



1 THE ENDANGERED FLORIDA PANTHER: A COMPLEX SOCIAL-ECOLOGICAL STORY



ESTIMATED TOTAL TIME
50 minutes

- ▶ Grades 9–Adult
- ▶ Life Sciences, General to Advanced
- ▶ Government, Geography, and Media Studies Connections

In this activity, students engage with the *Path of the Panther* film to build understanding of the complex story of the Florida panther and the land they and other species inhabit. This lesson is flexible for high school introductory biology students, with adaptations for advanced life science courses, adult courses, and nonformal education groups.

For younger audiences, students analyze *Path of the Panther* film clips to learn the story of this endangered species. Students will recognize the challenges of tracking and protecting this elusive big cat, as they build understanding of threats the Florida panther faces from hunting, habitat destruction, vehicle collisions, and disease. To demonstrate their learning, students create posters with proposals for addressing threats and limiting factors as a way to protect the panther and its habitat.

For advanced high school and adult audiences, participants watch the full *Path of the Panther* film or the clips provided, capturing notes on panther life history, human-wildlife challenges, tracking panthers, and progress and threats to recovery. They engage in small group discussions, then demonstrate learning and insights by creating posters with proposals for protecting the panther and its habitat.

Proposals from this activity will be useful as an additional resource in Activity 8: Florida Wildlife Corridor Voices Roundtable.

KEY TERMS

- ▶ endangered species
- ▶ limiting factor
- ▶ population
- ▶ wildlife tracking



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BACKGROUND

The film *Path of the Panther* provides a window into the ecosystems that support wildlife within the Florida Wildlife Corridor, the human impacts affecting wildlife populations, and the actions of people who are committed to conservation. The Florida panther, once roaming habitats throughout the southeast United States, is now found only in the southern region of Florida. The Florida Wildlife Corridor, designed to facilitate movement of wildlife, allows species to roam freely across diverse ecosystems. This network of connected public and private lands provides a natural habitat for countless **endangered species**, including the Florida panther.

Endangered species are organisms threatened by extinction, often due to habitat loss or loss of genetic diversity.

Habitat loss can happen naturally or as a result of human-caused threats such as land development, habitat fragmentation, hunting, or vehicle collisions.

Limiting factors in nature can also constrain the size of a **population**. Examples of limiting factors include scarce food sources, few mates, and competition for resources. Often, a population is affected by several limiting factors at once. Over time, limiting factors can cause population growth to slow and then stop as a population reaches the carrying capacity of the ecosystem. In addition to habitat loss, vehicle collisions, and hunting, the Florida panther population has been influenced by limiting factors including disease and a decrease in genetic diversity.

STANDARDS

This activity addresses the following:

NGSS: HS-ESS3-4: Construct an argument supported by evidence for how increases in human population and per-capita consumption of natural resources impact Earth's systems.

Florida NGSS: SC.912.L.17.6: Discuss, compare, and negotiate methods to balance the needs of humans with the needs of the environment.

AP Environmental Science: EIN-2.M: Describe the effects of urbanization on the environment.

OBJECTIVES

Students will:

- identify threats to the Florida panther population;
- discuss and evaluate different solutions to threats to the panther habitat and population; and
- propose strategies for protecting the Florida panther from extinction.

PREPARATION

Gather and/or print materials:

- Handout: Journey of the Endangered Florida Panther or Endangered Florida Panther Notes (1 per pair or small group)
- Film Clips: pathofthepanther.com/resources
- Large poster paper (1 per pair or small group)
- Markers (1 per pair or small group)
- Sticky notes (optional)
- Reference: [Endangered Species, Limiting Factors](#)

Set up technology:

Have students view as a whole class the film *Path of the Panther* or the selected film clips provided. Alternatively, viewing in pairs or small groups could give students an opportunity for more discussion. This assignment could also be completed as homework prior to group discussions and proposal development.

5 MIN INTRODUCE THE ACTIVITY

1. Build interest and access prior knowledge with a short discussion. Ask:
 - *What large animals/predators live in your local ecosystems? What large predators have you seen, or what have you not seen that you think lives near you?*
 - *How do you think the population of large wild animals, such as black bears or mountain lions, has changed since 1900? What might have led to those changes? Generate ideas around changes in habitat locally and more broadly for large mammals, including how they and humans interact.*



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2. Explain that while black bears live all over North America, big cats are much less common. Explain to students that to find out more, they will view clips from the *Path of the Panther* documentary film. They will examine how threats and **limiting factors** have caused the population of one of North America's big cats, the Florida panther, to decrease so much that it's been listed as an **endangered species**. Then they will create a proposal to address those factors to better protect the panther.

30 MIN VIEW CLIPS OR 90 MIN FULL FILM

3. Determine which handout to use with students: Journey of the Endangered Florida Panther (for clips) or Endangered Florida Panther Notes (for the full film).
4. Give pairs or small groups the handout to prompt note-taking as they view the film or clips. Rewind as needed to clarify information in the videos.
 - **If watching clips**, pause after each clip and discuss as a class the key points, using the following prompt:
 - ▶ *What factors have limited the panther population, past and present?* Have students circle or highlight notes referring to threats or limiting factors.
 - **If watching the full film**, have students take notes in the graphic organizer as they view the film.

Have students circle or highlight notes referring to threats or limiting factors.

15 MIN DISCUSS AND DEVELOP A PROPOSAL TO PROTECT THE FLORIDA PANTHER

5. Organize students into small groups for a short discussion. Each group should have a facilitator, a timekeeper, and a recorder to summarize. First, ask each group member to share a quote or scene that was significant to them and explain why. Then have groups discuss ideas for the following:
 - *What threats exist for the Florida panther?*
 - *What opportunities are presented in the film for solutions?*
6. Propose to students this key question: *What do panthers need to continue increasing their population?* Have students follow the prompt on the handout to develop their ideas.
7. Have students use large paper and markers to create a poster with their proposal ideas. Each group can post their proposal on the walls and present it to the class, or groups can move around the room as a "gallery walk," seeing each group's ideas and adding more ideas to posters using sticky notes.
8. To wrap up the discussion, students can talk about any valuable new ideas added to their posters. They can also take a moment to reflect and jot down and/or share something they have learned using the prompt "I used to think.... Now I think..." Collect ideas as they leave to gauge understanding.

MORE TO EXPLORE

ENDANGERED SPECIES RESEARCH

Have the group do some research on endangered species in their area (by county with [this tool](#)) and then find out the threats to those species. How similar are the threats to those of the Florida panther? Have wildlife corridors or other conservation strategies been put in place to address the needs of these endangered species?

