
Projects into Your Lesson Plans

- Project-based learning provides students with real world problems and applications, which are rich in context and authenticity
- Supports common core and STEM-based learning and meets science and research goals and objectives
- A to Z list of topics available to study, including but not limited to: invasive plants, birds, bees/pollinators, phenology, migration, astronomy, weather, wildlife, archaeology, pollution, and many more
- Interdisciplinary learning which provides a “lens” for learning all subjects
- Projects support active engagement and enhance cooperative learning in the classroom
- Enhances observation skills
- Supports students learning and understanding of the scientific process (hypothesis design, data collection, data accuracy, data analyses)
- Many projects support place-based education, and enable students to learn about the world right outside their classroom
- Increases science literacy

Favorite Citizen Science Programs for the Classroom

In addition to my top five favorite programs below, our Pinterest page is filled with many more excellent citizen science programs.

1) Journey North: A Global Study of Wildlife Migration and Seasonal Change

Age Group: Elementary & Middle School
Specifically designed for classroom teachers and their students, Journey North engages students around the globe in tracking wildlife migration and seasonal change. Projects include American Robin migration, monarch butterfly migration, weather and climate, sunlight and seasons, and many more. Participants share field observations across the northern hemisphere, exploring the interrelated aspects of seasonal change. All the programs are free, provide lots of hands on instructional materials to get you started, and most are geared to
curriculum standards.

2) **Bird Sleuth**

**Age Group:** Elementary through High School

Studying birds is an accessible and fun way to bring real science to students. From making observations and asking questions, to collecting data and publishing results, BirdSleuth creates practicing scientists with resources that engage youth in their own investigations. It is specifically designed for teachers and home school parents to use in the classroom. Educators purchase reasonably priced kits to get started. This a program of Cornell Lab of Ornithology, an international leader in creating citizen science programs.

3) **Project BudBurst**

**Age Group:** Elementary through Adult

Through story and active observation, Project BudBurst offers teachers ways to integrate science and geography into classroom instruction. As a participant, you are asked to observe plants, record your observations, and submit your observations on their website. The data are being collected in a consistent manner across the country so that scientists can use the data to learn more about the responsiveness of individual plant species to changes in climate locally, regionally, and nationally. Project BudBurst provides many materials to get you started in the classroom, including correlation to national curriculum standards. This is a free program.

4) **Project FeederWatch**

**Age Group:** Elementary through Adult

Project FeederWatch is a winter-long survey of birds that visit feeders at backyards, school yards, nature centers, community areas, and other areas in North America. Participants periodically count the birds they see at their feeders from November through early April and send their counts to Project FeederWatch. Project FeederWatch data helps scientists track broad scale movements of winter bird populations and long-term trends in bird distribution and abundance. There is a small fee to participate in the program. This another program of Cornell Lab of Ornithology.
5) **Zooniverse**: Real Science Online

**Age Group:** Elementary through Adult

Produced, maintained, and developed by the Citizen Science Alliance. The member institutions of the CSA work with many academic and other partners around the world, to produce projects that use the efforts and ability of volunteers to help scientists and researchers deal with the flood of data that confronts them. Projects are listed under the following subject matter: space, climate, biology, nature, and humanities. Citizen scientists participate virtually online. Projects in Zooniverse provide an excellent resource for inquiry-based learning within the classroom or at home. Zooniverse provides teachers with lots of great resources for the classroom.

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