New Blooms of Learning
By Bob Coulter

It’s gratifying to see so many projects blooming in our partner schools. New native plant gardens are emerging in reclaimed parts of the parking lot at places like Kirk Christian School and Reform Jewish Academy, and planning is underway at St. Michael’s School for a garden to replace a large tree that recently came down. Other projects getting underway include a field guide to their own schoolyard and a bird inventory being developed by the 5th graders at Rossman School. In addition to these new adventures, existing projects at schools including Freedom, Spoede, and McGrath continue to thrive.

Ingredients found in each of these new projects include dedicated teachers, a supportive school administration, and partnerships with other members of the community. For example, in several gardens being developed by religiously-affiliated schools, new collaboration is emerging between the school and the congregation. These projects are also taking LREC’s partnership with the schools to new levels as we more closely link what students do at the ecology center with what they do in the schoolyard and community.

Another key ingredient not to be overlooked is the importance of student ownership of the project. For example, instead of just planting a few plants and calling it a garden, the students at Kirk studied native plants at LREC and did extensive research in books published by the Department of Conservation and others to select the best plants for the conditions found in their new parking-lot garden. This effort culminated in a planting day this fall involving all of the 5th and 6th graders as their chosen plants were lovingly given new homes, enriching the learning and ecological habitats at the school.

What’s new in your schoolyard?
What was once a tangle of honeysuckle and locust trees in a drainage ditch behind Our Lady of Providence School (OLP) in St. Louis County has been transformed, with the assistance of the Missouri Department of Conservation (MDC), into a woodland rain garden dubbed, The Outdoor Experience.

The name appropriately conveys the role of the site in the life of the school as students have opportunity, right in their own schoolyard, to experience local ecology in a way that enhances learning. The LREC staff got wind of The Outdoor Experience through Volunteer Educator Diane Dubois, and it has quickly become a model schoolyard learning site for the ecology center. Lynn Holler, a member of the OLP school community, led restoration efforts and continues to effectively facilitate the restoration and educational use of the site.

Last year, 1st graders, with assistance of MDC and LREC, seeded and transplanted prairie plants at the edge of the woodland to initiate Our Little Prairie, which burst into bloom this summer with a dazzling display of color. Lynn recently reported that the two outdoor places are “really catching on. More teachers are taking the kids out when appropriate with their curriculum.” The OLP students, along with parents and teachers, are participating in rich outdoor learning experiences while beautifying the neighborhood and enhancing wildlife habitat.
Glass House Quiz
By Danelle Haake and Deanna Lawlor

October is a very seedy time of year. In celebration of the wealth of seeds ripening right now, we thought we would see just what you know about some of the seeds that are seen at LREC this month!

1. What are the things sticking all over Danelle and Emily in the photo below?

2. It sure seems like greenish brown balls about the size of a golf ball (maybe a little bigger) are falling from the sky around here. There are two different kinds, each with a special gift inside. One gives the gift up easily while the other holds on tight. Can you guess what they are?

See Glass House Quiz Answers, page 4

Zipper Spider, from page 4
Female and male zipper spiders look quite similar except the female is much larger and easier to spot. Both have a tendency to hold their legs in an X pattern but the males are said to do it in a much more pronounced form as a camouflage mechanism. The female’s abdomen enlarges before laying eggs; and she can lay up to four egg sacs over a span of a couple weeks. She anchors the sac in the middle of the web with large silk strands. The female will not guard the eggs, but leaves her young to fend for themselves. The young spiders will hatch in the fall but the egg case can last all winter and into the next year. Zipper spiders live only one year, using all their energy to reproduce, and then dying off in the winter.

NEA Foundation Green Grants
http://www.neafoundation.org/pages/educators/grant-programs/
Public school educators are eligible to apply for individual grants worth up to $5,000 for the development and implementation of ideas, techniques, and approaches for teaching “green” concepts. Upcoming application deadlines are October 15, 2009, February 1, 2010, and June 1, 2010. There is an online application process.
Zipper Spiders
By Emily Lopez, LREC Intern

A female zipper spider (*Argiope aurantia*) was spotted by an afternoon school group near the south prairie between some tall cup plants on Wednesday, September 9. Zipper spiders, also known as black and yellow garden spiders, banana spiders, golden orb weavers, and writing spiders, are commonly spotted in gardens and are known for their large zigzag patterned webs.

The zipper spider is capable of creating seven different kinds of silk from seven different spinneret glands; the various types of silk all have different amino acid compositions. Since the silk used to make the pattern on the web is thicker than the silk used to make the web itself, the design has a bright white appearance. The design is usually centrally-located and is called a stabilimentum because it is said to stabilize the web. The reason for their signature zigzag design is not completely known, but there are several speculations. It could be used to lure insects into the web, to keep birds from running in to the web, or to conceal the spider from its prey and predators. As a juvenile, the spider’s design can be seen in a large round form in the middle of the web with zigzags running all through it, but as the spider matures, the design changes to just one vertical zigzag pattern.

See Zipper Spiders, page 3

Glass House Quiz Answers, from page 3

1. tick trefoil or beggar's lice seeds (*Desmodium* sp)

   While annoying to humans, according to *Ozark Wildflowers* (Kurz, 1999), the seeds of *Desmodium* are a source of food for songbirds, ruffed grouse, bobwhite quail, and wild turkey.

2. black walnut (*Juglans nigra*) and Ohio buckeyes (*Aesculus glabra*)

   Did you know that black walnuts are harvested by hand from wild trees and that, according to Wikipedia, about 65% of the annual wild harvest comes from Missouri?

   Buckeyes have a wonderful candy named after them. The recipe is below.

   **Buckeyes (Peanut Butter and Chocolate Candies)**
   
   2 cups butter
   2 pounds peanut butter
   2 to 2½ pounds confectioners sugar
   2½ pounds milk chocolate

   Combine butter, peanut butter, and sugar in a bowl and mix well. Shape into walnut-size balls. Insert a toothpick in center of each ball. Place on a cookie sheet, as close together as possible, and put in the freezer overnight (or at least 4 hours).

   Melt the chocolate over a double boiler slowly, or in the microwave. Dip frozen balls into melted chocolate. Leave a bit of the peanut butter showing when you dip these, so they look like the buckeye. Place on parchment or wax paper to dry. Remove the toothpick and smooth over the hole the toothpick made. Store refrigerated in a tightly covered container, for up to one week.

   Optional: Bring some to LREC!