



Litzsinger Road Ecology Center

COMMUNITY NEWSLETTER

www.litzsinger.org

April 2013

in this issue

- 2 Spring Break Nature Camp, Part I
- 2 In the Calendar this Month
- 3 Glass House Quiz: Flooding
- 3 Earth Day
- 4 Horticulture & Restoration Offerings for School Groups
- 5 Combat Flooding in Your Own Backyard
- 6 LREC Reading Corner: *The Secret Garden*
- 6 LREC Announcements
- 6 Local Events

Kids investigate habitats, such as fallen trees, during Spring Break Nature Camp. Learn more on page 2. Photo by Eddie Jones.



Big and Powerful Ideas

by Bob Coulter

I'm taking an online course from the MIT Media Lab on "Learning Creative Learning." This has given me a chance to revisit how we engage kids in big ideas and support their ability to use them to make sense of the world. Many of the pillars of your curriculum, like adaptations and weather patterns, serve this role. A recent class session focused on the role of powerful ideas, with the premise that some ideas are more than big—they "move us across the threshold" to give us a new way of seeing the world. I'll propose a couple here:

- **Randomness:** While we often think (and teach kids) that one thing leads to another, in fact there is a strong degree of randomness in nature. Beyond the crap shoot of genetic variation, many other events happen by chance. If you're a small animal, your survival today depends in part on whether you encounter a predator. Every day is a coin flip of sorts, and it's only over time that patterns emerge in which species survive and which ones don't.
- **Systems:** Echoing the need to go past the linear "one thing leads to another" mindset, most things in nature depend on a number of other factors, and in turn influence that system they are a part of. If I'm a plant, I depend on the right nutrients in the soil, the right amount of water, and the like. In turn, I support the insects who nibble on me, each of whom supports the larger ecosystem.

Thinking in systems and appreciating the role of randomness are part of the foundation of scientific thinking. What would you add to the list? 🌱



Campers explore a fallen tree during the Spring Break Nature Camp. Photo by Eddie Jones.

Spring Break Nature Camp, Part I

by Eddie Jones

With some open mornings during spring break week (March 18–22), 15 children participated in a five-morning nature camp at Litzsinger Road Ecology Center. As of this writing, we’re three-fifths through the week. A progress report:

In attendance:

Eight fourth-graders and six second-graders along with four Volunteer Educators

Theme:

Habitats

The two-part mission:

- Create a habitat for our team.
- Create a habitat for another resident LREC animal.

Team choices: deer, rat snake, rabbit, or red fox. Each team independently created their own habitat around a different fallen tree.

Our observations:

In a non-school-related outdoor experience, fourth-graders are exuberant; second-graders are more exuberant! Temperatures in the low 30s, a breeze, and wet feet deter no one under the age of twelve.

Journaling, a book connection, and a snack provided a mid-morning respite. By noon check-out, all were ready for a nap. The kids, too.

Check the next month’s newsletter for images of completed habitats. 🌿

In the Calendar this Month...

Spring has truly sprung at LREC. We are starting to see seedlings in the prairies and the Virginia bluebells are on the verge of blooming. This will be a busy month for us as we try to plan the last school visits for the term and continue to improve the habitats on-site. Hopefully you will find time to enjoy this month’s calendar photos!

April

1. Students climbing on a downed cottonwood (*Populus deltoides*)
2. Flowering of purple trillium (*Trillium recurvatum*)
3. Flowers of wild sweet William (*Phlox divaricata*)
4. A bluebird pair (*Sialia sialis*) defending their nest box

See full-size images on our blog: <http://www.litzsinger.org/weblog/>.



Glass House Quiz: Flooding

by Deanna English and Danelle Haake

“April showers bring May flowers.” We have probably all heard this maxim in our childhood. Showers may bring flowers, but storms sometimes bring floods instead. This month, we are exploring floods as they affect ecosystems in general and Litzsinger Road Ecology Center in particular.

1. Which of the following is a true statement?

- a) Floods are not a natural occurrence; they are only caused by human management of the land.
- b) If there were no levees to keep floodwaters at bay, the farmland in the Missouri and Mississippi river valleys would be ruined.
- c) A 100-year flood can only happen once every 100 years.
- d) Many rivers, even in pristine natural areas, flood at least once every year or two.

2. What should you do if you are walking near a river or stream that is experiencing rapidly rising water or a flash flood and you need to get to the other side?

- a) Forget crossing, move to higher ground immediately.
- b) If the water is twelve inches or less, walk through quickly.
- c) If your car is on your side drive across. Cars are heavy and a safe place to be.
- d) Jump in and ride the rapids. It’s really fun!

3. The “Great Flood of ‘93” is often referred to as a 500-year flood. What does this mean?

- a) A similar flood happened in 1493.
- b) Floodwaters will only reach this height once every 500 years.
- c) There is a 0.2 percent chance that floodwaters will reach this height in any given year.
- d) It’s just as likely that a flood will last 500 years as it is that we will have a flood like that again.

See **Quiz**, page 4

EARTH DAY

by Martha M. Schermann

Each
Accepting
Responsibility
To
Help

Direct
Ardent
Youth



CELEBRATE EARTH DAY!

Sunday, April 21

St. Louis Earth Day Festival

11am–6pm at the Muny grounds of Forest Park. Explore sustainable products and local non-profits while enjoying music, food, and hands-on activities. Free. Learn more at <http://www.stlouisearthday.org/>.

Sunday, April 21

Recycling Extravaganza

10am–4pm at St. Louis Community College – Forest Park Campus. Local organizations will accept a wide variety of items. See <http://www.stlouisearthday.org/> for a full list and details.

Friday, April 26

Green Ball

7–11pm at the Moonrise Hotel. Fundraiser for the EarthWays Center featuring music, food, auction, and raffle. \$50 (\$40 for members). Learn more and order tickets at <http://www.mobot.org/greenball>.

Saturday, April 27

Earth Day Celebration

10am–3pm at the Garden. Featuring Earth Share of Missouri organizations. Included in Garden admission.



Volunteers look for Deer Creek macroinvertebrates in a kick net. Would you and your students like to help? Photo by Danelle Haake.

Horticulture & Restoration Offerings for School Groups

by Deanna English

Spring has finally arrived, and are we ever excited! Plants are popping up in the prairie, and the spring ephemerals are blooming in the woodland. In my opinion, there is nothing better than being on the edge of changing seasons. Everything feels exciting and new. We are certainly fortunate to live in a place of seasons.

We are busy transplanting our seedlings, preparing areas for new native plantings, and planting seedlings in prairie and woodlands. We will be monitoring the

macroinvertebrates in Deer Creek this month, too—another way to monitor the health of our streams.

Check out the following April activities. If they fit into your curriculum, call or email your school partnership coordinator and make arrangements to join us in one or more of these activities.

Stream cleanup—Available when the stream is at a safe level.

Stream monitoring—Use a kit to test dissolved oxygen, conductivity, pH, temperature (air and water), nitrates, turbidity, and chloride.

Macroinvertebrate monitoring—In April opportunities are available to count the numbers and types of macroinvertebrates found in Deer Creek to help determine stream health.

Invasive plant removal—Learn about invasive species and help us remove invasive plants from the site.

Roots and plant structure demonstration—Students are introduced to the purpose and function of roots and plant structures.

Plant seedlings—Greenhouse plants need to be planted in the prairie and woodlands.

Tree monitoring—High school and middle school students can develop tree identification skills and learn techniques used to inventory a large area of trees.

Plant monitoring—Students can learn how the plant monitoring grid is set up at LREC and practice their own monitoring skills. 🌱

From **Quiz**, page 3

4. In St. Louis City and County, what are some ways homeowners can help reduce the chance of flooding in urban streams?
 - a) Nothing. If it rains, it floods.
 - b) Reduce impervious surfaces on your property.
 - c) Install rain barrels and rain gardens.
 - d) Both b and c.

5. Will flooding help alleviate the drought?
 - a) Definitely. That's exactly what we need: a bunch of floods!
 - b) Not necessarily. Often flooding is caused from water running off frozen or compacted soil, where it cannot soak in.
 - c) Not necessarily. Flooding can be the result of rain far upstream not in our area.
 - d) Both b and c.

See **Quiz**, page 5



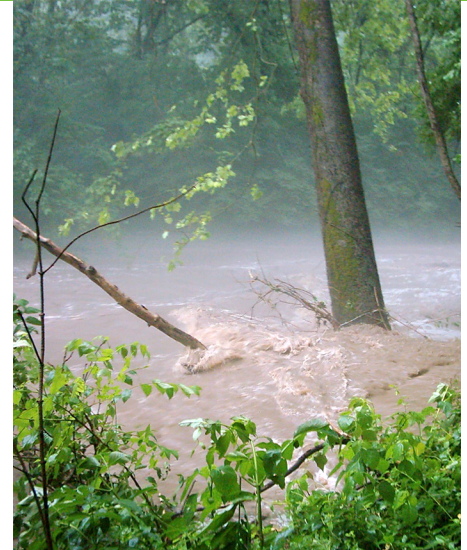
The flood on September 14, 2008 wreaked havoc at LREC, including uprooting many trees. Photo by Eddie Jones.



From **Quiz**, page 4

Answers:

1. **d) Many rivers, even in pristine natural areas, flood at least once every year or two.** While human land management has changed how and when our rivers flood, most rivers flood naturally on a regular basis. That is why most rivers have floodplains. The highly fertile farmland within the floodplains that are now ‘protected’ by levees originally became highly fertile because flood waters deposited layer after layer of nutrient-rich sediments and organic matter!
2. **a) Forget crossing, move to higher ground immediately.** If you are in a situation where there is rapidly rising water, you should immediately move to higher ground and walk out or wait for help. Water as shallow as six inches can sweep you off your feet and cars are particularly dangerous as they might stall in the middle of the water and can certainly be washed away. NEVER get in the water to swim in a flash flood situation!
3. **c) There is a 0.2 percent chance that floodwaters will reach this height in any given year.** A 100-year flood means there is a 1 percent chance that floodwaters will reach this height in any given year. There is no way of actually knowing how often a 500-year flood will happen, but there is a 0.2 percent chance that it will happen this year and a 0.2 percent chance it will happen in any given year after that.
4. **d) Both b and c.** Urban streams often flood because of manmade situations. The amount of impervious surfaces that direct water to the stormwater system contribute greatly to flooding. Holding or slowing down water that falls on your property by installing permeable surfaces, rain barrels, and rain gardens can help to reduce urban stream flooding.
5. **d) Both b and c.** If the water from showers and storms soaks into the ground, this helps alleviate the drought. If we have flooding, then most of the water is running off rather than replenishing our groundwater. Also, rain leading to flooding may have fallen on land many miles away. Flooding along the Missouri and Mississippi rivers in 1993 was caused by large snowmelt and rainfall in the far upper parts of the watershed, well away from the state of Missouri. ✍



A normally calm stream can quickly become a raging torrent during a flash flood, as evidenced in this photo of Deer Creek on May 24, 2004. Photo by LREC Staff.

COMBAT FLOODING IN YOUR OWN BACKYARD

Would you like to lessen the impact of flooding, reduce stormwater runoff, and improve local water quality? RainScaping (landscaping for stormwater management) your yard or site can help you do just that!

Check out the Garden’s online RainScaping Guide at <http://www.mobot.org/rainscaping> to learn what RainScaping is, which options are best for your site, and how you can implement them.

Note: Landowners in the Deer Creek watershed are eligible to apply for rebates for rainscaping. Details and applications available at <http://deercreekalliance.org/> or call 314-577-0202. ✍

LREC READING CORNER

by Deanna English

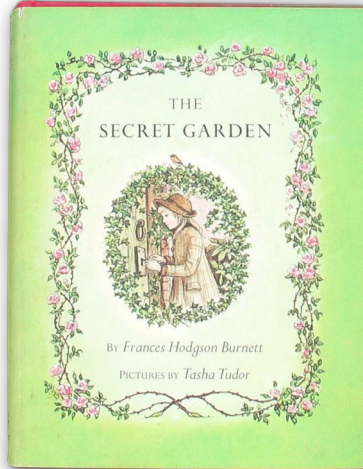
The Secret Garden

BY FRANCES HODGSON BURNETT

After a week of working with a group of second and fourth grade students who are attending LREC's first Spring Break Nature Camp, I was reminded how important it is to allow children the freedom to get out, explore, and create their own special places. With the delightful spring break experience in my thoughts it didn't take long to decide on the April book, one of my favorites from childhood: *The Secret Garden*. This book reminds us that being in the natural world can be magical, and can help break down boundaries, create friendships, and promote healing.

In this classic story, three children form an unlikely friendship and in the process transform a secret space that they have discovered. In the beginning of the book it seems impossible to imagine that you will ever become attached to Mary, a spoiled rich girl who was born into a privileged life in India. After the sudden death of her parents from cholera, Mary is sent to Yorkshire, England to live with her uncle. There she meets Dickon, the delightful brother of the house maidservant, Martha. Dickon has a special way with animals, and he tugs at your heartstrings from the beginning. Slowly Mary begins to creep into your heart as well as she meets Colin, her cousin, who is crippled, frightened, and neglected. Together these three friends begin to understand and appreciate each other as they start to heal both physically and emotionally.

I'd recommend this spring themed classic for readers age seven–adult. After reading this book, it will be hard for readers old or young to resist exploring their backyard for their own "secret garden." You might be amazed at what you can discover in your own backyard! 🌿



LREC Announcements

April 3 and April 24

Monthly Water Quality Sampling

9am, meet at the Glass House.

Questions? Contact Danelle Haake at danelle@litzsinger.org or 314-961-4410.

April 3

Macroinvertebrate Sampling

1pm, meet at the Glass House.

Questions? Contact Danelle Haake at danelle@litzsinger.org or 314-961-4410.

April 15

Volunteer Enrichment: Stream Macroinvertebrates

Meet at the Glass House. Program starts at 12:45pm or come at noon with your lunch. Bring your own boots, or borrow ours. Rain date of April 22. RSVP to Martha at martha@litzsinger.org or 314-540-4068.

Local Events

April 18

Missouri Prairie Foundation Support Day

At local Whole Foods Market® stores. Enjoy displays, presentations, a native plant sale, and more (activities vary by location). A portion of proceeds benefit Missouri Prairie Foundation. Details at <https://www.facebook.com/MOPrairie/events>.

April 20

Citizen Science Conference

8:30am–4pm at UMSL. Learn how to connect kids to real science investigations and research. For educators. \$39 (includes lunch and .7 CEUs). More information and registration at <http://www.umsl.edu/~pcs/noncredit-offerings/cit-sci.html> or call 314-516-7250.

SIGN UP FOR ONE OF OUR SUMMER WORKSHOPS:

Sustainable Schoolyards • Effective Outdoor Learning • What's It Like Where You Live?

Details: <http://www.litzsinger.org/profdev.html>.