



Refer to the key to land cover categories and examples to help you identify land cover types on satellite images. After marking each grid with the color associated with the dominant land cover category, COUNT how many grids are in each:

Land Cover Category and corresponding color key	# of Grids	% Land Cover
Farm <input type="checkbox"/>	_____	_____
Residential <input type="checkbox"/>	_____	_____
Pavement <input type="checkbox"/>	_____	_____
Building <input type="checkbox"/>	_____	_____
Soil <input type="checkbox"/>	_____	_____
Prairie <input type="checkbox"/>	_____	_____
Woods <input type="checkbox"/>	_____	_____
Water <input type="checkbox"/>	_____	_____
Other <input type="checkbox"/> (Describe):	_____	_____
<b>Total</b>	_____	_____ <b>100</b> _____

Measure in millimeters (mm), the distance from the center of the bioenergy block to the **closest**:

Farm	_____
Residential	_____
Pavement	_____
Building	_____
Soil	_____
Prairie	_____
Woods	_____
Water	_____
Other	_____

Compile the class average for large scale % land cover for each land type and for the distance from the center of the bioenergy block to each land cover type. Submit this data along with the answers to questions 1 - 4 to the GK-12 website using the online google docs form.

# Landscape Data Sheet – Small Scale

Switchgrass = S	Fertilized = F	Harvested = H
Prairie = P	Unfertilized = UnF	Unharvested = UnH

Name(s): \_\_\_\_\_

School District: \_\_\_\_\_ Instructor/Fellow: \_\_\_\_\_

Date: \_\_\_\_\_ School/Location Name: \_\_\_\_\_

Block Code: \_\_\_\_\_ Plot Treatment Description (Ex: P F UnH): \_\_\_\_\_

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**Designate one person in each group to be the data recorder (groups of 3- one data recorder, two water levelers)**

## Part 1: Measuring Slope

Group Number (1, 2, 3, or 4) \_\_\_\_\_  
Your group's direction is (N,S,E,W) \_\_\_\_\_

Level of vial 1 (edge of block; in centimeters): \_\_\_\_\_  
Level of vial 2 (along transect; in centimeters): \_\_\_\_\_

Distance between vial 1 & 2 on transect (in centimeters): \_\_\_\_\_

**Calculating Slope (calculation can be done in the classroom by using the initial and final elevations recorded for the transect)**

Elevation: start (vial 1) \_\_\_\_\_ - Elevation: end (vial 2) \_\_\_\_\_ = Change in elevation \_\_\_\_\_

$\frac{\text{Change in elevation: } \_\_\_\_\_\_}{\text{Distance traveled: } \_\_\_\_\_\_} = \text{Slope}$

Slope = \_\_\_\_\_

## Part 2: Summarizing Land Cover Surrounding Bioenergy Blocks

Circle the dominant land cover type at each location along your transect:

	Farm	Lawn	Hard Surface	Building	Bare Ground	Field	Woods	Water
<b>0 m</b>								
<b>10 m</b>								
<b>20 m</b>								
<b>30 m</b>								
<b>40 m</b>								
<b>50 m</b>								
Total:	_____	_____	_____	_____	_____	_____	_____	_____

Summarizing Land Cover (back in classroom-all groups working on one block get together)

Total Quadrats in your block (from all four directions) that falls into each Land Cover type:

<b>Group</b>	Farm	Lawn	Hard Surface	Building	Bare Ground	Field	Woods	Water
<b>1</b>	_____	_____	_____	_____	_____	_____	_____	_____
<b>2</b>	_____	_____	_____	_____	_____	_____	_____	_____
<b>3</b>	_____	_____	_____	_____	_____	_____	_____	_____
<b>4</b>	_____	_____	_____	_____	_____	_____	_____	_____
Block total (from all four groups):								
<b>Total</b>	_____	_____	_____	_____	_____	_____	_____	_____

How many quadrats were sampled from your block (add up all categories in the "total" row)? \_\_\_\_\_

**Convert to Percent Land Cover Type**

Example: Total Quadrats in Farm-6, Total Number of Quadrats- 24

$$6 / 24 * 100 = 25\%$$

	Total Quadrats in Each <b>Category</b> / Total # of Quadrats Sampled		<b>% Land Cover</b>
Farm	_____	/ _____	_____%
Lawn	_____	/ _____	_____%
Hard Surface	_____	/ _____	_____%
Building	_____	/ _____	_____%
Bare Ground	_____	/ _____	_____%
Field	_____	/ _____	_____%
Woods	_____	/ _____	_____%
Water	_____	/ _____	_____%

For each block of plots submit the small scale % land cover as well as the compass direction and slope for each transect to the GK-12 website using the online google docs form.