



## **School Program Description**

### **Predators Wildlife Discovery**

**Level: 4<sup>th</sup> – 5<sup>th</sup> Grade**

## **Saginaw Bay Visitor Center**

### **Bay City State Recreation Area**

#### **PROGRAM DESCRIPTION:**

This program focuses on the Michigan's predators and the important role a predator plays in the environment. Through the guided learning experiences, students will become familiar with the predators in our state, their role in keeping prey populations healthy, conservation measures which can be taken to help wildlife populations and how wildlife biologists manage wildlife populations through calculating "carrying capacity".

This award winning program was developed for 4<sup>th</sup> grade Michigan students by the Michigan United Conservation Club and has been offered throughout the state. The program setting is indoors starting inside the auditorium and only moving outside for the simulation game if weather permits. The program opens with a mystery animal lab where students have to logically deduce the identity of a Michigan predator from its skull. Next, students learn about other Michigan predators through the use of a wildlife skull collection. Then the students explore the natural history of our mystery animal to prepare them for a simulation game where they role-play that animal. Through playing the game, the students learn about how a wildlife biologist uses carrying capacity to manage a population. The game also helps model for the students how land use practices can cause an animal's population to increase and decrease based on the resulting food, water, shelter, and space available for the animal. The program concludes with information on how biologists utilize "hunting" as a scientific tool to help maintain a balanced ecosystem.

#### **PROGRAM GOALS:**

To help students appreciate and value Michigan's Wetland habitats and the wildlife they support.

To help students realize the need to conserve Michigan's remaining wetlands in order to preserve Michigan's wildlife populations.

To help student's understand the role a predator plays in the environment and how hunting can be a scientific management tool used in the place of natural predators.

#### **PROGRAM OBJECTIVES:**

1. Students will be able to list three predators that live in Michigan.
2. Students will be able to rank by size the timber wolf, coyote, and red fox.
3. Students will be able to correctly the niche (as an omnivore, carnivore, or herbivore) of a Michigan animal from a skull.
4. Students will be able to define: carrying capacity, predator, prey, nocturnal, range, omnivore, herbivore, carnivore, habitat.
5. Students will be able to list the four components of an animal's habitat: food, water, shelter and space.
6. Students will be able to predict whether carrying capacity goes up or down given a change in land use.
7. Students will be able to explain why predators go after the old, sick and weakest prey available.
8. Students will be able to list man as a predator that lives in our state.
9. Students will be able to predict what would happen to a prey population without predators.

#### **PRE-VISIT SUGGESTIONS:**

1. Introduce the concept of food chains and food webs.
2. Discuss the meaning of the words: carnivore, herbivore, omnivore.
3. Read the story of the "Big Bad Wolf" to your class. Discuss what parts of the story they feel are real and which parts is fiction. Can they find any other stories about ferocious wild animals, which attack people?

### POST-VISIT SUGGESTIONS:

1. Have the students create a "Predators of the Wetland" mural. Instruct each student to contribute a predator which lives in Michigan's Wetland Habitat.
2. Assign each student a predator. Instruct them to research their animal and find out what that animal eats, how it captures its food and whether there have been records of the animal attacking man (if they can find an occurrence, try to find out if the animal was healthy or not).
3. Project WILD: *Oh Deer!* – students become "deer" and components of habitat; *How Many Bears can Live in this Forest?* – students become "bears" looking for habitat components; *The Hunter* – students read and discuss a story; *And the Wolf Wore Shoes* – students divide books into those about "real" and those about "make-believe" animals; *Classroom Carrying Capacity* – students determine carrying capacity based on space; *Improving Wildlife Habitat in Your Community* – students design and accomplish a project to increase carrying capacity; *Quick Frozen Critters* – students play an active game of freeze tag that explores predator prey relationships; *Muskox Manuevers* – students simulate the muskoxen and wolves in a game which focuses on survival adaptations.
4. Project Aquatic WILD: *Marsh Munchers*- students simulate a salt marsh food web, *Turtle Hurdles* – students become sea turtles and limiting factors as the face extinction; *Hooks & Ladders* – a role playing game where students learn about the hazards faced by the Pacific Salmon.
5. Project Learning Tree –*Web of Life* – students take a close look at the forest ecosystem, *Birds and Worms*- an exploration into the part camouflage plays in survival, *Habitat Pencils* – a fun way to learn about habitat diversity; *Schoolyard Safari* - a search of the school yard for signs of animal life.

### COORDINATING WITH THE MICHIGAN SCIENCE GRADE LEVEL CONTENT EXPECTATIONS:

Science. Inquiry Process: S.IP.04.11, S.IP.04.12, S.IP.04.13, S.IP.04.14, S.IP.04.15, S.IP.04.16, S.IP.05.11, S.IP.05.12, S.IP.05.13, S.IP.05.14, S.IP.05.15, S.IP.05.16, S.IP.06.11, S.IP.06.12, S.IP.06.13, S.IP.06.14, S.IP.06.15, S.IP.06.16, S.IP.07.11, S.IP.07.12, S.IP.07.13, S.IP.07.14, S.IP.07.15, S.IP.07.16

Science. Inquiry Analysis & Communication: S.IA.04.11, S.IA.04.12, S.IA.04.13, S.IA.04.14, S.IA.04.15, S.IA.05.11, S.IA.05.12, S.IA.05.13, S.IA.05.14, S.IA.05.15, S.IA.06.11, S.IA.06.12, S.IA.06.13, S.IA.06.14, S.IA.06.15, S.IA.07.11, S.IA.07.12, S.IA.07.13, S.IA.07.14, S.IA.07.15

Science. Reflection & Social Implications: S.RS.04.11, S.RS.04.14, S.RS.04.15, S.RS.04.16, S.RS.04.17, S.RS.04.18, S.RS.04.19, S.RS.05.11, S.RS.05.12, S.RS.05.13, S.RS.05.15, S.RS.05.16, S.RS.05.17, S.RS.05.19, S.RS.06.11, S.RS.06.12, S.RS.06.13, S.RS.06.14, S.RS.06.15, S.RS.06.16, S.RS.06.17, S.RS.06.18, S.RS.06.19, S.RS.07.11, S.RS.07.12, S.RS.07.13, S.RS.07.14, S.RS.07.15, S.RS.07.16, S.RS.07.17, S.RS.07.18, S.RS.07.19

Life Science. Organization of Living Things: L.OL.04.16, L.OL.05.41, L.OL.05.42, L.OL.06.51, L.OL.06.52

Earth Science. Earth Systems: E.ES.07.41, E.ES.07.42

Life Science. Heredity: L.HE.05.11, L.HE.05.12, L.HE.07.21,

Life Science. Evolution: L.EV.04.21, L.EV.04.22, L.EV.05.11, L.EV.05.12, L.EV.05.21

Life Science. Ecosystems: L.EC.04.11, L.EC.04.21, L.EC.06.11, L.EC.06.21, L.EC.06.22, L.EC.06.23, L.EC.06.31, L.EC.06.32, L.EC.06.41, L.EC.06.42

### COORDINATING WITH M.E.A.P. SOCIAL STUDIES CONTENT STANDARD BENCHMARKS:

Geographic Perspective

II.2—I.e.1, I.e.2, I.e.3, I.e.4

II.4—I.e.3, I.e.5

II.5—I.e.1