From the new GK-12 proposal –
The new bioenergy theme creates many opportunities ...

We will create a collaborative research network
of schoolyard science research sites
{also replicates at KBS} that will
(a) serve as arenas for inquiry science activities
    that mimic aspects of GLBRC, LTER
    and fellows’ thesis research,
    while addressing
    Michigan Science Grade Level Content Expectations
    in Biology, Chemistry, Physics,
    Earth Science and Mathematics. {and MSP goals}
(b) allow K-12 classes to develop their own research initiatives,
(c) facilitate cross-district research collaboration, and
(d) encourage further interaction
    with GLBRC and LTER researchers
    and their K-12 partners
    across the national networks.
The Schoolyard Science Plots:

- designed to address specific questions
determined via collaboration

The “Replicated Core” blocks,
the questions asked,
data sampling methodology, etc.
will be replicated across the network
- must be very simple and very useful!

Plot layout
A. Pre-establishment: uniform lawn, light etc?
B. Composition seeded in:
   1. switch grass
   2. native prairie mixture
C. 1. fertilized
   2. not fertilized
D. 1. harvested-removed
   2. not harvested

2x2x2 = 8 treatments
= 1 replicate block

Local “Auxiliary” plots can be established
to address other questions
only of interest to one or a few districts.
or to one school (simplify for elementary?)
or that involve destructive sampling
Switchgrass after 1 month
Switchgrass after 1 year
Switchgrass June 2010

Native prairie after 1 month
Native prairie after 1 year
Native prairie June 2010
Plot start-up (for the “Replicated Core” blocks; local “Auxiliary” plots can be different):

1. Fellow & Teacher Partner schedule meeting to flag plots before July 9. Ideally, district administrator and T. Getty also present.
   Need (1) GPS device, (2) two >12m tapes, (3) 4 flags, (4) maps of schoolyards.
2. Ideal setting is similar to GLBRC plots:
   ~level, reasonably dry, not shaded,
   surrounded by mowed lawn, not too inconvenient to mow around,
   visible (we will provide ‘tasteful’ attractive posts and signs;
   also want to reduce temptation to casual trampling or vandalism),
   long axis oriented east-west (if doesn’t conflict with other criteria), ...
3. Draw ~location on map with landmarks (buildings, etc).
4. Flag one corner and record GPS location.
5. Lay out rectangle (as for a basement, nice geometry exercise):

   ![Diagram showing plot layout with GPS, 12m, 6m, and 13.416m dimensions]

6. Get confirmation from appropriate administrator.
7. Return documents (& photos) to Getty/Tinghitella; we will schedule herbicide application in mid-July; and later in late summer & fall.
7. Hand seed late fall or early spring
Lauren and Liz marked 2 blocks of plots at the Vicksburg Schools LandLab on East VW ave, just east of 34th St. GPS coordinate of the northwest corner is N: 42°07.270' W: 85°25.420'
Sandy, Iurii and Marty marking three blocks of plots on a sandy-gravely lawn behind the tennis courts at Plainwell High School
Jodi marking two blocks of plots near the Parchment Administration Building (the plots have since moved over closer to the buildings on the right)
Melissa and Connie marking 2 blocks of plots in an oldfield behind the high school and 1 block on the lawn near the Delton-Kellogg Middle School.
Leila and Becky marking 3 blocks of plots on lawn at the Gobles campus
Terri and Nick mapping 2 blocks of plots in a sandy oldfield behind Olivet high school
Marcia, Liz and Sue marking 2 blocks of plots on the lawn in front of Lawton High School
Mary and Nikhil marking one of the 5 blocks of plots on lawns at four schools in Comstock
Sandy, Alycia and Steve marking four of the 10 blocks of plots in the Harper Creek school district.
Debi and Nikhil marking one of the 2 blocks of plots by the Gull Lake Middle School.
Mark working with elementary classes to plant a new block at Galesburg-Augusta.
Tom marking one of 2 replicate blocks near the KBS LTER field lab