

Incredible Shrinking Habitat*

Subject: Social Studies

Duration: 30-45 minutes

Location: Outdoors

Key Vocabulary: Endangered species, population, prey base, limiting factors

Related Activities: Where Have Our Plants and Animals Gone?; The Lorax Activity; Population Interaction; Risky Business

Florida Sunshine State Standards: SS.B.2.2



Objectives. Students will be able to: a) describe the impact of development on wildlife populations, and b) recognize that habitat loss is one of the most critical issues facing wildlife.

Method. Students will become panthers, deer and motor vehicles in an active tag-like game.

Background. The Florida panther has succumbed to numerous pressures, including loss of suitable habitat, to become a highly endangered species. A viable population needs large tracts of undeveloped land to sustain an adequate prey base and territory for young to disperse. Access into wilderness areas by road building for drainage canals, and increased development for ranching, lumbering, agriculture, mining, oil and gas drilling, housing and recreation all impact the panther habitat and the viability of the population.

Materials

- 5 hula hoops
- 2 pieces of rope long enough to divide the playing field in half
- 4 orange traffic cones for boundary markers
- Poker chips for deer food (20-22 for every 10 students)
- Deer and panther pictures/symbols or jerseys to identify players (6-8 deer and 2-4 panther for every 10 students)

Suggested Procedure

1. Define playing area with traffic cones and place hula-hoops randomly within it.
2. Divide students; for every 10 you should have 6 deer, 2 panthers, and 2 in reserve to become panther and deer young. Attach pictures/symbols to players to distinguish deer from panthers.
3. Scatter food chips at random throughout playing field.
4. Tell the students that:
 - Each deer must get 4 food chips in order to survive.
 - Each panther must catch (tag) one deer that has at least 3 food chips, in order to survive.
 - Four of the hula hoops are “safety zones” for deer. If two deer are in a safety zone together, they

can increase their population (reproduce) and two of the reserve deer can enter the safety zone with them. All must continue finding food chips to survive.

- The remaining hula hoop is a panther den. Two panthers in the den site together can increase their population (reproduce), so that the two panthers in reserve can join them in the den site. All must continue to tag deer for food to survive.
- Whoever dies (deer or panthers) leaves the game to become part of the reserves.

5. Play for a few minutes or until all the prey (deer) have been eaten.

6. Ask students about the limiting factors on the panther population. (Did the habitat provide enough food for the panthers? For the deer? What if there weren't enough food for the deer? How would that affect the panther?)

7. Play again, but shrink the boundaries (because of increased development). Also, lay two ropes about a foot apart and parallel to each other (a road) down the middle of the habitat. Spread a reduced number of food chips in the habitat on both sides of the "road" to show the loss of resources from road construction.

8. Choose two students to be cars on the road. The cars must stay within the ropes but can tag any wildlife that comes close enough (roadkill).

9. Now play another round.

Evaluation

What additional factors limited panthers in the second game? How can those be changed? (Safe passages could be built under roads, there could be slower speed limits, we could limit human activities on lands next to the road to those that are least disturbing to panthers.)

Extension

Have students research other animals and determine the limiting factors on their populations.

* Adapted from Project WILD.