



Greetings!

Thank you for choosing the McHenry County Conservation District's Community Ecological Studies program at Living Land Farm and Hickory Grove Conservation Area. During this program students gain an awareness and understanding of human relationships with natural communities while exploring five different types of communities: pond, wetland, savanna, woodland, and a restored prairie. Students participate in hands-on activities, build an understanding of ecological concepts, and explore the different communities for signs of relationships and cycles.

Please make sure all teachers and chaperones attending the field trip are aware of the following information.

1. Teachers, chaperones and students should dress for the weather and wear sturdy footwear for hiking as we are outside the entire time.
2. One adult chaperone for every 10 students is required to ensure the safety of the students. We expect chaperones to monitor student behavior and participate in the field trip as well.
3. All students should wear a nametag.
4. Encourage everyone to bring plenty of water and a waste-free lunch! Pack lunches in insulated containers and include items that can be eaten in their entirety, recycled or composted. Examples are whole fruits and vegetables, drinks in reusable bottles, snacks purchased in bulk and brought in a reusable container, cloth napkins, and reusable ice packs. Everyone is encouraged to bring a backpack or fanny pack to carry lunches and drinks as we will be eating in the field. For additional information on reducing waste visit www.epa.gov/epawaste/wycd/index.htm.
5. Background information as well as pre and post-trip activities are available for this and all McHenry County Conservation District school field trips in your choice of format. Completion of the activities ensures a more successful learning experience for your students. **This packet has a map outlining the drop-off and pick-up locations of the field trip and pre and post-trip activities.** Included with the pre-trip activities is a vocabulary list. It is important that the students understand these words before attending the program.
 - * Download information from our website at www.mccd.org; click on the Education tab.
 - * Request that information be sent to your email or school address (call Leslie Krebs at 815-479-5779)
6. In the event of inclement weather on the day of your field trip, contact Leslie Krebs at 815-479-5779 to discuss rescheduling options.

I look forward to seeing you!

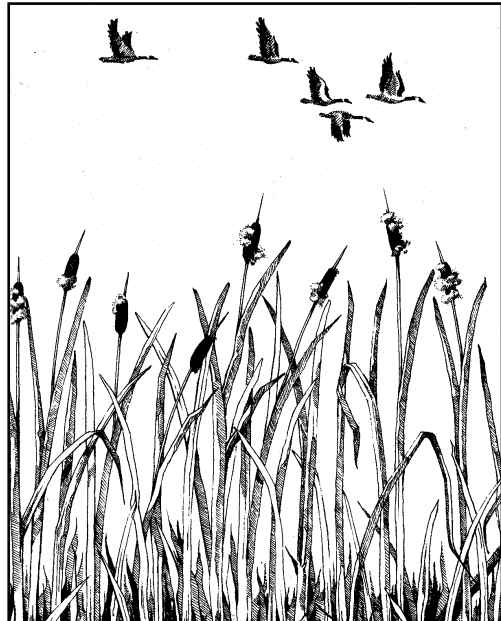
Sincerely,

Leslie Krebs
Education Program Coordinator

COMMUNITY

ECOLOGICAL

STUDIES



TEACHER PACKET

McHenry County Conservation District
Living Land

PRE-TRIP ACTIVITIES

Community Ecological Studies Field Trip Vocabulary

Adaptation ~ a special characteristic that enhances the ability of an organism to survive.

Camouflage ~ an organism's distinct physical appearance which helps it blend in with its surroundings.

Community ~ all living organisms interacting in a particular area.

Consumer ~ an organism that needs to get its energy from eating another organism.

Decomposer ~ the organisms (Fungus, Bacteria, Invertebrates) that convert dead organic material into soil.

Ecology ~ the study of the relationships that exist between living things and their environment.

Ecosystem ~ a natural unit that includes living (plants and animals) and nonliving (sunlight, water, temperature, etc...) parts interacting to produce a stable system.

Food Chain ~ the transfer of food energy from plants to other organisms, each which feeds on the previous one to acquire energy.

Food Web ~ a complex interlocking pattern of food chains.

Habitat ~ the arrangement of food, water, shelter, and space suitable for an organisms' needs.

Predator ~ an animal that eats another organism.

Prey ~ an animal that is hunted, or an organism that is eaten by another organism.

Producer ~ an organism that gets its energy directly from the sun (a plant).

Habitats for Sale

Grade: 3-7

Time: 30-60 minutes

Purpose: Creatively research and describe different habitats for different animals

Material

- Reference books and resources on animals and their habitats
- Pictures of different ecosystems
- Paper and Pencils
- Crayons/markers
- Real estate ads from local newspaper

Procedure:

Explain to the students that they will create a classified ad that describes an animal's habitat and/or home. Write animal names on slips of paper and hand slips out to each student or have them work in groups. Then have them begin to write the classified ads based on the examples of real ads. They need to include a description of where the animal will find its food, water, shelter, a place to raise family, without giving away the identity of the animal. They can include a picture of the habitat, or for younger kids just have them draw a picture.

Display a list of all the animals, and ask each participant or group to read each ad. Then have them guess, from the list, which animal would best fit each habitat. Discuss how some ads might fit more than one animal and how some animals might adapt to fit into a habitat that is not their own.

Example:

For Sale: Ten acres of undisturbed oak-hickory forest. This property includes both white oak, bur oak and shagbark hickory, which will produce plenty of acorns and nuts for years to come. The trees are very old with plenty of holes in them for sleeping, hiding or staying out of the elements. Don't forget all those wonderful big branches to climb and get your exercise. The forest floor is blanketed with plenty of leaves for making a very comfortable nest and the moist soil makes for easy digging .

Answer: (Grey Squirrel)

POST TRIP ACTIVITIES

Web of Life

Grade:

3-8

Time:

30-45 minutes

Purpose:

To demonstrate to students how everything in nature is connected to everything else.

Material:

- Ball of twine or yarn
- 5"×8" note cards
- Writing utensil

Procedure:

1. Choose an ecosystem (Forest, ocean, river, wetland, etc)
 2. Determine what lives in that ecosystem
 3. Write organisms' names on cards (Include the sun, water, producers, consumers, and decomposers). Make sure you have enough for all students or have students chose organisms.
 4. Have students stand in a large circle, give them the cards, and have them hold them.
 5. Pick one student to start with the ball of string and have them say what they need to depend on to survive in the ecosystem (the ecosystem is the circle of students). When they determine one thing they need they toss the ball of twine to that organism or thing (For example if the student is a deer a deer needs a plant (grass) to survive, then the deer throws the ball of string to the plant (grass)). This will continue until everyone has at least one piece of the string (the students can repeat organisms). Make sure the students hold the string tight enough.
 6. Discussion can begin after everyone is connected. Discuss who is a producer, consumer, and decomposer. Students will see how everything is connected but to prove it, take one of the components out. Explain that this component is being removed due to the effect of pollution, flooding, pesticides, or some other cause. Look at the effect on the web as this component is removed. This can lead into discussions about the issues related to human impact on the ecosystem.
- * Included is an example of animals that live in a prairie ecosystem, and how the web should look.**

Charting Diversity

Grade Level: 4-8

Time: 50 minutes

Purpose: Students will discover the diversity of plant and animal life and how they are adapted for survival.

Materials: Chalkboard or easel, copies of attached page, lunch bags or other containers, resources on plants and animals (encyclopedias, dictionaries, field guides)

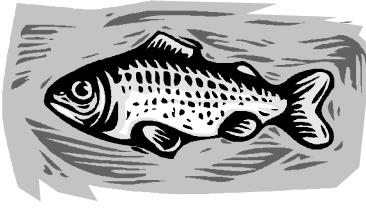
- 1) Copy a blank chart onto the chalkboard or a piece of easel paper. The chart should have 4 columns: *Where It Lives*, *How It Moves*, *What It Wears*, *Name of Animal*. It can have 4 rows to start out. Have students copy this chart onto a piece of paper (see below).
- 2) Pass out copies of attached *Charting Diversity* for each student.
- 3) Ask students to name different types of habitats in which animals live and write these on the chalkboard (forest, prairie, wetland, savannah, pond)
- 4) Ask if the animals living in these places have special characteristics that enable them to survive (fish swim, squirrels climb, etc..). Tell students they are going to play a game in which they will look at animals, determine how each is different and how each has a special role in the environment.
- 5) Divide the group into pairs and give each pair 3 lunch bags or other containers. Have students write one of the following on each bag: 1) *Where It Lives* 2) *How It Moves* 3) *What it Wears*. Then have students cut out the individual squares from the *Charting Diversity* sheet and place them in the appropriate bags.
- 6) Have one member from each pair take a square from each bag. Write the words in the appropriate column on the charts they made. Continue until all the bags are empty.
- 7) Explain to students that they will need to do a little detective work to complete their charts with the right animal names. For example, if a row lists the words wetland, flies and exoskeleton, the students should do research to find one or more examples of an animal that has all three characteristics (dragonfly, damselfly, etc..)
- 8) After students have finished their research, have them present their findings to the entire class or in the form of a report. Be sure students say how each species is especially suited for the habitat it lives in.
- 9) Ask students why there is such a diversity of plant and animal life on earth?

| Where It Lives | How It Moves | What It Wears | Name of Animal |
|----------------|--------------|---------------|----------------|
| | | | |

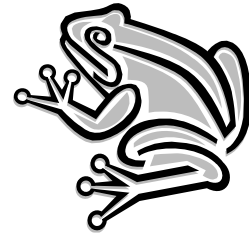
CHARTING DIVERSITY



Forest



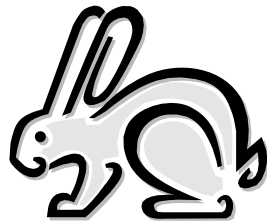
Swims



Scales or Slimy Skin



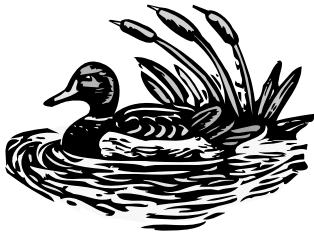
Prairie



Hops



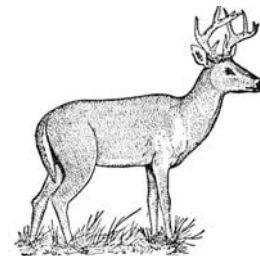
Feathers



Pond



Flies or Glides



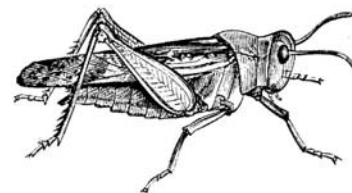
Fur



Wetland



Crawls, Walks or Runs



Exoskeleton