Food Chain Game

Level II—Grades 3-5

Objective: This activity will allow students to understand the relationship between predator and prey in a community.

Materials: Area large enough for students to move around in
Notebook and pencil
Chalkboard or flip chart

Background: A simple food chain relationship is plant to mouse to hawk, but feeding relationships are often difficult to observe in the wild. Students will re-enact this connection by being grass, mice and hawks in a game of tag.

Procedure:

1. Begin by dividing the class into three equal groups: grass, mice and hawks.
2. Set boundaries and place the plants in a large, uneven circle.
3. Cluster the mice closely in the middle of the circle and position the hawks outside the circle.
4. To differentiate between groups have each student do the following hand motion:

   PLANT – Clamp hands over head
   MICE – Put hands at sides
   HAWK – Flap arms like wings

5. When the command is given, mice try to make it to a food source (plant) before being tagged (eaten) by a hawk. One plant can only support one mouse, but hawks can eat as many mice as they can catch.
6. If a mouse tags a plant before being eaten, it remains a mouse for he next round. If it does not tag a plant or get tagged by a hawk, it becomes a plant in the next round. If it is eaten, it becomes a hawk in the next round. If a plant is tagged by a mouse, it becomes a mouse in the next round. If it is not eaten, it remains a plant. If a hawk does not catch a mouse, it becomes a plant, but if it does catch a mouse it remains a hawk.
7. After each round analyze the results by counting and recording the number of hawks, mice and plants.
8. After several rounds, return to the classroom with results. Ask the students the following questions:
   - When are hawks most plentiful?
   - Do hawks need plants to survive?
   - What happens if there are no hawks?
   - How does the game's balance compare to natures?
   - Are there more plants than plant eaters in nature?