

**Instructor Sheet**  
**Can You Find a Solution?**  
**Lesson 23**

**Grade Level(s):** Middle, High

**Duration:** Three to five 50-minute periods

**Setting:** Indoors, use computer for research, then ???

**Skills:** Listening, small group work, research, interpretation, reading, public speaking, web navigation

**Subject Areas:** Social studies, environmental science, life science/biology, language arts, mathematics

**Overview:** This interdisciplinary activity is designed as a mediation rather than a debate. Unlike debates, which have winners and losers, the goal of mediation is win-win, with all sides being satisfied with the outcome. Mediated settlements are more likely to become reality than settlements in which one party is forced to accept the position of another. This activity helps students develop higher level thinking skills (analysis, synthesis, and evaluation) required for the FCAT.

**Sunshine State Standards:**

Grades 6-8

SC.G.2.3.3 knows that a brief change in the limited resources of an ecosystem may alter the size of a population or the average size of individual organisms and that long-term change may result in the elimination of animal and plant populations inhabiting the Earth.

SC.G.2.3.4 understands that humans are part of an ecosystem and their activities may deliberately or inadvertently alter the equilibrium in ecosystems.

MA.B.1.3.3 constructs, interprets, and uses scale drawings such as those based on number lines and maps to solve real-world problems.

LA.A.2.3.8 checks the validity and accuracy of information obtained from research in such ways as differentiating fact and opinion, identifying strong vs. weak arguments, recognizing that personal values influence the conclusions an author draws.

LA.C.1.3.4 uses responsive listening skills, including paraphrasing, summarizing, and asking questions for elaboration and clarification.

LA.C.3.3.3 speaks for various occasions, audiences, and purposes, including conversations, discussions, projects, and informational, persuasive, or technical presentations.

SS.B.1.3.1 uses various map forms (including thematic maps) and other geographic representations, tools, and technologies to acquire, process, and report geographic patterns of land use, connections between places, and patterns and processes of migration and diffusion.

SS.B.2.3.6 understands the environmental consequences of people changing the physical environment in various world locations.

SS.C.2.3.7 understands current issues involving rights that affect local, national, or international political, social, and economic systems.

Grades 9-12

SC.G.2.4.6 knows the ways in which humans today are placing their environmental support systems at risk (e.g., rapid human population growth, environmental degradation, and resource depletion).

SC.H.3.4.3 knows that scientists can bring information, insights, and analytical skills to matters of public concern and help people understand the possible causes and effects of events.

LA.A.2.4.4 locates, gathers, analyzes, and evaluates written information for a variety of purposes, including research projects, real-world tasks, and self-improvement.

LA.C.1.4.1 selects and uses appropriate listening strategies according to the intended purpose, such as solving problems, interpreting and evaluating the techniques and intent of a presentation, and taking action in career-related situations.

LA.C.3.4.2 selects and uses a variety of speaking strategies to clarify meaning and to reflect understanding, interpretation, application, and evaluation of content, processes, or experiences, including asking relevant questions when necessary, making appropriate and meaningful comments, and making insightful observations.

SS.B.1.4.1 uses a variety of maps, geographic technologies including geographic information systems (GIS) and satellite-produced imagery and other advanced graphic representations to depict geographic problems.

SS.C.2.4.3 understands issues of personal concern: the rights and responsibilities of the individual under the U.S. Constitution; the importance of civil liberties; the role of conflict resolution and compromise; and issues involving ethical behavior in politics.

**Site location(s):** Natural History: Home Ranges

*Background Information:*

Environmental disputes are among the most complicated of all disputes in our society and involve many different individuals, groups, and organizations. Known as “stakeholders”, these parties have different interests and also may hold radically different values. It is not always possible to resolve a dispute, even through mediation.

The mediator begins by recognizing all positions are valid, by listening to all stakeholders, and by trying to discover what is most important to each group and where there is room to compromise. It is important to respect and understand other peoples emotions and feelings. As Hank Fischer, veteran of efforts to restore wolves to Yellowstone National Park discovered, to save endangered species it is not enough to have the strength and courage of your own convictions. You must also be able to put yourself in anthers skin.

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The Activity

*Pre-planning:*

1. Reserve a computer lab or set up computers in your classroom.
2. Photocopy web materials, if computers are not available.
3. Photocopy student sheets.
4. If using students as mediators, teachers should be sure students understand the basic purpose and principles of mediation. It is recommended that teachers reacquaint themselves with mediation materials, such as: *From Conflict to Cooperation: How to Mediate a Dispute* by Beverly Potter (Berkeley: Ronin Publishing, 1996), which gives practical guidelines and rules of thumb for mediation. The teacher may also consider inviting a professional mediator to visit the class.
5. Decide on teams.

*Procedure:*

1. Assign computers/teams
2. Explain grading rubric.
3. Have the students review the threats to the Florida panther on the panther web site

Site location: Threats

4. Pass out The Situation and Your Task sheet.
5. Pass out stakeholder sheets. Mediators (teacher or students) should familiarize themselves with Guidelines for Mediation.
6. Allow the groups time to meet and to brainstorm their positions, Encourage them to think how the panther and its protection and recovery affects them as a group. What issues are most important to them? On what issues might they be willing to compromise?
7. Each student researches his or her position (either as homework or in the computer lab).
8. The group meets again to share what its members have learned and to prepare a 3-5 minute presentation on its position.
9. Mediation: see guidelines for mediation. Ideally more than one class period would be allotted to this activity.
10. Post outcome on web site to share with other classes.

*Extension:*

Have students keep journals doing this activity, in which they record what they think and feel about the different positions and how and why they thoughts and feeling changed or developed over the course of the activity.

*Assessment:*

- 4 = Student has research notes, team presents a 3-5 minute presentation, posts outcomes on web site  
3 = Student has research notes, team presents a 3-5 minute presentation  
2 = Student has research notes  
0 = Little or no participation

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THE SITUATION

The Florida panther is among the most endangered animals in the world. “Endangered” means that without our help the Florida panther is likely to become extinct. If the panther becomes extinct, it will be gone forever. If the panther is to be saved, many individuals and groups must work together to find a solution acceptable to all.

At one time thousands of panthers ranged throughout most of the southern United States. Today only 30 to 50 adults remain in southeastern Florida on large private ranches and public conservation lands. Their range is currently one of the least developed areas in all of the eastern United States, but it is surrounded by some of the most densely populated and heavily farmed areas in the world.

Humans have endangered panthers by destroying their habitat and by direct persecution. Earlier in our history, panthers (and other predators such as wolves) were considered a threat to livestock and humans and were killed at every opportunity. Today panthers are further threatened by genetic problems resulting from their small population size. Roads are also a threat to panthers. Many panthers have been killed trying to cross roads. Roads also bring further human activity and development to panther habitat.

To survive and reproduce panthers need large amounts of land with abundant large prey (deer and hogs) and with forest cover. Male panthers need as much as 600 square kilometers each and females need up to 200 square kilometers each. Forests are important as stalking cover and as places to rest during the day and to den and raise their young.

The U.S. Fish and Wildlife Service in concert with other agencies that contribute to the management of the panther has determined:

“The survival and recovery of the Florida panther is dependent upon: 1) protection and enhancement of the extant population, associated habitat, and prey resources; 2) improving genetic health and population viability; and 3) reestablishing at least two additional populations within the historic range.”

In 1995, the second task “improving genetic health and population viability” was successfully addressed by the release of 8 female mountain lions from Texas into the south Florida population. The Texas mountain lions have successfully bred with Florida panthers and have produced healthy kittens.

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Your Task

Your task as a group to come up with a plan to protect and enhance the south Florida panther population, its habitat and its prey resources. You should also select two places in Florida where the panther might be reestablished. Can you find a balance between saving the panther and paying attention to human concerns?

To successfully do this, the perspectives of many different groups and individuals must be taken into account. Some of you will be asked to research the position of some of the stakeholders in panther recovery, to present your position to the group, and to work together to find a solution acceptable to all. Some of you will act as mediators and will help clarify issues and help stakeholders find solutions acceptable to all.

To help you get started are position statements from stakeholders as well as references to places on the web where you will find additional information. You may also want to look at [www.mountainlion.net](http://www.mountainlion.net), a very complete annotated bibliography.

To help you select areas where the panther might be reintroduced are a series of maps. Remember panthers need large forested tracts of land and deer and hogs to eat. You must also address concerns of all stakeholders. You can use the blank map to indicate areas of possible reintroduction.

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Stakeholders' Positions

**Environmental Attorney:** The Endangered Species Act is the law, and people should follow it without receiving compensation. Private property is not really private. In a civilized society, people cannot do as they wish with their property. Only the government can decide what is permissible on either public or private land. Instead of weakening the Endangered Species Act, we need to enforce it and strengthen it to protect habitat.

[www.endangered.fws.gov/endspp.html](http://www.endangered.fws.gov/endspp.html) (U.S. Fish and Wildlife Service Endangered Species Home Page)

[www.defenders.org/esapage.html](http://www.defenders.org/esapage.html) (Defenders of Wildlife Endangered Species Act Page)

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**Large Landowner:** Existing endangered species regulations are unreasonable and place an unfair burden on large landowners. Panthers use our lands because we are doing something right. We are being asked to protect something valued by all citizens but are not receiving any compensation. People in the cities and suburbs aren't making any sacrifices to protect the panther. Many of us are land rich but cash poor. Often we are forced to sell land that has been in our family for generations to pay federal estate taxes. NAFTA (the North American Free Trade Agreement) has made it even more difficult for us to make a living farming.

[www.panther.state.fl.us/gfc/panther/handbook/habitat/pvtlands.html](http://www.panther.state.fl.us/gfc/panther/handbook/habitat/pvtlands.html) (includes video) (Panther Net, Habitat, Private lands)

[www.fl-stewardship.com/](http://www.fl-stewardship.com/) (Florida Stewardship Foundation)

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**Conservationist:** We may lose 25 to 50 percent of God's creation over the next century. We have a moral responsibility to the other forms of life around us. We cannot continue to exploit our environment for short-term economic gain. All life has intrinsic value apart from its utilitarian value to humankind. The panther is an "umbrella" species and by protecting it we protect hundreds of lesser-known plants and animals within the panther's range. The beauty and power of the panther represents all that is good about Florida. And, we must not be the generation that loses it. Extinct is forever.

[www.defenders.org](http://www.defenders.org) (Defenders of Wildlife)

[www.atlantic.net/~oldfla/panther/panther.html](http://www.atlantic.net/~oldfla/panther/panther.html) (Florida Panther Society)

**Wildlife Biologist:** Panthers and other large predators fulfill important functions in an ecosystem. They help keep prey populations from overexploiting the environment. Deer may reduce tree species diversity, which in turn will reduce populations of birds and other species. Unregulated deer populations are subject to starvation and disease, wander into suburbs to feast on flowers and scrubs, and cause thousands of automobile accidents each year. Panthers do not densely populate an area. They space themselves through home ranges. They make a kill, stay and feed and move on. They don't deplete an area of deer. From an evolutionary standpoint, subspecies as well as species are important. Evolution often occurs on the edges of a species range and subspecies may have adaptive traits not shared by other members of the species.

[www.panther.state.fl.us/gfc/panther/handbook/natural/index.html](http://www.panther.state.fl.us/gfc/panther/handbook/natural/index.html) (Natural history section of Panther Net)

[www.uidaho.edu/rsrch/hwi/](http://www.uidaho.edu/rsrch/hwi/) (Hornocker Wildlife Institute)

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**Concerned Citizen:** Panthers are dangerous and will eat you, your children, your livestock, and your pets. Big cats aren't so cute and cuddly when they are in your backyard. There is nothing you could do if they decided to take your baby. What good are they anyway? They are just cougars and there are plenty of cougars out West. People are more important than panthers. The state should spend its money on programs for children instead of worrying about an overgrown cat.

[www.hcn.org/1997/aug04/dir/Western\\_A\\_Colorado.html](http://www.hcn.org/1997/aug04/dir/Western_A_Colorado.html) (A Colorado reality check: lions roam and kill)

[www.panther.state.fl.us/gfc/panther/handbook/references/finalrep.pdf](http://www.panther.state.fl.us/gfc/panther/handbook/references/finalrep.pdf) (Sociological study)

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**Hunter 1:** Panthers will kill all our deer. We pay our hard-earned money for hunting leases and we don't want panthers taking all the deer. They hang around the feeders and take the biggest and the strongest bucks. Each panther will take 20-30 deer each year. If you have a population of 20 cats, that's several hundred deer out of your herd. Soon there won't be any deer left.

[www.state.fl.us/gfc/panther/pdfs/1st\\_reintro.pdf](http://www.state.fl.us/gfc/panther/pdfs/1st_reintro.pdf) (1<sup>st</sup> north Florida reintroduction study)

[www.state.fl.us/gfc/panther/pdfs/reintroduction.pdf](http://www.state.fl.us/gfc/panther/pdfs/reintroduction.pdf) (2<sup>nd</sup> north Florida reintroduction study)

[www.ool.com/hunting/org.statements.html](http://www.ool.com/hunting/org.statements.html) (position statements on hunting of major national organizations)

**Hunter 2:** Panthers are hunters too and there are enough deer for both of us. Hunting over bait is illegal on federal land and in many situations. Why if it allowed on private land where it causing most of the conflicts between hunters and panthers. It's unethical and unsportsmanlike. True hunters spend 99% of their time scouting the area, learning the habits of animals, and enjoying wildlife and the outdoors.

[www.state.fl.us/gfc/panther/pdfs/1st\\_reintro.pdf](http://www.state.fl.us/gfc/panther/pdfs/1st_reintro.pdf) (1<sup>st</sup> north Florida reintroduction study)

[www.state.fl.us/gfc/panther/pdfs/reintroduction.pdf](http://www.state.fl.us/gfc/panther/pdfs/reintroduction.pdf) (2<sup>nd</sup> north Florida reintroduction study)

[www.ool.com/hunting/org.statements.html](http://www.ool.com/hunting/org.statements.html) (position statements on hunting of major national organizations)

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**Land Developer:** Southern Florida is one of the fastest growing regions in the nation. People want houses, roads, schools, and shopping centers. We have a right to make a profit and to meet the demands of citizens. The American economy depends of growth: we bring jobs and prosperity.

[www.ftrend.com](http://www.ftrend.com)

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**Animal Rights Activist:** Our efforts should go into protecting the habitats of other species and then we should leave them alone. Wild animals have the right to be treated with respect and this includes leaving them in their natural surroundings. We believe that hunting for sport is murder. Nonhuman predators kill and consume because they have no choice: they must hunt or starve.

<http://arrs.envirolink.org> (Animal Rights Resource Site)

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**Seminole/Miccosukee Indians:** The panther has always been a part of our culture, a kind of sacred animal. We used panther tails, paws, bones, and skin in our traditional medicine. Even today more than half of the Seminoles are part of the panther clan. We never over-killed panthers or over-developed their habitat. It was not the American Indian that caused the panther and other animals to become endangered. Probably the Seminoles have a deeper interest in the panther and its future than most of the citizens in the state of Florida. If we lose the panther, a part of Seminole culture will die.

[www.panther.state.fl.us/gfc/panther/handbook/whatname.html#billie](http://www.panther.state.fl.us/gfc/panther/handbook/whatname.html#billie) (Chief James Billie tells panther creation tale and discusses Seminole culture)

[www.seminoletribe.com/news](http://www.seminoletribe.com/news) (Seminole Tribe of Florida)

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**Guidelines for Mediation**

**Task 1:** One member of each stakeholder group presents its position (3-5 minutes). A note taker records on the board the key points of each presentation.

**Task 2:** The group with the help of the mediator discusses any conflicts over facts that arise during the presentations. The panther website and other resources should be used to clarify facts. Mediation cannot proceed if there is basic disagreement over facts.

**Task 3:** Brainstorming. The group with the help of the mediator lists all the ways they can think of to protect the panther and to ensure its survival. The goal here is to be creative and to list all possible options.

**Task 4:** Evaluate the options in terms of how well they satisfy the needs and concerns of all of the stakeholders. Mediators should try to determine what is most important to each group and what issues they are willing to compromise on. Mediators should help the group to develop ways to address the legitimate concerns of all the stakeholders.

**Task 5:** Formulate a plan for protection and recovery of the Florida panther. The plan should contain a series of actions to protect the panther in south Florida as well as suggest places elsewhere in the state where the panther might be reintroduced. If the group cannot agree on protection and recovery, write up what issues could not be agreed on (and why) as well as any issues that the group was able to agree on.