

Litzsinger Road Ecology Center

COMMUNITY NEWSLETTER

www.litzsinger.org

April 2015

in this issue

- 2 Student Project Highlights: Freedom School
- 3 Teacher Timeline
- 4 Horticulture & Restoration Offerings for School Groups
- 5 New at LREC
- 6 Glass House Quiz: Roots
- 8 LREC Announcements
- 8 Local Events

Freedom School preschoolers prepare to sow seeds in a demonstration garden at Litzsinger Road Ecology Center. Learn more about the project on page 2. Photo by Eddie Jones.

Springing to the End

by Bob Coulter

As we move into spring we have the paradox of new growth emerging all around us, coupled with the closing work of finishing out the school year. The cycles of life are always at work, even if they are not well aligned. As you scope out the best way to navigate this paradoxical time of year, I'd like to suggest three ideas offered by the late Tom Little, former beloved head of the Park School in Oakland. He argues that the best, most engaging work for kids encompasses three principles: it is emergent, integrated, and experiential:

- *Emergent* in that it grows from and builds on the kids' interests and ideas. Look for creative, kid-driven ways to reach your 'must-do' curriculum requirements.
- *Integrated* in that the inquiries go where they will, transcending rigid boundaries of disciplines and assigned grade levels; and
- *Experiential* in that kids are active participants, not just reading about what others do.

Your field studies with us—and the other projects you are doing—offer possibilities to reach all three of these markers, which will give the kids a strong end to the school year and a catalyst for further growth. Happy spring! 🌱



Student Project Highlights: Freedom School

by Deanna English

Several years ago, one of our summer interns developed a demonstration garden at Litzinger Road Ecology Center. She was looking at effective ways to kill lawn grass when creating native plant gardens at schools or at home. Using four different techniques (plastic, newspaper, cardboard, and herbicide) she developed four 6' x 8' plots. Since that summer we have seeded and planted those plots, and each year expanded the garden by four more 6' x 8' plots treating them the same way. Each year groups of students of all ages help care for the existing plots and in the spring build another extension. Having students work with us to create and maintain the space helps to mimic

similar gardens at schoolyards while allowing students to practice and learn what they can do at their own school or home.

Last month we had Freedom School preschoolers help us spread seed in our newest garden addition. Freedom School has partnered with us for many years. During that time they have developed beautiful prairie and woodland native plant spaces at their school, which their students enjoy and help maintain. Part of establishing their new prairie involved using seed mixes supplied by LREC. These seed mixes created a foundation, then native plants were planted in the spring and fall until the space became established. Each seed mix consists of a variety of seeds for species compatible with the school garden space. The seeds are mixed with sawdust to help spread the seeds more evenly.

During this recent visit, I discovered that Freedom School preschool students are amazing seed spotters, spreaders, and stompers. Each group of students peered into the seed mix container, and with their sharp little eyes easily identified different shapes and sizes of seed floating in the sawdust. Then each tiny helper

got a cup full of mix and carefully sprinkled the seed and sawdust onto the ground watching closely for soil that didn't have a sawdust dusting. After they had distributed their seed, we sang a song and danced the seed into the ground. This dancing ensured that the seed made contact with the soil and the wind couldn't easily blow the seed away.

Working with students to create the demonstration gardens over the past few years has been a delightful project. We've had students of all ages contribute to the building and maintenance of the space. Next time you are at LREC stop by and check out the demonstration gardens.

If you would like your students to contribute to the creation of this child-driven garden space **there are still two more jobs to complete this spring.** I need students in late April and May who are willing to plant seedlings and develop the newest garden space. Creating the space requires measuring beds, laying out plastic, newspaper, and cardboard, and covering the beds with wood mulch. I hope to meet you in the demonstration garden this spring! 🌱



Freedom School students spreading seed.
Photo by Eddie Jones.

Teacher Timeline

by Eddie Jones

Current teacher partners are invited to schedule a meeting with their Litzsinger contact person in **May** to review the past school year and discuss options for the coming year. Plan to submit a final partnership update **prior** to the meeting. (You may submit your update via the [online form](#) available on our website.)

SUMMER OPPORTUNITIES FOR TEACHERS AT LREC

We're offering more opportunities for you to learn at LREC this summer! All opportunities are open to current teacher partners, except *Effective Outdoor Learning* which is also open to new teachers.

Registration for our two workshops, *Effective Outdoor Learning* and *Sustainable Schoolyards*, is now underway (details and online registration on our [website](#)). Contact your partnership coordinator to register for any of the other offerings:

June 11–12, 9am–3pm (also offered July 7–8)

Schoolyard Habitats I: Schoolyard Assessment

Learn how to investigate current schoolyard conditions, with your students, to determine the suitability for natural habitat development.

June 24, 1–3pm

Volunteer and Teacher Enrichment: Native Plant Families

June 29–July 1, 9am–4pm

Effective Outdoor Learning workshop for teachers new to LREC. (Registration required.)

July 7–8, 9am–3pm (also offered June 11–12)

Schoolyard Habitats I: Schoolyard Assessment

Learn how to investigate current schoolyard conditions, with your students, to determine the suitability for natural habitat development.

July 14, 1–3pm

Volunteer and Teacher Enrichment: Plants, Pollinators and other Partnerships

July 27–31, 9am–4pm

Sustainable Schoolyards workshop. Learn how to develop natural habitats on your school grounds while meeting curriculum standards. (Registration required.)



Sustainable Schoolyards participants learn how to prepare their site for replanting.
Photo by Leslie Memula.

HORTICULTURE & RESTORATION OFFERINGS FOR SCHOOL GROUPS

by Deanna English

I can't believe all the bird sounds at LREC. Just walking out the door reminds me it's springtime. Colleen, our resident bird researcher, recently discovered a pair of red-tailed hawks nesting on site—so exciting! The burnt prairie is getting greener and there's a haze of color around the trees as the buds swell and burst into new growth. It's lovely here in spring.

We've also been working with students and volunteers to clear the invasive wintercreeper from around the cabin area. This month and in May we will be planting some native plant seedlings that have been growing in the greenhouse this late winter. Most of those plants were seeded and then transplanted by students and volunteers.

If you are here this April or May and planting fits into your visit plans, then let us know and you can help reestablish native plants around the cabin or in the demonstration gardens. You can also find other fun spring activities listed below. We look forward to seeing you at LREC this spring.



Red-tailed hawk (*Buteo jamaicensis*). Credit: Mark Bohn/USFWS.

APRIL RESTORATION OPPORTUNITIES:

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.

Macro invertebrate monitoring—This is an opportunity to count the numbers and types of macro invertebrates found in the 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.

Greenhouse transplanting—We can always use the help to transplant some of those little seedlings.

Plant seedlings—Depending on how we warm up this month we will be planting seedlings in the woodland and prairie

Tree monitoring—High School and Middle School students can work on developing 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 setup at LREC and practice their own monitoring skills. 🌱

TEACHERS & VOLUNTEERS:

Stay connected with us!

Visit our **website** where—in addition to site and program information—you'll find a site calendar, blog, and an archive of past newsletters:

<http://www.litzsinger.org>

Danelle documents happenings at LREC on **YouTube**:

<http://tiny.cc/lrec-youtube>

If you're on **Facebook**, join us there! We have two Facebook groups: LREC Teachers and LREC Volunteers:

<http://tiny.cc/lrec-teachers>

<http://tiny.cc/lrec-volunteers>

Go to the group page and click "Join Group."

New at LREC

by Mary Voges

This spring, we at Litzsinger Road Ecology Center will be working with students and teachers, as well as volunteers to put in a new trail and restore the woodland area around the cabin.

Earlier this year, we had steps built at the east side of the cabin to allow easier access to and from the trails. These steps enter onto a new pathway along the creek, across a newly installed bridge, that joins our existing footpath. This pathway will give students the opportunity to view Deer Creek's curve, erosion activity, and all the spring activity.

Soon the kingfisher will be flying around the bend to its nest in the muddy bank, as well as families



New steps lead from the deck to the trails. The new bridge is visible in the background. Photo by Mary Voges.



The new bridge. Photo by Mary Voges.

of ducks and all their downy ducklings. Keep your eyes open to catch a glimpse of the wily mink crossing the creek with babies in her mouth or muskrats carving tunnels into the bank, filling them with plant material.

Of course, the red-eared slider turtles will be out and about, sunning and swimming along the creek. You might see a great blue heron and of course, the tracks of all these wonderful critters.

We will be clearing out the euonymus and planting some interesting native species, welcoming any and all help to enrich this area for our students. If you have time before, after or during your classes, please grab some trowels and pruners and

join us. Teachers, we would love to have your students participate in this activity, so just let us know and we will provide the necessary tools!

Happy Spring from all of us at LREC! 🌿

See the response of some local wildlife to our new steps—view the video on our blog: <http://www.litzsinger.org/blog>.



Glass House Quiz: Roots

by Danelle Haake and Deanna English

Have you noticed that, if you look closely, things are turning green? There are little buds opening (or preparing to open) on our trees and shrubs. Several non-native flowers have been blooming for a week or two (snowdrops, daffodils, and crocuses) and the prairie is showing a flush of green.

But where is all this growth coming from? Where are the perennial plants getting the energy to grow? From the roots, of course. In honor of their important contribution to the onset of spring growth, this month's quiz focuses on roots. Enjoy testing your knowledge on this important but seldom celebrated part of plants.



Snowdrops are one of the first harbingers of spring.

- 1. What functions do roots serve for the plant?**
 - a) produce energy
 - b) act as an anchor
 - c) allow plants to move freely
 - d) both a and b
- 2. The primary root, or radicle, is what first appears from the seed at the time of germination. This root first ties the plant to the earth. After the initial growth, depending on the type of plant, the root continues to grow in one of two ways. What are those two different types of growth called?**
 - a) taproot and fibrous root system
 - b) taproot and surface
 - c) epidermis and fibrous root system
 - d) surface and epidermis
- 3. Many plants spread above ground by first spreading underground. They send out special roots that will pop up new plants several feet away from the parent plant. What are these special roots called?**
 - a) runners
 - b) joggers
 - c) rhizomes
 - d) bulbs
 - e) both a and c
- 4. What bonus functions do roots serve in the ecosystem?**
 - a) improve soil texture
 - b) create channels to allow water to infiltrate
 - c) prevent soil erosion
 - d) all of the above
- 5. Most of us enjoy eating some roots. Which of these is NOT a root?**
 - a) beet
 - b) carrot
 - c) potato
 - d) sweet potato

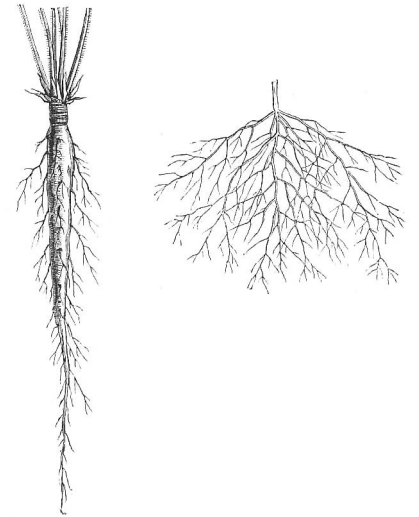
See **Quiz**, page 7



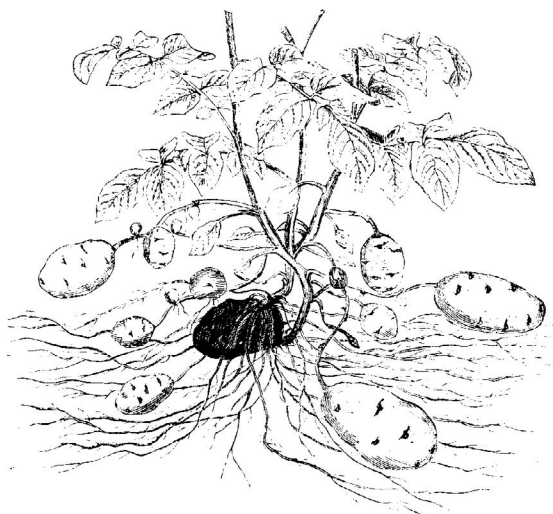
From **Quiz**, page 6

Answers:

1. **b) act as an anchor.** Roots are an anchor for the plant, holding it in place as well as storing energy, and providing water and nonorganic nutrients. While roots may store energy for the plant, they do not produce it; that job is held by the leaves.
2. **a) taproot and fibrous root system.** Gymnosperms (conifers, ginkgo and a few others) and dicotyledons (plants that have two seed leaves) have taproots. Monocotyledons (plants with one seed leaf like grasses) have a fibrous root system.
3. **c) rhizomes.** Underground stems called rhizomes will send up new shoots. These are sometimes called runners (so give yourself a point if you said 'e'), but the term runner is generally used to refer to similar growth patterns that occur **above** the ground.
4. **d) all of the above.** Roots are a very important component of the ecosystem and serve all three of these functions, and many more besides.
5. **c) potato.** Potatoes are tubers, which are the swollen tips of underground stem. 🌱



Above left: taproot. Above right: fibrous root.



Left: tubers of a potato plant. The mother tuber is indicated in black.



Above: underground stems (rhizomes) of a bamboo plant.

SPRING HIKES

Check out these local opportunities. These guided hikes are free, held rain or shine, and open to all ages. Bring your camera and notebook, if desired!

April 4

Rocks, Quarries and Fossils

10 am at Meramec Highlands Quarry at Dee Koestering Park (1703 Marshall Road, Kirkwood). Meet at entry parking lot.

Geologist Scott George will guide us through Kirkwood's intriguing Meramec Highlands Quarry at Dee Koestering Park. The site is a historic quarry listed on the National Historic Register, with large boulders and quarry spoils providing a view of the unique geology and fossils of the area.

April 18

Spring Wildflower Walk

10 am at Emmenegger Nature Park (11991 Stoneywood Drive, Kirkwood). Meet at the trailhead kiosk by the creek.

Discover enchanting "spring ephemeral" wildflowers and more on a hike with Missouri Botanical Garden's native plants expert George Yatskievych. We'll learn fun and fascinating facts about wildflowers, trees, shrubs and plants as we enjoy their beauty.

May 23

The Hidden Life of Emmenegger Woods

10 am at Emmenegger Nature Park (11991 Stoneywood Drive, Kirkwood). Meet at the trailhead kiosk by the creek.

Join Webster Groves Nature Study Society vice-president Rich Thoma for fun and fascinating hike through Emmenegger Nature Park. We'll take a look at the insects and other small creatures that can be found in a variety of microhabitats within the park.

LREC Announcements

April 3, 7, 16, and 22

Water Quality Monitoring (Macroinvertebrates)

1:30 to 3:30pm. If you have questions or would like to participate contact Danelle Haake at danelle@litzsinger.org or 314-961-4410.

April 13

Volunteer Enrichment: Seeds, Transplanting, and Propagation—How It All Comes Together

1 to 3pm, meet at the Barn. How does Mary do what she does in the greenhouse? Learn about seed collecting, stratification, propagation, and transplanting. We will take a walk to the burned prairie and see which seedlings are coming up. If you'd like, come early with your lunch at 12:30pm. RSVP to Martha at 314-540-4068 or martha@lrec.net.

April 14

Water Quality Monitoring (Chemistry)

1 to 3:30pm. If you have questions or would like to participate contact Danelle Haake at danelle@litzsinger.org or 314-961-4410.

Local Events

April 26

St. Louis Earth Day Festival

10am to 6pm on the Muny Grounds of Forest Park. Participate in hands-on educational activities, learn about sustainable products and services, and enjoy entertainment, food, and family-friendly programming. The Missouri Department of Conservation will also be doing a tree seedling giveaway. Free. Learn more at <http://www.stlouisearthday.org/>.

APRIL

by Martha M. Schermann

A

Playful

Raccoon

Illicits

Laughter

