

Summer Plans? Participate In IOWATER

IOWATER, Iowa's volunteer water quality monitoring program, empowers citizens to take a proactive approach to water quality. By monitoring the water resources in our backyards, we can ensure the protection, longevity and productivity of high quality water resources, as well as evaluate, assess, and improve those of lower quality. By becoming an IOWATER volunteer you are not only provided with monitoring equipment, but you are also given the freedom to monitor wherever and whenever you choose. The program brings people closer to the landscapes that surround them and encourages them to develop a sense of place within the watersheds in which they live. This tie between ourselves and the water resources that give us life will lead to the understanding, respect, and protection of Iowa's water bodies long into the future.

Becoming involved in IOWATER is easy – workshops are held throughout the summer at various locations across the state. To register, contact the local facilitator listed on the IOWATER Workshop Schedule below. Walk into the Level 1 workshop as a citizen, and walk out as an IOWATER Level 1 Certified Volunteer Water Quality Monitor. For more information, contact Brian Soenen, IOWATER Coordinator, (515) 205-8587, brian.soenen@dnr.state.ia.us.



2007 Level 1 Workshops

DATE	LOCATION	CONTACT	PHONE	EMAIL
June 8, 5-9 PM June 9, 9 AM- 3 PM	Lee County at Southeastern Iowa Community College	Mike Sallee 335 Messenger Road Keokuk, IA	(319) 524-3221 ext. 1991	jmsallee@ scciowa.edu
July 13, 5-9 PM July 14, 9 AM- 3 PM	Polk County at Metro Park East Landfill	Mary Gillaspay 300 E. Locust, Suite 100 Des Moines, IA 50309	(515) 323-6505	mgi@mwatoday.com
July 27, 5-9 PM July 28, 9 AM- 3 PM	Cerro Gordo County at Lime Creek Nature Center	Todd Vonehwegen 3501 Lime Creek Road Mason City, IA 50401	(641) 423-5309	tvonehw@co.cerro- gordo.ia.us
Aug 10, 5-9 PM Aug 11, 9 AM- 3 PM	Clay County at Oneota Park	Jacklyn Gautsch 109 Trowbridge Hall Iowa City, IA 52242	(319) 335-1761	jackie.gautsch@dnr. iowa.gov
Aug 24, 5-9 PM Aug 25, 9 AM- 3 PM	Johnson County at Iowa City Public Works	Carol Sweeting 410 E Washington St. Iowa City IA 52240	(319) 356-5164	carol-sweeting@ iowa-city.org



EPA Needs You!

U.S. EPA is looking for preK-4th grade activities to be used in its new Kids Club. In the club, kids receive recognition for completing environmental projects and activities. Previous activities have included water conservation (turning off the water while brushing your teeth) and energy conservation (turning off the lights when leaving a room). EPA is also looking for activities a teacher can do within their classroom. Recognition will be given on the website

www.epa.gov/kids if your activity is used. Contact: Megan Gavin, gavin.megan@epa.gov or (312) 353-5282 for additional information.

June 2007



**Reduce
Reuse
Recycle
Renew**

For Our Future



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4Rs is produced by the Iowa Recycling Association, a non-profit organization dedicated to reducing, reusing, recycling and renewing.

Partially funded by the REAP Conservation Education Program. Invest in Iowa, our outdoors, our heritage, our people. REAP is supported by the state of Iowa, providing funding to public and private partners for natural and cultural resource projects, including water quality, wildlife habitat, soil conservation, parks, trails, historic preservation and more. For more information visit www.extension.iastate.edu/iowaee/CEP.html.



Weyerhaeuser

Additional financial assistance provided from the Weyerhaeuser Company Foundation.

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FROM THE EDITOR

Shelly

Welcome to Summer! We all know what that means – outdoor activities, especially those revolving around water. This issue of *4R's*

provides cross-curricular resources to teach and engage your students and organizational members in outdoor activities also revolving around water. Do you have an activity to share with other Iowa educators? Keep us posted on all of your summer outdoor adventures! In the interest of recycling and saving paper waste, e-mail your submissions to Shelly Codner at shelly@netins.net.



This is the final issue of *4R's* for 2006-2007. See you next year. Please contact Shelly Codner at shelly@netins.net if your e-mail address or location changes.

If you are unfamiliar with the content of *4R's*, visit the on-line searchable archive at www.iowarecycles.org.

If you are not a current subscriber, you may receive this FREE publication by emailing Shelly Codner at shelly@netins.net.

If you would enjoy sharing the value and vision of IRA, visit www.iowarecycles.org and join today!

Calling All High School Science Teachers

TERC (Technical Education Research Centers) is seeking high school science teachers to participate in the 2007-2008 pilot test or the 2008-2009 field test of its Biocomplexity and the Habitable Planet curriculum. Pilot and field test teachers will receive stipends for providing feedback and completing other responsibilities. For more information, contact Gillian Puttick, (617) 873-9712, gilly_puttick@terc.edu or visit www.terc.edu/newsroom/916.html.

Annual Water Festival Gives Water (and Recycling) a Hand

The *Iowa Children's Water Festival* is a free, one-day event, heightening awareness of the importance of our most valuable resource – WATER. Approximately 2,000 fifth graders from across Iowa participate each year. The 11th annual event was held



on May 10, 2007 at the Des Moines Area Community College Campus in Ankeny. Various aspects of water-related topics were taught through presentations, experiments, exhibits, games and entertainment. These included two recycling activities presented by Mary Gillespy of Metro Waste Authority and *4R's* editor and Iowa Waste Exchange Resource Specialist, Shelene Codner.

Gillespy organized a recycle relay that taught participants about materials that can be recycled or reused. Codner led a classroom presentation using the mini-Materials Recovery Facility (mini-MRF) developed by the Iowa Recycling



Association in association with a grant from the United States Department of Agriculture. Participating students worked the sort line and learned how materials are separated once they leave the curb.

To learn more about the *Iowa Children's Water Festival*, visit www.iowachildrens.org. To learn more about the recycling relay activity, contact Mary Gillespy, (515) 323-6505, mgi@mwatoday.com. For more information on the mini-MRF contact Kristin Simon, 319-365-9941, ext. 26, kristin.simon@ecicog.org.

STUDENT CHALLENGE

Water Words – Rhyme Time

The natural world as seen through the eyes of a child is often uplifting, humbling and refreshing. In keeping with our wonderful world of water theme, this month's student challenge consists of creating a poem or story dealing with anything about water. Make sure to use the words found in the *Groundwater Glossary* that is included in this issue of *4R's*.

E-mail your students' literary masterpieces to Shelly Codner at shelly@netins.net by September 1,

2007 – the winners will be announced in the first issue of *4R's* for the 2007-

2008 year. Remember to include your student's or organization member's e-mail address and the mailing address for your school or organization. All participants' names will be placed in a drawing to win an iPod shuffle.



The May Student Challenge winner was Lukas Christopherson of AGWSR Community Schools in Ackley. Congratulations, Lukas!

Register For Free Recycling From Apple

For a limited time, Apple is offering free recycling of all CPUs (any manufacturer), displays and related peripherals to any



accredited K-12 or higher education institution with at least 25 systems. There is no purchase required to take advantage of

the offer. Simply fill out the form available online at http://education.apple.com/contact_me/recycle_promo_hed/ by June 30th (the pick-up date may be scheduled as late as July 31st). You will be contacted by an Apple Recycling representative within three business days to coordinate logistics.

Groundwater Glossary

Aquifer: the geologic formation of sand, soil and gravel where groundwater is stored.

Condensation: stage of the water cycle when water transforms from a gas into a vapor and becomes suspended in the atmosphere, visually represented by clouds.

Contamination: an impurity in air, soil or water that can cause harm to human health or the environment.

Depletion: occurs when water is used faster than it is replaced; can cause a shortage.

Discharge: to expel; water that naturally moves from an aquifer to a surface stream or lake.

Drought: an extended period of dry weather.

Evaporation: stage of the water cycle when water transforms from a liquid into a gas.

Groundwater: water contained under the ground's surface, between particles of and in the cracks of sand, soil and gravel; a common source of water for drinking and irrigation.

Groundwater flow: the movement of groundwater beneath the earth's surface.

Irrigation: to supply water to crops, parks, golf courses and lawns.

Permeable: any material that allows water to penetrate through it.

Precipitation: stage of the water cycle when water vapor molecules become too large and heavy to remain in the atmosphere and fall to the ground in the form of rain, snow, sleet, hail, etc.

Recharge: to increase the amount of groundwater, through precipitation or surface water, that absorbs into the aquifer; also called infiltration.

Runoff: water that does not become absorbed by the earth but flows across the surface of the land into a stream or lake.

Saturation zone: the area where water fills the spaces between soil, sand and rock underground.

Seepage: to leak from.

Water cycle: the never-ending movement of water through the atmosphere, ground and back again; also called the hydrologic cycle.

Water table: the top of the saturation zone.

Well: a hole or shaft drilled into the earth to pump water to the surface.

Award to Honor Schools Deadline July 9, 2007

The KnowledgeWorks Foundation *Richard Riley Award* recognizes schools that provide a safe and healthy learning environment while also serving as community centers. Several key factors in selection are 1) how the design contributes to improving teaching and learning and academic achievement, 2) how the community participated in the facility design, 3) application of smart growth and sustainability principles in the facility design, and 4) creative financing of the facility. Visit www.richardrileyaward.org/en/Submit.asp

'A' IS FOR AWARDS



Green Apple Award Winner – Kristin Simon

Kristin Simon, solid waste planner and environmental educator for the East Central Iowa Council of Governments (ECICOG) in Cedar Rapids was the May 2007 *Green Apple Award* winner. Kristin's contributions to environmental education have been numerous, innovative and impassioned. Kristin has implemented a variety of new and creative education programs targeted mainly to children. Her first and most successful is the Summer Library Reading Program at local public libraries. Each summer, Kristin chooses a storybook to read and develops a presentation and game relating to resource conservation, composting, or household hazardous materials management. The program has promoted waste reduction to approximately 3,000 kids and dozens of parents.



This program has created positive relationships with the public library system, opening new education opportunities through presentations and print material distribution.

Kristin developed another creative and successful program being replicated by recycling educators across Iowa. The Mini-Materials

Recovery Facility (MRF) program is a portable recycling sort line model that engages children and adults alike. Interactive learning is one of Kristin's many talents and the mini-MRF program allows everyone learn about recycling by "working" the materials recovery facility.

An Iowa DNR grant project in the schools of one member county challenged Kristin to develop a solid waste education unit for 4th to 5th grade students. She met that challenge and exceeded expectations by creating and teaching all five unit lessons to 220 students. The lessons included a history of waste management techniques, the recycling mini-MRF, resource conservation, landfill design and composting. The project also involved a brief "how-to-recycle" presentation to 3,250 students in four school districts and an art contest for a recycling themed school calendar.

Kristin has worked hard over the past three years to increase waste reduction and recycling education in the ECICOG region. In 2006 alone, she gave or was involved in 39 presentations, tours, and fairs other than her main projects described above. Congratulations, Kristin!

The *Green Apple Award* is sponsored by the Iowa Recycling Association, Green Teacher Magazine (www.greenteacher.com), L.G. Publishing (www.littleguypublishing.com), Climb Theatres (www.climb.org) and Stan Slaughter, Eco-Troubadour (www.stan.slaughter.com). Nominations are open to environmental educators in formal and non-traditional educational settings.

Entry Guidelines

Environmental educators must work within the state of Iowa. Nominations will be accepted on an on-going basis and will be kept on file. One candidate per month will be selected for the *Green Apple Award* and an accompanying prize package. An on-line and downloadable nomination form can be found at www.iowarecycles.org.

FROM THE BOOKSHELF

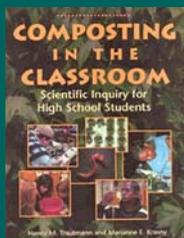
Explorations Magazine

Scripps' *Explorations* magazine is now free and published monthly on the Web as part of the institution's public education programs. Research and stories featured are available in multimedia formats. A variety of educational materials are available including *Voyager for Kids*, 40+ video clips, archives of articles from the last 13 years, and more. View this free publication at <http://explorations.ucsd.edu/>.



Student's Guide to Composting

Composting in the Classroom: Scientific Inquiry for High School Students, by Nancy Trautmann and Marianne Krasny, is a comprehensive guide for teachers interested in guiding composting research projects by high school students. Downloadable in pdf format at <http://compost.css.cornell.edu/CIC.html>.



AT THE MOVIES

Edens Lost & Found

Produced by Bullfrog Films
Directed by Harry Wiland

This film addresses practical solutions and models for urban transformation that go beyond pollution prevention to tackle the challenge of improving the quality of life in cities for ourselves and future generations. Entire series is 228 minutes, grade level 7-12, college, adult, U.S. released 2006-2007. For purchasing information, visit www.bullfrogfilms.com/catalog/edns.html.



K-12 Environmental Excellence Awards Deadline November 2007

Seaworld/Busch Gardens/Fuji Film *Environmental Excellence Awards* program rewards K-12 students and community groups working at the grassroots level to protect and preserve their local environment. Visit www.seaworld.org/conservation-matters/eea/about.htm.

June is...



American Rivers Month

Download the lesson plan, *My Kayaking Trip* and print the *American Rivers Month Math Problems Worksheet* www.edhelper.com/DailyThemes_June_9_1.html.



Recreation and Parks Month

Find park and recreation activities, coloring pages, games and puzzles; visit www.june.arpaonline.ca/kids.htm



Perennial Gardening Month

Find many resources, including: funding, curriculum materials, lesson plans and activities; visit www.kidsgardening.com.



National Fishing and Boating Month

Find fishing information, including: tips on taking your children fishing, fishing hot spots and the fishing report; visit www.iowadnr.com/fish/kids.html.

National Environment Day (June 5)

Find environmental related activities including: printables, contests, on-line story books, lesson plans and much more; visit www.ecokids.ca/pub/eco_info/browse_topics/environmental_issues.cfm.

World Ocean's Day (June 8)

Download ocean related math, geography, science, and language skills activities at www.education-world.com/a_lesson/lesson060.shtml.

Father's Day (June 17)

Download printable Father's Day coupons at <http://familycrafts.about.com/od/fathersdaycrafts/ig/Printable-Fathers-Day-Coupons/index.htm>

Retro Recycling – A Blast from the Past

Congratulations to **Dana Dettmer, Chickasaw County naturalist** who was our May Retro Recycling winner. Dana submitted two website locations, previously published in *4R's*, containing information about rain gardens.

You could be a winner, too! Submit your response to the following question by September 1, 2007 and you will be eligible for our drawing to win a \$50 on-line gift certificate to amazon.com. Submit your answer, including your name and telephone number, to shelly@netins.net. A searchable archive of *4R's* can be found at www.iowa recycles.org. Support *4R's* by beginning all of your amazon.com shopping at the *4R's From the Bookshelf* store at <http://astore.amazon.com/4rfromthebookshelf-20>.

Each year a free international poetry and art contest for youth on the theme of watersheds is held. The contest is designed to help youth explore the natural and cultural history of the place where they live, and to express through poetry and art.
What is the name of the contest?