Teacher Notes for "Habitat Mapping" Field Activity: (page 1 of 2)

I. Safety Requirements:

a. Wear long pants and closed toe shoes (soft sandy soil, mud & thorny bushes probable).
b. Bring water, each student should have a water bottle!
c. A floppy hat for shade may be helpful
d. Stay with partners/team
e. Be careful about cactus, *Smilax sp*. vines, Hog Plum (*Ximenia Americana**)***, Nicker Bean (Caesalpinia bonduc), Poison Wood (*Metopium toxiferum)*, spiders & snakes. (see reference sheet Poison Plants of FL at the following link: http://www.edis.ifas.ufl.edu/pdffiles/EP/EP22000.pdf)
f. Be aware of land marks: Lighthouse, Poles in center of site, Flag to the NW, sounds of traffic and the bridge bells to avoid being lost in the site.
g. Some areas are unreachable. Observations may be taken from a distance. It is easier to back-track then to push through the bushes.
h. Only use the two-way radio for project related help or emergency.
i. Report any injury or issue to site staff.

II. Equipment/materials for each team:

a. GPS with quick reference guide (Garmin 64st are available at the site) *****
b. Clipboards & pencils*****
c. Site maps (Areal zones, Topographical, Soils and Vegetation see map packet)
d. Data recording sheet
e. Plant ID pamphlets*****
f. Two-way radios*****
g. Mapping program (for after field visit, back in class)

***Items provided on site (other items need to be brought with the group)**

III. Methods

a. Divide class/group into six teams
b. Each team will be responsible for mapping specific areas of all habitats working in and east-west zone.
c. Four teams will start, one at each corner (North West, North East, South West and South East) of the site and two teams will start in the middle of the west side and the middle of the east side (overlook). See yellow stars on zone map.
d. Each team will work toward the middle (North/South Red line) of the site, mapping points within their zone (yellow-lines).

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e. Each team will take a minim of four GPS coordinates at each corner (or as close as possible) of their assigned Zone, record those coordinates on the data sheet and mark on their zone maps where the reading was taken. Additional GPS coordinates are recommended and must also be recorded and marked on their maps. **Overlapping zones is OK, the idea is to cover the entire study site using input from all teams. **Not all parts of the site are reachable. Students are to view areas from easily accessible spots to determine where the habitat changes.**
f. Teams will also indicate the names of the plants that they observed to determine the type and ecotone of the habitats they observed. Ecotones are to be marked on their zone map.
g. Students will share/collaborate their findings to complete a comprehensive overall habitat mapping, delineating each of the three major habitats based on plant and topographical observations.
h. After data is collected and shared, each team will create a map using a mapping software program such as Google Earth or Arch View to generate their habitat map. Students can hand draw habitat zones on a fresh aerial map is a mapping program is not feasible.

IV. Vocabulary for Habitat Mapping:

Coordinates: points of intersection in a grid system. GPS coordinates are usually expressed as the combination of latitude and longitude.
Delineation: the act of representing, portraying, or describing, as by lines, diagrams, sketches, etc.; drawing an outline.
Dominate Species: The species that predominates in an ecological community, particularly when they are most numerous or form the bulk of the biomass.
Ecotone: transitional area of vegetation between two different plant communities, such as forest and grassland. It has some of the characteristics of each bordering biological community and often contains species not found in the overlapping communities**.**
Endangered species: a species of animal or plant that is seriously at risk of extinction.
GPS: Global Positioning System. Also, the device that reads and interprets the satellite positioning data.
Habitat: Place where an organism or a biological population normally lives or occurs.
Threatened Species: a species likely, in the near future, to become an endangered species within all or much of its range.
Topography: Graphic representation of the surface features of a place or region on a map, indicating their relative positions and elevations.