

Science Education Programs and Resources



The GLOBE Program™

Global Learning and Observations to Benefit the Environment

www.globe.gov

GLOBE is a hands-on, international, environmental science research and education program which links students, teachers, and the scientific research community in an effort to learn more about our environment through student data collection and observation. Having a strong global awareness of environmental issues is essential in preparing and guiding students to become responsible, future stewards of their environment. The objectives of The GLOBE Program are:

- Enable students to take scientifically valid measurements in the fields of atmosphere, hydrology, soils and land/cover biology and phenology—depending upon local curricular
 - Reporting their data through the Internet to the student archives
 - Creating maps and graphs on the free interactive Web site to analyze data sets
 - Collaborating with scientists and other GLOBE students around the world.
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Earth Force's GREEN

Global Rivers Environmental Education Network

www.green.org

Earth Force's GREEN helps young people protect rivers, streams and other vital water resources in their communities, thus merging hands-on, scientific learning with civic action. Through GREEN, Earth Force creates affordable, quality testing equipment and teacher materials. Program participants can use the materials to assess the health of a watershed and develop a sustainable plan to improve water quality in their area. GREEN kits include:

- **GREEN Program Advanced Water Monitoring Kit**
 - **GREEN Program Low Cost Water Monitoring Kit**
 - **GREEN Program Water Monitoring Kit**
 - **GREEN Program Estuary Monitoring Kit**
 - **GREEN Earthforce Elementary Field Trip Kit**
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Science Olympiad

www.soinc.org

The Science Olympiad is an international, non-profit organization devoted to improving the quality of science education, increasing student interest in science and providing recognition for outstanding achievement in science education by both students and teachers. These objectives are accomplished through classroom activities, research, training workshops and the encouragement of intramural, district, regional, state and national tournaments. The Science Olympiad tournaments are rigorous academic, interscholastic competitions that consist of a series of individual and team events that students prepare for throughout the year. The Science Olympiad is for students in elementary through high school. Some of the challenges and events of the Olympiad include:

- **Orienteering/Map Reading/Road Scholar/Get Your Bearing**
 - **Pond Study/Water Quality**
 - **Starry, Starry Night/Reach for the Stars**
 - **Rock Hound/Rocks and Minerals**
 - **Don't Bug Me/Leaf and Tree Finder/Amphibians and Reptiles**
 - **Biomass**
 - **Calculator Contest**
 - **Elements, Compounds & Mixtures**
 - **Food Web/Food Chains/Owl Pellets**
 - **Grab a Gram/Chemistry Lab**
 - **Graphing**
 - **Save Our Earth**
 - **What Went By**
 - **Wildlife Safari**
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Envirothon

www.envirothon.org

Envirothon continues the proven concepts of hands-on education with the excitement of a good competition and the fun of spending a day in the outdoors. The result is an effective educational tool that helps teachers nurture environmentally aware students and met the need to implement the teaching of environmental education. Envirothon is a series of hand-on contests in which teams of high school students compete to solve environmental problems. The event works much like an athletic competition, and the winners of that event get the chance to compete at the international level.



Adopt-A-Watershed

www.adopt-a-watershed.org

The Adopt-A-Watershed program is built around an engaging, integrated, K-12 science strategy that focuses learning on the local environment, emphasizing service in partnership with the community. The watershed becomes a living laboratory in which students and community volunteers participate in service-learning activities, making science applicable and relevant to their lives. The Adopt-A-Watershed strategy makes science come alive through outdoor field studies, restoration projects and community education projects, all of which apply grade level appropriate concepts based on national science standards to stewardship of the local watershed.



Forestry Suppliers

www.forestry-suppliers.com/s01_pages/ed_lessonplan.asp

Forestry suppliers offers lesson plans, correlated to National Science Education Content Standards, as downloads from their website. The ideas and activities included in these Lesson Plans are intended for use in classrooms where an appreciation for a better understanding of the environmental and earth sciences is the focus of the core curriculum. Lesson units include:

- Insect Study
 - Predicting the Weather
 - Measuring Soil Moisture
 - Measuring Soil pH
 - Orienteering
 - Aquatic Life Study
 - Tree Study
 - Using GPS
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The Winneshiek County Conservation Board has equipment available for several of the topics listed above. Contact WCCB about reserving equipment and having a staff person assist you in your study!

WCCB equipment includes:

- Insect nets and collection boxes
- Compasses and GPS units
- Aquatic nets and collection tubs
- Microscopes and watch glasses
- Water sampling materials
- Forest study kit
- Small animal study kits
- Backyard/Schoolyard exploration packs



www.winneshiekwild.com