

Litzsinger Road Ecology Center

COMMUNITY NEWSLETTER

www.litzsinger.org

September 2010

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Students participate in the planting and maintenance of their schoolyard habitat at McGrath Elementary. Photo by Eddie Jones. See more examples of schoolyard habitats on page 6.

Being Your Own Advocate

By Bob Coulter

We hope your new school year is getting off to a good start. The volunteers and staff at LREC are looking forward to continuing our partnerships with you and your kids. From young kids to teens, you're getting kids involved in projects that apply what they are learning about ecology to make a difference in your schoolyard and community. In a staff meeting last week we discussed the challenges

of keeping up with you—a great problem for us to have!

We're also well aware of the challenges you face in leading projects like these in an educational climate that all too often promotes a very narrow vision of education. As we move forward together, I'd encourage you to take a look at a few "fact sheets" that document the benefits of the work you are doing. Published by the University of Colorado's Children, Youth, and Environments Center, these fact sheets print as nice 2-sided, single-sheet handouts you can use at parent nights or in the take-home folders many schools use. Or, just send the links to your kids' parents. They are available at www.tinyurl.com/cu-factsheets. Or, just follow the link from the www.litzsinger.org web site.

We all have a role to play in advocating for quality education. These sheets are just one way. Please let us know how we can support your efforts. ✍



CSI's First Year Draws to a Close

by Deanna Lawlor



Maplewood Richmond Heights Middle School student Nicole Hartzell monitors water quality on the Eleven Point River.

The first year of Community Science Investigators (CSI), an NSF grant funded project, drew to a close this summer with some exciting summer events. Part of the requirement of this after school project is a 70-hour summer program for the middle school CSI students.

The three 2009–10 participating schools were Maplewood-Richmond Heights Middle School in Maplewood, Christ the King School in University City, and Marian Middle School in South

St. Louis. Each of these schools planned summer programs based on what they had been learning about their community throughout the school year and each group's common interests. With their newly formed skills in Geographic Information System (GIS) and an Augmented Reality game (MITAR) in place, each school pulled their year together with a culminating event.

Christ the King's theme was competition, and the group spent two weeks exploring different areas of competition at LREC and around town. Right here at LREC they explored the watershed and learned about the competition going on in Deer Creek and then compared it to what they found at LeBarque Creek in Jefferson County.

They also spent time at LREC playing a MITAR game that required the students to use their imagination to transport themselves back in time to become apprentices of a frontier doctor. They worked in the prairie to identify and learn about prairie medicinal plants and how they can be used. Did you know that an extract from the cup plant's roots was thought by the Chippewa to relieve back and chest pains?

More commonly, Native Americans used the cup plant's resinous sap as chewing gum.

MRH Middle School had a water theme, which brought them to LREC for a few days to learn about water monitoring and to do some GIS mapping projects related to the water monitoring taking place in the St. Louis area. This group also used their mapping skills and water monitoring skills on a two-day canoe trip to collect data on the Eleven Point River.

The group checked oxygen levels, turbidity, temperature, and water flow to determine the health of the river and to answer questions the group had about oxygen levels based on turbidity and water flow as well as water temperature inside and outside a cave. At all the monitoring sites the group used a GPS unit to record the location. When they returned to St. Louis they were then able to use GIS to map their trip and monitoring points.

Marian Middle School spent their three-week summer program using GIS to map information about their community. They

See **CSI**, page 5

Summer Internships

by Mary Voges

Each summer, we at LREC employ one or two interns, usually college students interested in ecological restoration or a related field. We offer opportunities to students seeking professional development and hands-on job experience. We require the interns develop an independent, site-based research project, to be presented at the end of their ten-week paid internship.

This summer we were fortunate to have two college students, Jessica King and Christopher Kinast, and a high school senior, Madeline Brandt.

During their time at LREC, Maddie, Chris, and Jessica took on many tasks, from weedwhacking and chainsawing to water quality monitoring and plant monitoring. They assisted staff with any and all activities necessary to maintain the site and prepare for the upcoming school year.

Maddie

Madeline (Maddie) came to us through the SIFT & TERF program, a National Science Foundation-funded collaboration between Washington University's Tyson Research Center and Shaw Nature Reserve. The purpose

of the SIFT & TERF program is to attract and involve "St. Louis area high school students in scientifically based exploration of the natural world."

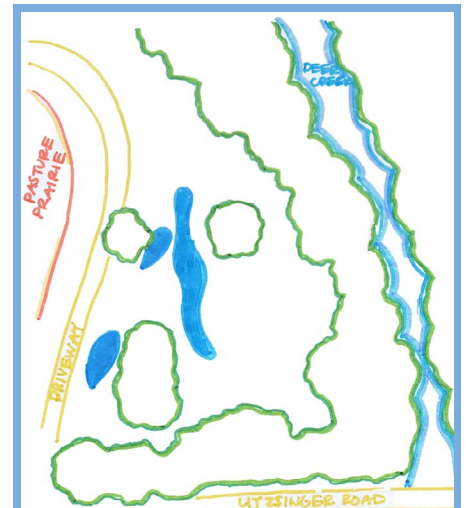
A senior at John Burroughs School, Maddie has an interest in field research and environmental studies. Her time in the SIFT & TERF program provided skills such as: using GPS equipment, deciphering a dichotomous key, and testing water, all things that she was able to do while at LREC.

Maddie developed a seed collection utilizing plants found at LREC. This compilation of seeds contains both native and invasive seeds and pods and will be used by education to expand our *Prairie Plants and Woodland Wonders* curriculum.

Jessica

Jessica King, is a master's degree student at Kansas State University, majoring in Landscape Architecture. Jessica built her project utilizing the currently unused property at 9701 Litzsinger Rd. (where Bob's house once stood). As a landscape architect, Jessica's project involved developing the property as an instructional tool for visiting

students. Her design features demonstrate water retention, runoff, natural drainage, and soil structure and analysis. Her ideas included incorporating two small rain gardens and widening the existing bioswale to allow better flow. The vegetation Jessica suggested include grasses, sedges and rushes, as well as isolated areas of forbs and woody plant material.



Jessica's landscape design includes:

- Incorporation of two rain gardens (one of forbs and one of grasses, sedges, and rushes) and a bioswale (forbs, sedges, grasses, and rushes)
- Using native plants for better infiltration and filtration
- Planting 1.5 feet away from one another to allow natural fill
- Using shorter plants for a border around the taller, inside plants

See **Internships**, page 5

Glass House Quiz: Branching

by Danelle Haake and Deanna Lawlor

With summer on the way out, we are pleased to return to the newsletter with the *Glass House Quiz* for another school year. Every summer, one of the many tasks that take a good deal of time is plant monitoring. We monitor plant communities in the woodlands and prairies every year in order to determine where we have invasive species, where we have new or unusual species, and if we are progressing as expected in our site restoration.

The branching pattern is key to telling the following pairs of plants apart. Match the plant name with the correct photo. Answers on page 5.

1. Poison Ivy and Box Elder Seedling

Both poison ivy and box elder have compound leaves that look similar. However, in one the plants, the branching pattern is opposite and in the other, alternate. Which is which?



2. Stinging Nettle and Wood Nettle

Both stinging nettle and wood nettle have simple leaves (one leaf on a leaf stalk). Which is which?



There are a few important characteristics to keep in mind when identifying plants. Among these are some that apply to nearly every tree, shrub, and forb (flowering, non-grass plant) in the world:

Leaves: Simple or Compound

Simple leaves are composed of only one leaf or blade and a leafstalk. This is the most common type of leaf.

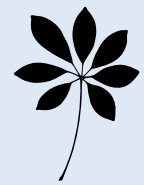


Simple

Compound leaves have blades divided into three or more leaflets. These leaflets can be arranged in two rows (pinnately compound) or radiating like a fan (palmately compound).



Pinnately Compound



Palmately Compound

Branching: Opposite or Alternate

The branching pattern of a plant is useful in determining its identity. The two most common branching patterns are opposite and alternate.



Opposite



Alternate

See **Quiz**, page 5



From **CSI**, page 2

developed ten informative maps about their community such as what communities the students are from, high schools that Marian graduate students attend, and what interesting things there are to do in the Marian community. They hope to post some of these maps on the school web site to better inform potential students and their families about the school.

Overall, the first year of CSI ended with a bang. This school year we will have six new middle schools in St. Louis and six new schools in Boston.

The six local 2010–11 schools are:

Brittany Woods Middle School, University City

Hoech Middle School, St. Ann

Owensville Middle School, Owensville

St. Cecilia Academy, St. Louis

Waynesville Middle School, Waynesville

Wyvetter Younge, East St. Louis

The teacher training for this new group was in July. They are a great group of teachers, and we look forward to working with them. ✨

From **Internships**, page 3

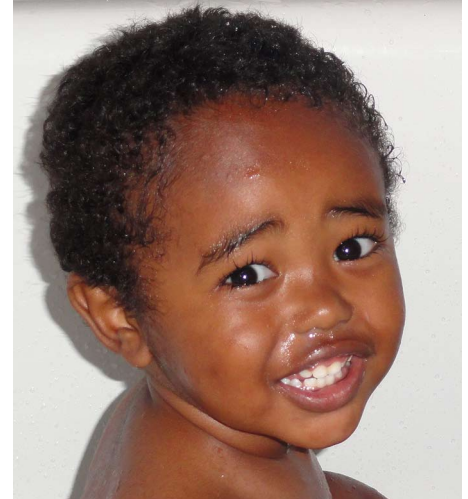
Chris

Christopher Kinast, a former student of Regis University in Denver and currently attending St. Louis Community College at Meramec. Chris is studying Horticulture, with an emphasis on arboriculture.

Christopher created a student-friendly field guide: *Field Guide to Selected Trees at LREC*. This book can be used by staff and volunteers while walking the site

with students of any age as the terminology is easy to follow.

Our Intern Program has proven advantageous to all involved, providing useful work-related activities and research opportunities for the interns, and receiving much-needed assistance on-site. In addition, the program is a look into the future of ecology. We see this as a win-win situation! ✨



Nem enjoying a bath.

Leslie Memula (School Partnership Coordinator) and her husband, Raj, became parents this summer.

Their son, Nemero Yumo Memula—Nem for short—was born in Sidama, Ethiopia on September 22, 2008. They arrived home as a family on July 2, 2010.

From **Quiz**, page 4

Answers:

1A: Opposite: Box Elder, also called Maple Ash (*Acer negundo*).

1B: Alternate: Poison Ivy (*Toxicodendron radicans*).

2A: Opposite: Stinging Nettle (*Urtica dioica*).

2B: Alternate: Wood Nettle (*Laportea canadensis*) This nettle is common in the LREC woodlands. Don't be fooled—this one stings too!

References:

Opposite/alternate images based on: <http://en.wikipedia.org/wiki/Phyllotaxis>

Plant photos by Danelle Haake. ✨

Any School Can Create a Schoolyard Habitat

by *Eddie Jones*

At most, students spend 6 hours at Litzsinger Road Ecology Center (LREC) over the course of a school year. That's not much time to develop a sense of familiarity, much less ownership and identity. So where can students go to make this kind of meaningful connection with an outdoor place? Their schoolyard! It's accessible on a daily basis for play and learning.

Even the most unlikely spot can serve as a schoolyard habitat. Habitats can be designed and created by students as formal learning activities. LREC is committed to assisting teachers in implementing schoolyard learning through the development and use of wildlife habitats. If you'd like help creating a habitat at your school, let your LREC staff contact know.

What does a schoolyard habitat look like? 🌱

Clockwise from top:
Belridge Elementary,
Reform Jewish Academy,
and the Freedom School.
See also MacGrath
Elementary on cover.
Photos by Eddie Jones.



LREC Announcements

September 30, 2010

Water Monitoring

Meet at 9 am at Glass House. Contact Danelle Haake (314-961-4410 or danelle@litzsinger.org) if you have questions.

Local Events

September 10, 2010

Fall Wildflower Sale

At Whitmire Wildflower Garden at Shaw Nature Reserve from 4 to 8 pm. Admission: \$3 for MBG members/SNR passholders and \$5 for non-members. Ask SNR horticulturalists your questions.

September 15, 2010

Dig N Dine

Streamside habitat restoration at Deer Creek Park (on Laclede Station Rd.) from 4 to 6 pm. Contact Danelle Haake (314-961-4410 or danelle@litzsinger.org) for further details.

September 18, 2010

Watershed-Wide Water Monitoring

Meet at Forest Park at 9 am for site assignments. Contact Danelle Haake (314-961-4410 or danelle@litzsinger.org) for further details.

September 25, 2010

Green Homes Festival

In Grand Center 10 am to 5 pm. Free. Learn more at www.greenhomesSTL.org.

September 25, 2010

Prairie Day

Shaw Nature Reserve from 10 am to 4 pm. Visit www.shawnature.org or call 618-451-3512 for more information.

September 25, 2010

River des Peres Trash Bash

Learn more at www.riverdesperes.org.