

Litzsinger Road Ecology Center

COMMUNITY NEWSLETTER

www.litzsinger.org

December 2014

in this issue

- 2 Just a Pokeberry...
- 3 Helping Students Thrive
- 4 Student Project Highlights:
Kol Rinah
- 6 Let's Go Out!
- 7 How Cold Is Too Cold?
- 7 Horticulture & Restoration
Offerings for School Groups
- 8 Glass House Quiz:
Woodpeckers
- 10 LREC Research:
Shannon Rapp
- 10 LREC Announcements
- 10 Local Events

*Preschoolers at The Freedom School ride a pretend "bus" to LREC. Learn more about their outdoor learning experiences on page 2.
Photo by Heather Pegors.*

The Art of Exploring Nature

by Bob Coulter

Recently, one of our teacher partners expressed his appreciation for how varied the experience was for each group of students at Litzsinger Road Ecology Center. While the kids are all working toward the same general goals in their time on site, the teacher observed that each group has a different "flavor" based on the group leader's expertise. This variation seeds great discussions back at school. I'll go a step further and suggest that the variation also grows out of letting the kids' interests and passions help to shape the investigation. When this happens, the experience becomes more resonant with each child's emerging identity, and more likely to contribute to their growth.

In a climate of overly prescribed, standardized learning experiences, it's good to have these creative opportunities. More than 80 years ago, John Dewey remarked that in any creation, "the artist selected, simplified, clarified, abridged, and condensed according to his point of view and interest." Similarly, he noted, one perceiving the art makes their own re-creation in a process parallel to the artist. As with art, so it is with nature. We owe kids the opportunity to build their own interests and meaning. Thanks for all you do to make it happen. 🌿



Just a Pokeberry...

by Heather Pegors, PreK teacher at The Freedom School in University City

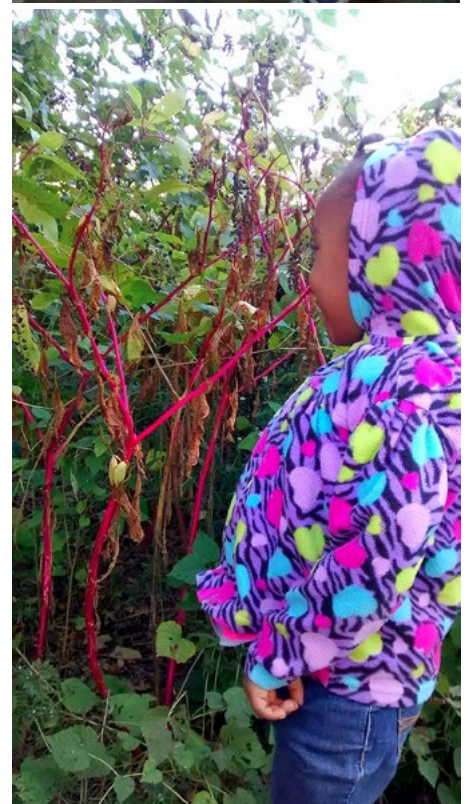
Our trip to Litzsinger this fall was a return trip for some of our 3–5 year olds, and a first time experience for others. Having opportunities to explore, become more comfortable outside, and develop imagination during unstructured outside time is a goal in our learning community.

As the bus pulled into the driveway at Litzsinger that October morning, Naomi, a returning four-year-old, exclaimed to her three-year-old friend, “See! Look at all the nature!” The class disappeared into the prairie and woodlands with the educators and returned to the picnic tables later to draw an observation from the hike. Martha’s group had gathered pokeberries to use as ink for their drawings. The vibrant fuschia stem was remembered by the students. Drawing with the pokeberry was one of the highlights of the trip, along with catching a frog and seeing a snake! Naomi’s parents shared she went home that night and drew over 20 illustrations of what she had seen on our trip.

Back in our own schoolyard, a few children ran towards the prairie shouting, “It’s the plant from our field trip!” They correctly identified the distinct plant with excitement, to which a five-year-old Addyson who was standing nearby added nonchalantly, “That’s just a pokeberry.”

In our schoolyard there are logs bordering the prairie. Perennially, the children pretend the end of the log is a mode of transport and they are traveling somewhere. In early November the log became a school bus. Saddled on the log they sang “We’re going to Litzsinger,” using plants as the steering wheel. Shortly after they jumped off shouting and running, “We’re here! We’re here!”

Whether returning to Litzsinger or visiting for the first time, the learning has extended into the play in our own schoolyard. For a young child to say, “That’s just a pokeberry” is beautiful evidence of the learning that happened in a meaningful environment. Thank you, Litzsinger! ✨



Top: While at LREC, students draw with pokeberry ink. Bottom: Back at school, a student recognizes a pokeberry plant in her schoolyard. Photos by Heather Pegors.



Fifth graders from The Soulard School “sprout” out of cold frames at LREC. Photo by Leslie Memula.



Students measure an area in the schoolyard for cold frames. Photo by Ann Luciani.

Helping Students Thrive

by Ann Luciani, Thrive classroom (grade 5) teacher at The Soulard School

The fifth grade students in the Thrive classroom at The Soulard School have spent the trimester studying the biodiversity of plants and animals in their Soulard neighborhood and in the county, at both LREC and at Babler State Park on their annual camping trip.

Students have taken a special interest in monarch butterflies after finding a very hungry caterpillar on the playground who thrived on milkweed leaves grown from LREC plants. Students studied a variety of butterfly-loving plants and, with the help of Leslie, planted several varieties of milkweed (common milkweed, butterflyweed, and swamp milkweed) in our garden plot. Students cleaned and collected milkweed seeds that will be stomped in the garden after the first snow.

As a STEAM project (Science, Technology, Engineering, Art, and Mathematics), students are also in the process of researching, designing, and building cold frames to cover our vegetable gardens in the hopes of extending the growing season! Thanks to LREC for sharing their plant, animal, and hothouse/cold frame expertise with our students.

Here are a few words from a few of our Thrivers regarding our current projects and other outdoor learning activities:

Cold Frames

In class we are learning about cold frames. A cold frame is a type of structure that keeps plants alive in the winter. A cold frame does not use heating from electricity. So far in our project we have sketched ideas, picked the best one, and are now starting to find prices on

materials. We are also finding better materials and measuring in metric how much materials we need. This project is super fun!
—Rhiannon

Milkweed

The Thrive class has been learning about milkweed. When Ann first brought in the milkweed, we ran to the pods and opened them a little—seemingly they were going to burst. When we opened the pods the littlest bit, there was an explosion of seeds like they were trying to be freed from a prison-like pod. It was marvelous to blow the seeds around the room—even Ann loved opening the pods and blowing the seeds. We blew, laughed, and made a mess that Ann eventually told us to clean up. I love milkweed and I’m looking forward to telling you more about what Thrive is learning. —Holly



Students clean milkweed seeds. Photo by Ann Luciani.

See **Thrive**, page 4

From **Thrive**, page 3

Outdoor Learning

At fifth grade you probably know your ABCs, but do you know your ABCs of science? My class (the Thrive class) went nature journaling with first grade (Enigma) and taught them their ABCs. We learned what abiotic is (something that never lived), biotic (something that is/was living), and cultural (something man-made).

The Thrive class has a lot of outdoor experiences such as a bird coordinate grid. We went around identifying birds and their coordinates. We also did science bubbles where we went outside and blew bubbles to see if they would freeze (it wasn't cold enough since it was 25 degrees). In STEAM Lab we went around Soulard with a compass making directions to a band in Soulard and back. We have fun. —Lydia ✍️

DECEMBER

by Martha M. Schermann

Decomposition
Evokes
Certain
Ecological
Moments
By
Employing
Recycling

Student Project Highlights: Kol Rinah

by Deanna English

We get many visits from naturally curious early childhood students who make science exploration their daily job as they explore and question everything around them. We also have the pleasure and honor of working with many talented early childhood teachers who take advantage of this natural curiosity to fold disciplines besides science into the outdoor experience.

This month my student project focus is on Linda Kram's early childhood class at Kol Rinah. This fall Linda collaborated with the art teacher to create Shretelech houses in their school natural area near where they have planted prairie plants.

You may be wondering, "What are Shretelech houses?" I too had to do a little research, so here's a little bit of what I learned. Shretelech are "little people"—some folks might call them elves or fairies—but children at the Jewish school, Kol Rinah know them by their Yiddish name, *Shretelech* (singular *Shretele*). I think all of us have probably at one time or another found ourselves looking for our version of a Shretele or maybe building a tiny structure that hopefully will attract a Shretele. The children at Kol Rinah worked this fall to use natural materials they found in the schoolyard to create homes so the Shretelech might find their natural



Kol Rinah students build Shretelech houses in their schoolyard. Photos by Linda Kram.

See **Shretelech**, page 5

From **Shretelech**, page 4

space more inviting and stay awhile. This activity required imagination and engineering skills to create durable and welcoming structures.

I've also learned that Shretelech behavior is much like wild animals we might see when we are outside. Shretelech are quick to hide, so you have to be very observant if you want a chance of catching sight of one. And when I met up with them during their visit to Litzsinger Road Ecology Center, the children of Kol Rinah were in search of Shretelech. I bet there haven't been many preschoolers as quiet and observant as this group. Of course you can't be quiet all the time, but these students spent much time sneaking around and they found some interesting and suspicious things. Eddie was out with one group and reported an amazing wood lined hole in the ground and later a leaf floating on the end of a thread, and when one of the students touched the leaf it floated up, up, up into the air. Martha said her group saw some shelf fungus that looked suspiciously like a staircase.

What an exciting visit for everyone. During all the work building homes at school and searching for Shretelech at LREC there was obviously a lot of learning going on. I bet they built some awesome observation and fine motor skills while they were learning about Shretelech, too. I don't know if we have Shretelech living here at LREC, but I for one am going to keep my eyes peeled and ears open when I'm out and about. You should try this too and see what you find. Let us know if you spot a Shretelech! 🐛



Above and at left: Kol Rinah students explore Litzsinger Road Ecology Center. All photos by Linda Kram.

Let's Go Out!

By Laura Johnson and Val Toskin, Saul Mirowitz Jewish Community School

Reprinted from KINDERGARTEN NEWS, November 7, 2014

Ask your child. Ask any teacher about inside recess days, and she will tell you from experience that they are not ideal! By the end of the day, the children are restless, have low stamina, and are struggling to concentrate. Some are cranky, others silly. In kindergarten, we go outside rain or shine because we are committed to setting our students up for success.

Playing outside provides children with something they would otherwise lack: exercise. Exercising while having fun is the best kind of exercise, and who doesn't have fun playing outdoors?! Conquering the monkey bars, playing tag with friends, pumping hard on the swings, and building a snowman get our children's bodies moving.

Exercise not only builds muscles but also helps the brain! When the heart rate increases, so does the brain's capacity for memory. The outdoors provides children with a venue for imaginative play, a vital component of cognitive development in young children. It allows children to make sense of their world, incorporate new concepts into old ones, and experiment in a safe way.

Children who play outside learn how to solve real-world problems, such as which tool will help dig the deepest hole and how hard to kick a ball across the field. They also build character skills by compromising, negotiating, cooperating, and collaborating.

Nutritionally, short regular recesses provide your child with their daily dose of vitamin D, helping to promote better moods, balanced energy levels, memory, overall health, and more. Just 10–15 minutes does a body good.



A student enjoys a crisp winter day at LREC. Photo by Eddie Jones.

Children raised on or around a farm are generally healthier than those who are not because they are exposed regularly to dirt, animals, pests, bacteria, and everything else that send modernday parents running. While these things often invoke a sense of danger, frequent contact with the natural world is actually associated with less instances of autoimmune disorders and allergies.

Our children need the fresh air for their mental, physical, and emotional wellbeing. Only thunderstorms and temperatures below 20° F will keep us inside. So stock your child's cubby with an extra sweater, hat, gloves, and shoes. When the snow comes, make sure to send their boots and snowsuits. We are experts at making snowmen! ❄️



Students explore the snowy prairie. Photo by Eddie Jones.

How Cold Is Too Cold?

Some quotes from school representatives throughout the country regarding winter recess and sports activities:

"If it's 15 below (or warmer), they go out, no matter what. At 20 below, it gets iffy."

—School principal in International Falls, Minnesota

"If it's much below 40 degrees we just don't go out"

—Asheville, North Carolina City Schools

"If the temperature is below zero, we'll usually keep them in."

—Marquette, Michigan

"We don't have any written policy. We leave that to the judgment of the building principals."

—Indianapolis Public Schools

A common St. Louis school standard is 20 degrees.

At Litzsinger Road Ecology Center, no matter the weather, we will go out and, if necessary, come back in for a bit to warm up or dry off. It is the rare day when weather should be the cause of a canceled visit. If we expect or encounter nasty weather, we will work with teachers to ensure the safety and quality of winter visits. Except for weather-related transportation problems (snow/ice), we will be ready for students every school day at LREC. Come out and enjoy the winter! ❄️



HORTICULTURE & RESTORATION OFFERINGS FOR SCHOOL GROUPS

by Deanna English

For the last few months the staff and visiting students have been collecting and cleaning seed here at LREC. Most of the collecting and cleaning is now completed and we are beginning to work on designing custom seed mixes for different areas of the site. Some mixes will be going into areas where invasive non-native species have recently been removed and we are trying to reintroduce native species. Other mixes are formulated to increase the diversity of plants in different areas of the site.

DECEMBER HIGHLIGHTED OPPORTUNITY:

Seed Mixing and Dispersing

If you visit in December with older students (upper elementary through college) and would like to learn about and help create seed mixes, please let us know. We will also have opportunities to spread the seed, which is fun for any age group.

ONGOING DECEMBER RESTORATION OPPORTUNITIES:

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

Stream monitoring—Stream monitoring kits are available and include dissolved oxygen, conductivity, pH, temperature (air and water), nitrates, turbidity, and chloride.

Invasive plant removal—We welcome opportunities to educate as students help us remove invasive plant species from the site.

Roots and plant structure demonstration—This activity introduces students to the purpose and function of roots and plant structures.

Clean seed—Learn about different seed sizes and dispersement strategies. Clean and prepare for planting in the greenhouse or for sowing outside.

Prepare seed (stratify/scarify)—Help prepare seed in order to mimic winter so the seeds go through their natural cycle and break dormancy.

Create seed mixes (Middle School and High School)—Students can learn about selecting site-specific species, use a formula to determine the amount of seed needed for an area and help us weigh each species of plant seed and create a custom seed mix. ❄️

Volunteer Holiday Party

MONDAY, DECEMBER 8, 2014, 11AM TO 2PM

AT THE GLASS HOUSE

(9733 Litzsinger Road, St. Louis, Missouri 63124)

RSVP to Martha at 314-540-4068 or martha@lrec.net.

Glass House Quiz: Woodpeckers

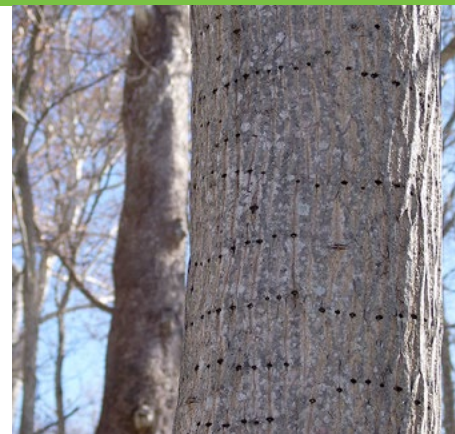
by Danelle Haake and Deanna English

We are fortunate that Missouri is home to seven different species of woodpecker, and all of those seven species have been spotted at LREC. It's always delightful to catch a glimpse of one of these birds, and as the leaves fall it seems to be easier to spy one of these beauties. Maybe it's the flash of red against the duller colors of winter that catches the eye since most woodpeckers have at least some red on their heads. Whatever it is, we were intrigued enough to go looking for more information about these birds.

The seven species of woodpeckers found in Missouri are the hairy, downy, pileated, red-bellied, and red-headed woodpeckers, the Northern flicker, and the yellow-bellied sapsucker. The source of most of the information in this quiz is a great web article by the Missouri Department of Conservation: <http://mdc.mo.gov/conmag/1999/12/missouri-woodpeckers>. No fair peeking at the article before you take the quiz, but as you generate your own questions, you should check it out.

We hope you have fun with the quiz and take some time to notice the woodpeckers in your own backyard and neighborhood.

- 1. One of the largest species of woodpeckers in the U.S. is frequently seen here at LREC. Which is it? (Hint: the cartoon character Woody Woodpecker is modeled on this species).**
 - a) pileated woodpecker
 - b) hairy woodpecker
 - c) ivory-billed woodpecker
 - d) Northern flicker
- 2. There are things that we can do to provide food and habitat for woodpeckers. Which of the following will help the woodpeckers?**
 - a) leave dead and dying trees standing (if they are not a safety hazard)
 - b) put out suet feeders in the winter
 - c) Plant native trees, shrubs, and vines that produce fruit and nuts
 - d) Both a and b
 - e) All of the above
- 3. Why do woodpeckers peck at wood?**
 - a) to make their nests
 - b) to attract mates
 - c) to find food
 - d) both a and c
 - e) all of the above



Holes in the trunk of a butternut tree.
Photo by Danelle Haake.

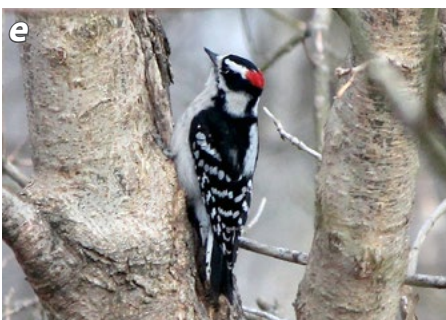
- 4. The butternut trees near the south prairie have horizontal lines of holes in their trunks and branches. This is due to which type of woodpecker?**
 - a) downy woodpecker
 - b) hairy woodpecker
 - c) yellow-bellied sapsucker
 - d) red-crowned sapsucker
- 5. Many people find that two of the types of woodpecker that visit LREC are difficult to tell apart. Which two?**
 - a) red-headed and hairy
 - b) downy and hairy
 - c) downy and pileated
 - d) pileated and red-headed
- 6. All the woodpeckers of Missouri lay the same color egg. Which color?**
 - a) tan with dark spots
 - b) pure white
 - c) yellowish green
 - d) gray with white speckles

See **Quiz**, page 9

From **Quiz**, page 8

Answers:

1. **a) pileated woodpecker.** The pileated woodpecker (*Dryocopus pileatus*) has a lovely red crest, and it is responsible for the large holes in the tree spar that many volunteers refer to as either the ‘woodpecker tree’ or the ‘ghost tree.’ (FYI, the ivory-billed woodpecker [*Campephilus principalis*], which once lived in southeastern Missouri, is/was about the same size as the pileated woodpecker, but requires a very special type of forest to survive. The species may be extinct.)
2. **e) all of the above.** All of these improve the availability of food and habitat for woodpeckers.
3. **e) all of the above.** Woodpeckers often peck at trees and logs in search of a tasty bug to eat. They also nest in tree cavities—often cavities they have made or enlarged by pecking with their strong beaks. They drum on wood to establish territories and attract mates; if you’ve ever seen a woodpecker pecking metal or plastic objects like light poles, this is probably the reason.
4. **c) the yellow-bellied sapsucker.** The yellow-bellied sapsucker (*Sphyrapicus varius*) drills rows of closely spaced holes and then eats the sap and the insects that are attracted to the sap. (FYI, to the best of our knowledge there is no such thing as a red-crowned sapsucker!)
5. **b) downy and hairy.** Downy and hairy woodpeckers have very similar color patterns, however the hairy woodpecker (*Picoides villosus*) is larger than the downy woodpecker (*Picoides pubescens*) and its beak is noticeably longer.
6. **b) pure white.** All Missouri woodpeckers lay white eggs. Since woodpeckers nest in cavities (hollowed out areas in trees), their eggs do not need to be camouflaged. ✂



Clockwise from top:
a. Tree cavities created by woodpeckers at LREC. Photo by Danelle Haake.
b. Female pileated woodpecker. Photo by Mark Musselman, USFWS.
c. Female yellow-bellied sapsucker. Photo by Ken Thomas.
d. Male hairy woodpecker. Photo by Ano Lobb.
e. Male downy woodpecker. Photo by Danelle Haake.

LREC Research: Shannon Rapp

by *Danelle Haake*

This summer and fall, Shannon Rapp of Fontbonne University and a couple of her students have been coming out to study the mammals found at Litzsinger Road Ecology Center. In a project entitled “Understanding Mammalian Diversity: The Influence of Suburban Development on Foraging Behavior in Small Mammals,” Shannon is using wildlife cameras to study the diversity and behavior of our resident fauna.

One aim of this study is to determine the diversity of mammals living at LREC. There are many bits of anecdotal evidence for a variety of wildlife that has been sighted over the past several years. In the first phase of this project, Shannon and her student, Stephanie Luttrell, captured images of turkey, deer, raccoons, grey squirrels, and opossums. (Download their complete study at <http://www.litzsinger.org/research/rapp-luttrell.pdf>.) A later batch of photos also picked up a number of mice.

In the second phase of the study, Shannon is working with student Zach Carel to examine the influence of the nearness of human uses on one or two species. This involves the use of seed trays filled with a known number/weight of sunflower seeds mixed with sand. After a period of time, the trays are collected to determine how much seed was eaten. The photographs taken of the seed-eating critters are also studied to verify which animals were eating the seeds.

We are eager to see what can be learned about the mammals of LREC and are grateful to Shannon and her students for collecting such interesting data. 🌿



Photos from Shannon's study. Note the tiny mouse at the bottom of the last photo.

LREC Announcements

December 2

Volunteer Enrichment: Burns
3 to 4pm, meet at the Cabin. RSVP to Martha at 314-540-4068 or martha@lrec.net.

December 8

Volunteer Holiday Party
11 am to 2pm at the Glass House. RSVP to Martha at 314-540-4068 or martha@lrec.net.

Local Events

December 6

Clark Hike: Winter Food for Wildlife
9am to 2pm at Weldon Spring Conservation Area in St. Charles County. Search for nuts, berries, and other winter wildlife food on this 5.3 mile hike. Ages 12 and up. Call 636-441-4554 to reserve a spot.

December 9

The Big Muddy: An Ecological History of the Missouri River and 21st Century Challenges
7 to 8:30pm at the Missouri History Museum. Learn about the geology, ecological history, and development of the Missouri River, from Lewis and Clark to the present. Free and registration not required. More at <http://www.academyofsciencestl.org/>.

December 13 and 14

Open House—
World Exploration: Behind the Science with Garden Botanists
1:30 to 4pm at MBG's Monsanto Center (4500 Shaw Blvd.). Join Garden botanists for a tour of the research building, including the library and herbarium. Free. Reservations recommended. Learn more at <http://www.missouribotanicalgarden.org/things-to-do/events/calendar.aspx>.