

An integrated unit focusing on the management decisions regarding one of Arizona's major predators

Mountain Lions in Arizona

Lesson 4: Humans and Lions – Conflicts Through Time

LESSON OVERVIEW

Students will learn about the history of predator management policies that led to the sharp decline in mountain lion populations throughout the United States. They will read a short article about mountain lion management and answer questions.

SUGGESTED GRADE LEVELS

- 6 – 12

ENDURING UNDERSTANDINGS

- Modern wildlife management is based on science as well as on the social pressures of the time.

OBJECTIVE

Students will:

- Read and comprehend a scientific article.
- Create a bar graph from a given set of data.
- Develop conclusions supported by scientific data.

ARIZONA DEPARTMENT OF EDUCATION STANDARDS

Grade	Science	Social Studies
6	S1-C3-03; S1-C3-04; S1-C4-03	S1-C1-02
7	S1-C3-05; S1-C4-03	
8	S1-C3-05; S1-C4-03	
High School	S1-C3-06; S1-C4-02; S1-C4-04; S3-C1-05; S3-C2-03; S3-C2-05	S1-C1-01; S3-C3-05

Note: The full text of these standards can be found in Appendix A.

TIME FRAME

- 1 day (45 minutes)

MATERIALS

- *History of Mountain Lion Management* article (1 per student)

TEACHER PREPARATION

- Make copies of the *History of Mountain Lion Management* article for each student



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SUGGESTED PROCEDURES

1. Ask students: "Do you believe it is legal to hunt mountain lions in the United States?" They can answer in the form of a journal entry or a class discussion. Select key answers for further discussion. Inform students that in many states hunting mountain lions is part of mountain lion management, and we are going to explore this further by reading an article on the history of mountain lion management.
2. Hand out the *History of Mountain Lion Management* article. Explain to students that they are to read the article silently and, when finished, answer the questions on a separate sheet of paper. If they do not finish in class, they can complete the assignment as homework.
3. When students have answered the questions, ask volunteers to read their paragraphs. Discuss their responses with the class. Point out that the many viewpoints that people have on this topic show that although science suggests an answer, decision-makers must take into account the values and concerns of stakeholders and constituents as well as science when making decisions. Decisions that will affect the public must respect the variety of backgrounds, experiences, and values that the public brings to the decision-making process. As a result, many questions may have more than one appropriate answer.
4. Collect the answers. If you will be reusing the article, collect it as well.

ASSESSMENT

- Responses to *History of Mountain Lion Management* questions
- Class discussion

EXTENSIONS

- Students can read and summarize the article "Predator Management: An Issue with Teeth" in the May-June 2001 issue of *Arizona Wildlife Views* magazine, published by the Arizona Game and Fish Department.
- Encourage your students to participate in the *Hot Topics Campfire Chat* with their parents at home.

ARIZONA GAME AND FISH DEPARTMENT POSITION

The Arizona Game and Fish Department has determined that mountain lions will be destroyed if they attack a human or when they are judged to be a substantial threat to public safety. However, dogs, cats, and other small domestic pets could be considered a natural prey base for lions. The loss of these pets from lions will not be a sufficient reason to remove a lion from its home range. The agency has considered trapping and relocating problem lions; however, due to their large home ranges, the fact that all suitable habitat is occupied, and intraspecific defense of occupied habitat, this option will not be used.



Appendix A: Arizona Department of Education Standards – Full Text

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Science Standards

Grade	Strand	Concept	Performance Objective
6	1	3 – Analysis and Conclusions	3 – Evaluate the observations and data reported by others 4 – Interpret simple tables and graphs produced by others
		4 – Communication	3 – Communicate the results of an investigation with appropriate use of qualitative and quantitative information
7	1	3 – Analysis and Conclusions	5 – Formulate a conclusion based on data analysis
		4 – Communication	3 – Communicate the results of an investigation with appropriate use of qualitative and quantitative information
8	1	3 – Analysis and Conclusions	5 – Explain how evidence supports the validity and reliability of a conclusion
		4 – Communication	3 – Present analyses and conclusions in clear, concise formats
High School	1	3 – Analysis, Conclusions, and Refinement	6 – Use descriptive statistics, like mean, to analyze data
		4 – Communication	2 – Produce graphs that communicate data 4 – Support conclusions with logical scientific arguments
	3	1 – Changes in Environments	5 – Evaluate the effectiveness of conservation practices and preservation techniques on environmental quality and biodiversity
		2 – Science and Technology in Society	3 – Support a position on a science or technology issue 5 – Evaluate methods used to manage natural resources

Social Studies Standards

Grade	Strand	Concept	Performance Objective
6, 7, 8	1	1 – Research Skills for History	2 – Interpret historical data displayed in graphs, tables, and charts
High School	1	1 – Research Skills for History	1 – Interpret historical data displayed in graphs, tables, charts, and geologic time scales
	3	3 – Functions of Government	5 – Describe the factors and processes that determine major domestic policies (e.g., social security, education, health care, parks, environmental protection)



Appendix B: Worksheets and Overheads

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The pages that follow contain the worksheets listed below:

- A. *History of Mountain Lion Management* – An article describing how the government has managed mountain lions through recent history. Poses questions regarding mountain lion management. (2 pages)

