



Happy New Year!

This email is part of a continuing effort to connect you (formal and non-formal educators) with conservation education news, web links and downloads received through the Forest Service (the Grand Mesa, Uncompahgre and Gunnison National Forest (GMUG)). Here is a list of links to information on environmental science education for teachers and students, outdoor classroom opportunities, grants (such as green schools), web training, videos, positions for educators, new curriculum information ("Discover the Forest"), interesting/interactive nature links and much more - all related to environmental education. Please scan through the list, you might find something that sparks you or your student's interest!

Highlights: checkout.....

- [Scientist Cards](#) - information on various science careers - great for career days!
- **Snowmastodon Project** presented on January 17 at CMU (see the attachment).
- How to make your school a [Green School](#)

Thanks you very much for your time. If there is someone else that you think might be interested in this information please forward it on. *Anne*

WATER QUALITY MONITORING TRUNKS

The GMUG National Forest has 7 water quality test kits available for check out to local middle and high schools. The kits are meant to help teachers get students outside the classroom and learn about aquatic ecosystem health. Kits contain equipment for aquatic invertebrate sampling, dissolved oxygen test, nitrogen and phosphorus concentrations tests, pH and other equipment to monitor the health of freshwater systems. Curriculum is also provided with the kits to help teacher incorporate these activities in to lesson plans. Kits are available for check out from the Forest Supervisors Office. We can work with the Forest Service offices (Grand Junction, Paonia, Montrose, Gunnison, Lake City, Norwood) to get the trunks checked out to you. Check the forest website for more information about these kits (Coordinator is Mike Carrillo mcarrillo@fs.fed.us (970) 874-6661)



Consider becoming a **GREEN SCHOOL!**

PLT Green School – is a nationwide environmental service-learning program that inspires students to take personal responsibility for improving the environment at their school, at home, and in their community. Students, teachers, and school staff receive tools, training, and resources for student-led [Green Teams](#) to create healthier schools – and save money. PLT GreenSchools! Help improve students' academic performance in science, technology, engineering, and math, develops students' critical thinking skills, and grows student leaders. See how ENERGY STAR tools can help your school improve energy efficiency by using [the GreenSchools! Energy Investigation](#) to examine our school's energy use and implement action plans to reduce energy impacts.

Where are these CE UPDATES posted?

Check out the GMUG **LEARNING CENTER** <http://www.fs.usda.gov/main/gmug/learning> (look on the right column under quick links for the CE Connections Monthly Updates). This page also has links to the Forest Service National Conservation Education Program www.fs.usda.gov/conservationeducation.

More CE information at **The Educator Tool Box** on the National Conservation Education website has more resources <http://www.fs.usda.gov/main/conservationeducation/educator-toolbox>

Links just on POLLINATORS.....

POLLINATOR'S LIVE - investigate the world of pollinators. Focus sessions included nutrition, cooking from school gardens, schoolyard habitats, People's Garden and community initiatives. Teachers were able to use Pollinator Live! as a resource to meet science standards, to involve students in becoming citizen scientists and to become knowledgeable, engaged and active conservationists. pollinatorlive.pwnet.org.

Putting food on the table (Nature Works video with lesson plans) (<http://www.natureworkseverywhere.org/video-tour/pollinators>)

The Pollinator Partnership's (<http://www.pollinator.org/index.html>) mission is to promote the health of pollinators, critical to food and ecosystems, through conservation, education, and research. Signature initiatives include the NAPP (North American Pollinator Protection Campaign), **National Pollinator Week**, and the Ecoregional Planting Guides.

Pollinator Posters (<http://www.fs.fed.us/wildflowers/features/panels.shtml>) free download

You can also download the **BeeApp**, which shows what pollinator-friendly plants to plant in your zip code: <http://pollinator.org/beesmartapp.htm>! The planting guides upon which the app is based can be found at: <http://pollinator.org/guides.htm>

SCIENTISTS AND CAREERS

The National Inquirer **Scientist Cards** – information and posters profiling various environmental scientists and what they do /education/ etc. (<http://www.naturalinquirer.org/scientists-v-92.html>)

"A Day in the Life of a Biologist." I think this is a great demo of best practices approaches that could be adapted to be used by any agency specialist engaging a classroom of kids about careers and what our agencies do. I dare say this could be used as a mini-training session for prepping a specialist with ideas before they hit the classroom: <http://distancelearning.fws.gov/videomain.html>

COOL LINKS and DOWNLOADS for all ages....

The World's Forests – newest addition to the series (<http://www.naturalinquirer.org/The-World's-Forest-2-Edition-i-32.html>) can be downloaded....info about forests in 233 countries and territories. All together, these forests are the world's forests. No matter where these forests are located, they provide benefits for people and wildlife across the entire planet. Read this edition to find out more!

Corals, oceans, climate change - National Oceanic and Atmospheric Administration (NOAA) Education pages have information for students and teachers (<http://oceanservice.noaa.gov/education/>)

Native medicinal plants- www.nps.gov/plants/medicinal

Climate Trivia: Which Animals Are Most Sensitive to Climate Change? Find out at <http://www.earthgauge.net/>
Climate change means geographic changes in the distribution of certain temperature and moisture conditions. Because most species are optimized to live within specific climate conditions, a mobile species will try to track these conditions as they expand, contract or shift to the north/south or uphill/ downhill. Less mobile species may adjust their life cycles. *Find out more....*

Classroom Earth helps teachers of all subject areas integrate environmental education into their classrooms. Visit www.classroomearth.org

Infographic: EPA Resources - Classroom Ready. View an interactive infographic with stats and resources for educators and teachers. This site offers hands-on classroom ideas on smog, water resources, water conservation, air quality, how to reduce waste, power profiler, energy efficiency, and more. Just click to [learn more](#).

BatsLIVE-A Distance Learning Adventure. BatsLIVE has launched our website (<http://batslive.pwnet.org>), and will use webinars and live broadcasts to reach kids and their educators AND the professional land management community during International Year of the Bat.

The Monarch Joint Venture (MJV) is a partnership agencies, organizations, and academic programs working to protect the monarch migration in the lower 48 United States. The MJV is committed to a science-based approach to monarch conservation work, guided by the North American Monarch Conservation Plan (2008), and is focused on activities that support monarch habitat conservation, maintenance and enhancement; education; and research and monitoring. <http://monarchjointventure.org/publications.htm>

Game Station- more computer green games than you can imagine related to bird biology (migration, nest identification, beaks etc.), energy, climate, leaky faucets, garbage, water life, electricity, beaches, volcanoes, wolf quest- and more links to NASA climate games. <http://planetconnect.org/gamestation>

Hands on the Land (<http://www.handsontheland.org/>) America's national forests, national parks, national wildlife refuges, waterways, and other public lands comprise nearly one-third the area of the United States, and offer unique teaching and learning opportunities. *Hands on the Land*, a national network of field classrooms, connects students, teachers, families, and volunteers to these special places all across America. Within the communities of *Hands on the Land* sites, public, non-profit, and private partners customize hands-on experiences using local natural, historical, and archaeological settings to bring classroom learning to life. Site has **hot topics** (wildland fire, invasive species, pollinators, oceans, climate, habitat, forests watersheds) and several **computer games** (mathhabitat, probing for pollinators and ozone inquiry). [Winter 2013 newsletter](#) – Sea to Shining Sea Live Interactive Virtual Explorations (LIVE) is a collaborative program sponsored by the National Park Service

Need to find public lands or waterways in your community or near your school? Nature Find website is a Public Lands Locator with an easy-to-use map and database-search tool using zip-code, city, or state inputs. More information: <http://www.naturefind.com/>

Talking animal video by BBC- funny <http://www.youtube.com/watch?v=R6R-Hm0enGg&feature=youtu.be>

HIGH SCHOOL

Planet Connect (PlanetConnect.org; ClassroomEarth.org) is the National Environmental Education Foundation's (NEEF's) online social network, where high school students can learn about current environmental issues, internships, environmental careers/ green jobs, funding opportunities, colleges connections, video contests, environmental games, innovative ways technology is used to for the environment, photos celebrating world oceans day, and much more- check out this site!

Eagle Scout projects? Know someone looking for an idea? How about developing QR codes for various nature trails in your area? <http://www.theledger.com/article/20121203/OUTDOORS/121209870>

5th-8th GRADE STUDENTS

The Junior Snow Ranger program is designed for children in the 4th and 5th grade. Outdoor and indoor activities are included in a colorful publication that highlights themes such as safety, wildlife, winter ecology, recreation, and the joy of winter fun. The program mission is to inspire youth to embrace a life-long relationship with the winter environment, and to become stewards of the land. The activity book highlights the role of a real snow ranger, the use of rescue dogs, and the continued importance of wildfire prevention during the winter. In addition, it teaches kids how to make their own snowshoes, similar to those that were once used in some Native American cultures.

(check it out on the GMUG website or link directly to the activity booklet) or contact [Anne Janik](mailto:AnneJanik) for booklets http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5347818.pdf

The *Natural Inquirer* is a middle school science education journal! Scientists report their research in journals, which enable scientists to share information with one another. This journal, the *Natural Inquirer*, was created so that scientists can share their research with middle school students. Each article tells you about scientific research conducted by scientists in the USDA Forest Service.

- The World's Forests
- Climate Change
- Wildland Fire
- Journals are available in Spanish

All of the research in this journal is concerned with nature, trees, wildlife, insects, outdoor activities and water. First students will "meet the scientists" who conduct the research. Then students read special information about science, and then about the environment. Students will also read about a specific research project, written in a way that scientists write when publishing their research in journals. Students become scientists when they do the DiscoveryFACTivity, learning vocabulary words that help in understanding articles.

(<http://www.naturalinquirer.org/>)

Wading into Wetlands <http://WetlandsLIVE.pwnet.org> (good for 4th-8th grade teachers/students)

Discovering the Drought (Project Wet - [Free Lesson plan](#)). Specifically designed for grades three through six, the [Project WET Discovering Drought Lesson Plan](#) contains ideas that can be adapted for other levels as well. With detailed instructions and suggestions for extensions, evaluations and more, this free resource will allow you to talk and teach confidently about the complex issue of drought

ELEMENTARY SCHOOL STUDENTS and younger....

"**DISCOVER THE FOREST**" - new curriculum that engages youth with the forest and the outdoors www.discovertheforest.org. Help young children to understand nature and the environment through science www.theinvestigator.org

The Lorax - Project Learning Tree Pre K to 8th grade [environmental education activity Guide](#)
[Discover the Forest – Lorax Page](#) (activities for students grade Pre K – 6)

Nature Play at Home - Children have a natural affinity towards nature - a guide for creating enticing outdoor play spaces as close as your backyard, patio or balcony.

[Nature Play at Home : A Guide for Boosting Children's Healthy Development and Creativity](#) shows parents and caregivers how they can turn an uninspired outdoor environment into an entertaining and exciting play area that will have kids racing to, "Go outside and play!" <http://www.nwf.org/Home/Get-Outside/Be-Out-There/Why-Be-Out-There/Policy/Natural-Play-Areas.aspx>

The **Woodsy Owl** Program consists of reading **Woodsy's ABC** book and discussing with the children how their lives are enhanced by natural.

http://www.fs.usda.gov/detail/conservationeducation/smokey-woody/woody-owl/?cid=fsmrs_100615

Looking for Woodsy and Smokey products? www.symbols.gov

Leaf Critters® are animated leaves with names that almost match that of their home tree. And they have a stewardship message: to inspire a renewal of the earth and its inhabitants. Adding the Leaf Critters® to already established programs could be a good help in having K-5 children learn their trees. Please look at the website link

provided: www.leafcitters.com. The curriculum can be tailored to any site with the trees that are indigenous there.

PRE-SCHOOL/HEAD START PROGRAMS

Growing Up WILD is one of the largest curriculum and professional-training programs that aims to bring nature study to a preschool-aged audience. The program grew out of the Council for Environmental Education's K-12 Project WILD environmental education program which releases activity guides and conducts teacher workshops. By constantly reinforcing environmental issues from a young age to adulthood, it allows citizens to make more responsible decisions as those issues are presented before them. The [Growing Up WILD curriculum](http://www.projectwild.org/growingupwild.htm) guide shows teachers how to incorporate reading, math and other basic skills into their nature lessons. For example, in one activity called "In a Grasshopper's World," students are instructed to examine a grasshopper, count its antennae and measure its size -- simple math skills that are meant to introduce students to the subjects on which they will be tested later in life. (<http://www.projectwild.org/growingupwild.htm>)

GEOCACHING

Ranger Rick Geocache – NWF has launched Ranger Rick's Geocache Trails, a fun outdoor adventure for kids and their families. NWF is looking for more parks, nature centers, and other outdoor recreational sites to serve as trail hosts in their area. Ranger Rick's trails marry GPS-enabled treasure hunting, or geocaching, with a wildlife-themed game featuring Ranger Rick and his pals from the award-winning children's magazine published by National Wildlife Federation. For more information, see <http://www.nwf.org/Get-Outside/Geocaching-Participants.aspx>.

GLOBAL TREE BANDING PROJECT

Join students all over the world working together tracking how trees respond to climate. Students around the globe are already monitoring the rate at which their local trees grow and comparing it to Smithsonian research and to other students world-wide. Once involved, you will help to create the first global observatory of how trees respond to climate! <https://treebanding.si.edu/>

ART

"Get to Know Program your wild neighbors" - Wildlife artist Robert Batman has worked to inspire youth to discover the natural world. Working in partnership with [a vast network of partners](#), this program provides innovative [programs](#), [resources](#), and [events](#). Such as calendar art contest, kid's video describing their forests, and activities such as BioBlitz, and virtual hike....[Learn more »](#)

Use **tree drawings** to engage people

<http://www.orionmagazine.org/index.php/articles/article/6602>

WEBINARS for teachers

Green teacher webinars-<http://www.greenteacher.com/webinars.html>

Some of the 2012/2013 topics include:

- Using Insects to Motivate students – Feb 7
- Community Treasure Hunts – Feb 18

US Department of Education/EPA - **Green Ribbon Schools information/webinar** series

Jan. 16, 2013, 4-5 p.m.: [Food for Thought: Space Food and Nutrition \(NASA\)](#)

Jan. 23, 2013, 2-3 p.m. Farm to School Program (USDA)

Jan. 30, 2013, 3-4 p.m. [Eyes on the Earth- Global Climate Change \(NASA\)](#)

Feb. 6, 2013, 2-3 p.m. Tools to Reduce Waste in Schools (EPA)

Feb. 13, 2013, 4-5 p.m. [Emerging "Green" Technologies: OMEGA: Offshore Membrane Enclosure for Growing Algae \(NASA\)](#)

Feb. 20, 2013, 4-5 p.m. [Climate Time Machine \(NASA\)](#)

Mar. 6, 2013, 2-3 p.m. Integrated Pest Management in Schools (EPA)

Mar. 13, 2013, 4-5 p.m. [Food and Fitness \(NASA\)](#)

Mar. 20, 2013, 4-5 p.m. [Radiation Exposure on Earth \(NASA\)](#)

Apr. 3, 2013, 2-3 p.m. The Three T's of Reducing Lead in Drinking Water in Schools (EPA)

Apr. 10, 2013, 2-3 p.m. Chemical Safety in Schools (EPA)

Apr. 17, 2013, 4-5 p.m. [Water, Exploration and the Future \(NASA\)](#)

May 8, 2013, 2-3 p.m. Drinking Water Best Management Practices for Schools and Child Care Facilities (EPA)

GRANT INFORMATION

Excellent tool for conducting funding searches - offered through the FS National Library

http://fconline.foundationcenter.org/welcome.php?menu_code=combined

[GP RED](#) is a not-for-profit organization created in 2008. Through research, education, and development, GP RED's mission is to facilitate the creation of interdisciplinary, innovative, practical management tools and strategies intended to enhance and promote integration of health, recreation, and land management industries.
