

*A writing activity
dealing with the
issues surrounding
the reintroduction of
the Mexican wolf into
Arizona*

Wolves

An Uncertain Future?

LESSON OVERVIEW

In this lesson, students will explore the continuing debate over the reintroduction of Mexican wolves into Arizona. After visiting Web sites of various stakeholders, the students will write either a letter to the Arizona Game and Fish Department (grades 4 – 6) or a persuasive essay (grades 7 – 12).

SUGGESTED GRADE LEVELS

- 4 – 12

ENDURING UNDERSTANDINGS

- Wildlife management is a complex issue that must take into account the social, economic, and cultural backgrounds of the stakeholders involved.

OBJECTIVE

Students will:

- Develop a critical stance on wolf reintroduction.
- Research information about opposing philosophies concerning the wolf reintroduction debate.
- Write a persuasive letter/essay to convince others of their viewpoint.

ARIZONA DEPARTMENT OF EDUCATION STANDARDS

Grade	Science	Writing
4	S3-C1-01	S1-C1-04; S1-C3-01; S1-C3-06; S1-C4-04; S2-C1-01; S2-C1-02;
5	S3-C1-02; S3-C1-03	S2-C1-03; S2-C2-03; S2-C2-06; S2-C3-02; S2-C4-01; S2-C4-02; S2-C5-02; S3-C4-01
6	S2-C1-03; S3-C2-02;	S1-C1-01; S1-C3-01; S1-C3-07; S1-C4-04; S2-C1-01; S2-C1-02;
7	S2-C1-03; S3-C2-01; S3-C2-02	S2-C1-03; S2-C1-04; S2-C2-03; S2-C2-05; S2-C3-02; S2-C3-04;
8	S2-C1-03; S3-C2-01; S3-C2-02	S2-C4-01; S2-C4-03; S2-C5-02; S3-C4-01
High School	S2-C1-01; S2-C1-03; S2-C1-04; S3-C1-01; S3-C1-05; S3-C2-03; S3-S2-05	S1-C1-05; S1-C3-01; S1-C3-07; S1-C4-04; S2-C1-01; S2-C1-02; S2-C1-03; S2-C1-04; S2-C1-05; S2-C2-03; S2-C2-05; S2-C3-02; S2-C3-03; S2-C4-01; S2-C4-02; S2-C4-03; S2-C5-03; S3-C4-01



A writing activity
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issues surrounding
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the Mexican wolf into
Arizona

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

TIME FRAME

- 3 – 5 days (45 minutes each day)

MATERIALS

- *Student Research Guide* (one per student)
- *Essay Planning Guide* and *Graphic Organizer* (double-sided, one per student)
- *Author Self-Reflection* (one per student)
- *Peer Editing Guide* (one per student)
- *Wolf Essay Rubric* (one per student)
- *Approximate Historic Range of the Mexican Wolf* transparency
- Computers with Internet access (or class sets of printed Web sites containing background information)

TEACHER PREPARATION

- Make copies of both the *Student Research Guide* and the *Essay Planning Guide* and *Graphic Organizer* for each student.
- Make an overhead of the *Approximate Historic Range of the Mexican Wolf* map.
- Preview the Web site links to become familiar with the information they present and where the answers to the questions may be found.
- If student computer use is not available, you will need to print out and copy some of the information for the students. Suggested documents include:
 - Mexican Wolf Frequently Asked Questions
 - AZA: Species Survival Plan
 - Farm Bureau: No Sheep's Clothing for These Mexican Wolves
 - Defenders of Wildlife: Wolves
 - Mexican Wolf Fact Sheet
 - Habituated Wolves
 - Dangers of Wolves
- If you want your students to explore the issue further before they write their essay, check out the math-based unit titled "Counting on Wolves," available from the Arizona Game and Fish Department Web site.

SUGGESTED PROCEDURES

1. Ask students where they think wolves can be found in the United States. If they do not mention Arizona, guide them in that direction.
2. Show them the *Approximate Historic Range of the Mexican Wolf* map. Explain that until recently a species of wolf roamed freely in Arizona, but it is believed to have been extirpated from the United States in the early 1900s. Explain that "extirpated" means that an animal has become extinct in certain parts of its original range.
3. Ask students to offer theories as to why the wolf may have become extirpated in the United States. If they do not come up with it on their own, lead them to the fact that wolves were removed in a federally mandated effort to eliminate all large predators.



*A writing activity
dealing with the
issues surrounding
the reintroduction of
the Mexican wolf into
Arizona*

4. Explain that in the late 1970s, the federal government hired a trapper to catch some Mexican wolves in Mexico before they became extinct. These wolves were brought into captivity in zoos throughout the United States and Mexico. Now, through careful breeding, we have increased the population sufficiently to be able to release some wolves back into the wild.
5. Point out that not everyone is happy with this idea. Ask the students to suggest possible reasons why some people might be upset about wolves going back into the wild.
6. Inform the students that they will now have the opportunity to explore this issue in more detail. They will be looking at Web sites and answering questions to determine which groups of people might be in favor of the reintroduction of wolves and which groups might be against it. When they have had sufficient time for research using the Internet, they will develop their own opinion and write a letter (grades 4 – 6) or an essay (grades 7 – 12) to convince people of their viewpoint.
7. Give a copy of the *Student Research Guide* to each student.
8. Direct students to the “Wolves: An Uncertain Future?” Web site available at www.azgfd.gov. From there, students must follow the directions in their *Research Guide*, answering the questions as they visit the various links.
9. Allow students at least one day to complete the *Research Guide*.
10. When they have finished the *Research Guide*, give them copies of the *Essay Planning Guide* and *Graphic Organizer*. They are to follow the directions provided. These tools will assist them in developing their letter or essay.
11. When students have completed the *Essay Planning Guide* and *Organizer*, they may begin writing their persuasive papers. Links are provided that will give them some tips on writing their papers.
12. When they have completed their rough drafts, divide the class into groups of four.
13. Inform the students that they will now have the opportunity to edit/critique their teammates’ papers using a *Peer Editing Guide* to help them make specific suggestions for improvement. Emphasize that the author is the ONLY one who can make changes or corrections to the paper, but encourage authors to look seriously at the comments. For more information on Peer Editing, see Appendix B.
14. Set a due date for revised papers. Before you collect the papers, ask students to reflect on their work by answering three questions:
 - a. What did you learn by writing this letter/essay?
 - b. What do you like best about your letter/essay?
 - c. What next?
15. Students should write their answers on the back of the last page or on another page they attach to their paper. Allow peer group teammates a final check for completeness, and turn in the final draft along with the peer editing and rough draft.

ASSESSMENT

- *Student Research Guide*
- *Essay Planning Guide*



*A writing activity
dealing with the
issues surrounding
the reintroduction of
the Mexican wolf into
Arizona*

- Persuasive Essay or Letter – It is recommended that you use one or all of the traits detailed in the 6-trait rubric in order to best prepare your students for the AIMS test. However, another good rubric is provided.
- Self-assessment

EXTENSIONS

- Encourage your students to send a copy of their letter/essay (original or modified) to the editor of your local newspaper. See if any of them are published. Use this activity to initiate a discussion on citizenship and the role that we play in our society.
- Stage a class debate giving students from both sides the opportunity to argue their position in a structured format.
- Hold a class role play in which each student represents a particular stakeholder and argues their stakeholder's point of view in an attempt to change legislation. A detailed and complete role-play can be found at <http://www.kidsplanet.org/tt/wolf/socialstudies/Cri.PDF>.
- Encourage your students to participate in the *Campfire Chat* with their parents at home.

ARIZONA GAME AND FISH DEPARTMENT'S POSITION

The Arizona Game and Fish Department has determined that direct participation in reestablishment of the Mexican wolf would be consistent with its current program to reestablish extirpated (extinct in certain parts of its original habitat) nongame and endangered wildlife in Arizona and that agency participation is essential to representing the State's interest in, and authority for, management of the wildlife resources that are held as a public trust for the people of Arizona.



Appendix A: Arizona Department of Education Standards – Full Text

A writing activity dealing with the issues surrounding the reintroduction of the Mexican wolf into Arizona

Science Standards

Grade	Strand	Concept	Performance Objective
4	3	1 – Changes in Environments	1 – Describe how natural events and human activities have positive and negative impacts on environments
5	3	1 – Changes in Environments	2 – Propose a solution, resource, or product that addresses a specific human, animal, or habitat need 3 – Evaluate the possible strengths and weaknesses of a proposed solution to a specific problem relevant to human, animal, or habitat needs
6	2	1 – History of Science as a Human Endeavor	3 – Analyze the impact of a major scientific development occurring within the past decade
	3	2 – Science and Technology in Society	2 – Compare possible solutions to best address an identified need or problem
7	2	1 – History of Science as a Human Endeavor	3 – Analyze the impact of a major scientific development occurring within the past decade
	3	2 – Science and Technology in Society	1 – Propose viable methods of responding to an identified need or problem 2 – Compare solutions to best address an identified need or problem
8	2	1 – History of Science as a Human Endeavor	3 – Evaluate the impact of a major scientific development occurring within the past decade
	3	2 – Science and Technology in Society	1 – Propose viable methods of responding to an identified need or problem 2 – Compare solutions to best address an identified need or problem
High School	2	1 – History of Science as a Human Endeavor	1 – Describe how human curiosity and needs have influenced science, impacting the quality of life worldwide 3 – Analyze how specific changes in science have affected society 4 – Analyze how specific cultural and/or societal issues promote or hinder scientific advancements



A writing activity dealing with the issues surrounding the reintroduction of the Mexican wolf into Arizona

Science Standards Continued

Grade	Strand	Concept	Performance Objective
High School	3	1 – Changes in Environments	1 – Evaluate how the processes of natural ecosystems affect, and are affected by, humans 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 and technology issue 5 – Evaluate methods used to manage natural resources

Writing Standards

Grade	Strand	Concept	Performance Objective
4 – 5	1	1 – Prewriting	4 – Use organizational strategies to plan writing
		3 – Revising	1 – Evaluate the draft for use of ideas and content, organization, voice, word choice, and sentence fluency 6 – Apply the appropriate tools or strategies (e.g., peer review, checklists, rubrics) to refine the draft
		4 – Editing	4 – Apply appropriate tools or strategies (e.g., peer review, checklists, rubrics) to edit the draft
	2	1 – Ideas and Content	1 – Express ideas that are clear and directly related to the topic 2 – Provide content and selected details that are well-suited to audience and purpose 3 – Use relevant details to provide adequate support for the ideas
		2 – Organization	3 – Place details appropriately to support the main idea 6 – Construct a paragraph that groups sentences around a topic
		3 – Voice	2 – Convey a sense of originality, sincerity, liveliness, or humor appropriate to topic and type of writing
		4 – Word Choice	1 – Use a variety of specific and accurate words that effectively convey the intended message 2 – Use descriptive words and phrases that energize the writing
		5 – Sentence Fluency	2 – Write sentences that flow together and sound natural when read aloud



A writing activity dealing with the issues surrounding the reintroduction of the Mexican wolf into Arizona



Writing Standards Continued

Grade	Strand	Concept	Performance Objective
4 – 5	3	4 – Persuasive	1 – Write persuasive text that attempts to influence the reader
6 – 8	1	1 – Prewriting	1 – Use organizational strategies to plan writing
		3 – Revising	1 – Evaluate the draft for use of ideas and content, organization, voice, word choice, and sentence fluency 7 – Apply appropriate tools or strategies (e.g., peer review, checklists, rubrics) to refine the draft
		4 – Editing	4 – Apply appropriate tools or strategies (e.g., peer review, checklists, rubrics) to edit the draft
	2	1 – Ideas and Content	1 – Use clear, focused ideas and details to support the topic 2 – Provide content and selected details that are well suited to audience and purpose 3 – Develop a sufficient explanation or exploration of the topic 4 – Include ideas and details that show original perspective
		2 – Organization	3 – Place details appropriately to support the main idea 5 – Construct paragraphs by arranging sentences with an organizing principle (e.g., to develop a topic, to indicate a chronology)
		3 – Voice	2 – Convey a sense of identity through originality, sincerity, liveliness, or humor appropriate to the topic and type of writing 4 – Choose appropriate voice (e.g., formal, informal, academic discourse) for the audience and purpose
		4 – Word Choice	1 – Use accurate, specific, powerful words that effectively convey the intended message 3 – Use vocabulary that is original, varied, and natural
		5 – Sentence Fluency	2 – Create sentences that flow together and sound natural when read aloud
	3	4 – Persuasive	1 – Write persuasive text that: a) establishes and develops a controlling idea, b) supports arguments with detailed evidence, c) includes persuasive techniques, and d) excludes relevant information

A writing activity dealing with the issues surrounding the reintroduction of the Mexican wolf into Arizona

Writing Standards Continued

Grade	Strand	Concept	Performance Objective
High School	1	1 – Prewriting	5 – Use organizational strategies to plan writing
		3 – Revising	1 – Evaluate the draft for use of ideas and content, organization, voice, word choice, and sentence fluency 7 – Apply appropriate tools or strategies (e.g., peer review, checklists, rubrics) to refine the draft
		4 – Editing	4 – Apply appropriate tools or strategies (e.g., peer review, checklists, rubrics) to edit the draft
	2	1 – Ideas and Content	1 – Maintain a clear, narrow focus to support the topic 2 – Write with an identifiable purpose and for a specific audience 3 – Provide sufficient, relevant, and carefully selected details for support 4 – Demonstrate a thorough, balanced explanation of the topic 5 – Include ideas and details that show original perspective and insights
		2 – Organization	3 – Place details appropriately to support the main idea 5 – Employ a variety of paragraphing strategies (e.g., topical, chronological, spatial) appropriate to application and purpose
		3 – Voice	2 – Convey a sense of identity through originality, sincerity, liveliness, or humor appropriate to the topic and type of writing 3 – Choose appropriate voice (e.g., formal, informal, academic discourse) for the application
		4 – Word Choice	1 – Use accurate, specific, powerful words and phrases that effectively convey the intended message 2 – Use vocabulary that is original, varied, and natural 3 – Use words that evoke clear images
		5 – Sentence Fluency	3 – Demonstrate a flow that is natural and powerful when read aloud



A writing activity dealing with the issues surrounding the reintroduction of the Mexican wolf into Arizona

Writing Standards Continued

Grade	Strand	Concept	Performance Objective
High School	3	4 – Persuasive	1 – Write a persuasive composition that: a) states a position or claim, b) presents detailed evidence, examples, and reasoning to support effective arguments and emotional appeals, c) attributes sources of information when appropriate, d) structures ideas, and e) addresses the reader's concerns (grades 9 – 10) or acknowledges and refutes opposing arguments (grades 11 – 12)



*A writing activity
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issues surrounding
the reintroduction of
the Mexican wolf into
Arizona*

Appendix B: Peer Editing

There are a number of successful ways to conduct peer editing in your classroom. One method is described below. These procedures can be used by themselves or in conjunction with the *Peer Editing* student worksheet included.

1. Assign students into groups of four. Give each student a highlighter or colored pencil to use in editing. It is helpful for each group member to use a different color. Before you begin any peer editing, it is critical that all students understand the importance of sincere, careful editing. The idea is to improve everyone's skills (and grade!) by offering helpful criticism.
2. Inform students that before they begin editing they must first complete the *Author Self-Reflection* guide or answer similar questions on a blank sheet of paper. Attach this and a blank cover sheet to their paper.
3. Students pass their papers to their right. Editors read both the author's comments and the paper. This continues until the papers have returned to their authors with all the editors' comments.
4. On the cover sheet the author has attached, each editor responds to the following prompts:
 - a. Write a sentence describing what you like about the essay.
 - b. Question the author about any area that is not clear to you.
 - c. What can the author do to improve this paper? Be specific!
 - d. Please respond directly to the author's stated concerns.
5. Finally, each editor focuses on a specific writing trait by answering the following questions:
 - a. Editor #1: Has the author backed up his or her opinion with at least three reasons and additional supporting facts? Underline (or highlight) words and sentences that are especially good at supporting the author's view.
 - b. Editor #2: Is the essay arranged in a logical way that is easy to read? Underline words or phrases that help the reader move smoothly through the paper.
 - c. Editor #3: Does the author use a *voice* that is appropriate and effective in persuading the reader? Underline words that reveal the author's persuasive voice.
6. Authors get their own paper back on the final pass. They should review each editor's comments, clarify what is meant if they are not sure, and thank each other for their help.
7. Authors take the peer editing sheet and their rough draft home to revise. They may choose to accept or reject their editors' suggestions.
8. When the final draft is turned in, these papers should be included.



Appendix C: Worksheets and Overheads

*A writing activity
dealing with the
issues surrounding
the reintroduction of
the Mexican wolf into
Arizona*

The pages that follow contain the worksheets listed below:

- A. *Student Research Guide* – A worksheet the students can fill out as they are researching about the Mexican wolf reintroduction (1 page)
- B. *Essay Planning Guide* and *Graphic Organizer* – A double-sided handout which guides the students through drafting their essay (2 pages)
- C. *Wolf Essay Rubric* – A possible tool to use in evaluating the student essays (1 page)
- D. *Author Self-Reflection* – One method for the students to reflect on their own writing before turning in the final draft (1 page)
- E. *Peer Editing Guide* – A tool to guide students through the peer editing process (1 page)



Student Research Guide

Directions: Use the links provided to research the answers to the following questions.

1. What is the government's role in the reintroduction of the Mexican wolf to Arizona?

2. What is the role of zoos and similar organizations? _____

3. Which groups are most likely to support wolf reintroduction? _____

Provide three reasons why these groups are more likely to support it:

- a. _____
b. _____
c. _____

4. Which groups are least likely to support wolf reintroduction? _____

Provide three reasons why these groups are less likely to support it:

- a. _____
b. _____
c. _____

5. Based on the scientific research provided on wolves, which group is most supported by facts? _____

List three of the facts that best support this group:

- a. _____
b. _____
c. _____



Essay Planning Guide

Now that you are familiar with the Mexican wolf reintroduction and both sides of the debate, it is time to develop your own informed opinion. This sheet will help you organize your thoughts and outline your position. It should serve as a guide as you plan and draft your essay explaining your position.

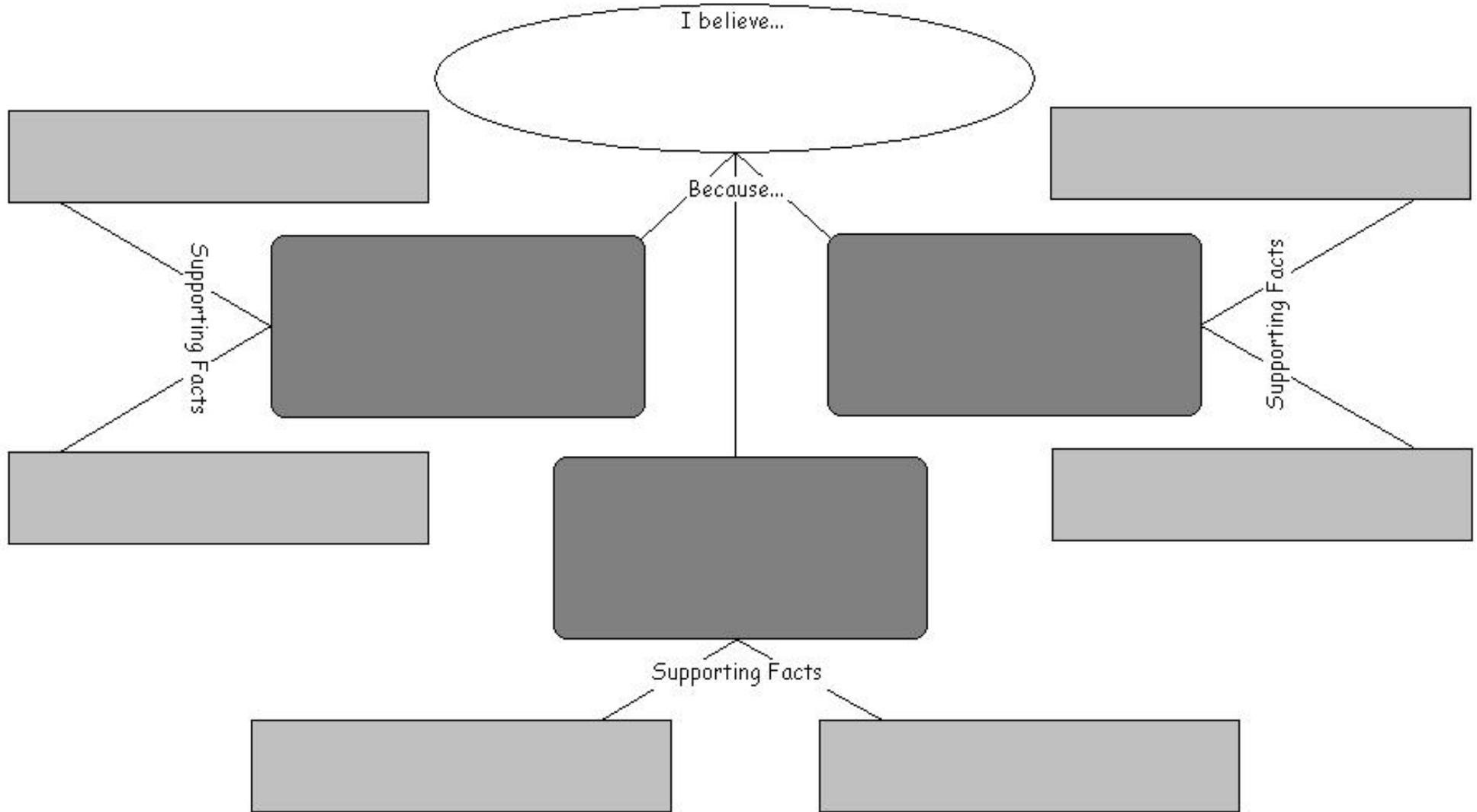
Directions:

1. From the list below, select a question that most interests you:
 - a. Is the current recovery program likely to produce a viable population of Mexican wolves in the Southwest?
 - b. Should Mexican wolves be maintained within clearly defined boundaries or be allowed to roam free?
 - c. Should Mexican wolves be reintroduced into other parts of Arizona?
 - d. Where should the Mexican wolf recovery program rank in respect to other animal or natural resource priorities?
2. Use the Web sites provided or any other reliable resources that you find to research this question.
3. Use the Graphic Organizer on the back of this page to arrange your notes and ideas.
 - a. Write your selected question in the banner at the top.
 - b. In the white circle, write your response to this question.
 - c. In each of the dark gray boxes, give one reason to support this opinion.
 - d. In each of the light gray boxes, give one piece of evidence, fact, or statistic that supports the reason given.
4. Use these notes to write the rough draft of your essay.
5. Use the Author Self-Reflection Guide to help you evaluate your work.
6. Have some classmates read your essay and write their comments.
7. Review the comments of your classmates as well as the Author Self-Reflection Guide and the rubric, make any necessary revisions, and complete the final draft.
8. Turn in your essay.



Essay Graphic Organizer

Your Question:



Wolf Essay Rubric

The following rubric will show you how your essay will be evaluated. Use it as you write.

CATEGORY	4	3	2	1
Accuracy of Facts (Content)	All supportive facts are reported accurately.	Almost all supportive facts are reported accurately.	Most supportive facts are reported accurately.	NO facts are reported OR most are inaccurately reported.
Adding Personality (Voice)	The writer has developed a unique and persuasive voice. There is a strong sense of personality.	The writer has developed a convincing voice. There is some sense of personality, but it may be inconsistent or weak at times.	The writer occasionally develops a convincing voice, but generally it is weak and inconsistent.	There is no sense of voice in the essay.
Sequencing (Organization)	Details are placed in a logical order and the way they are presented effectively keeps the interest of the reader.	Details are placed in a logical order, but the way in which they are presented/ introduced sometimes makes the writing less interesting.	Some details are not in a logical or expected order, and may distract or confuse the reader.	Many details are not in a logical or expected order. There is little sense that the writing is organized.
Word Choice	Writer uses vivid words and phrases that linger or draw pictures in the reader's mind, and the choice and placement of the words seems accurate, natural and not forced.	Writer uses vivid words and phrases that linger or draw pictures in the reader's mind, but occasionally the words are used inaccurately or seem overdone.	Writer uses words that communicate clearly, but the writing lacks variety, punch or flair.	Writer uses a limited vocabulary that does not communicate strongly or capture the reader's interest. Jargon or clichés may be present and detract from the meaning.
Flow and Rhythm (Sentence Fluency)	All sentences sound natural and are easy-on-the-ear when read aloud. Each sentence is clear and has an obvious emphasis.	Almost all sentences sound natural and are easy-on-the-ear when read aloud, but 1 or 2 are stiff, awkward or difficult to understand.	Most sentences sound natural and are easy-on-the-ear when read aloud, but several are stiff, awkward or difficult to understand.	The sentences are difficult to read aloud because they sound awkward, are distractingly repetitive, or difficult to understand.
Completeness	Required elements (three reasons with supporting facts) are addressed completely.	Required elements are included, but may only be given superficial treatment.	Some required elements are missing and/or not described in enough detail.	Many required elements are missing and/or are incomplete in detail.



Peer Editing Guide

Editors:

1. _____
2. _____
3. _____

Please read this paper carefully and respond to the following prompts on another sheet of paper. Remember you are not to make changes or corrections on anyone else's paper, but you may suggest them:

Editor #1:

- a. Has the author backed up his or her opinion with at least three reasons and additional supporting facts? Underline (or highlight) words and sentences that are especially good at supporting the author's view.
- b. Write a sentence describing what you like about the essay.
- c. Question the author about any area that is not clear to you.
- d. What can the author do to improve this paper? Be specific!
- e. Please respond directly to the author's stated concerns.

Editor #2:

- a. Is the essay arranged in a logical way that is easy to read? Underline words and phrases that help the reader move smoothly through the paper.
- b. Write a sentence describing what you like about the essay.
- c. Question the author about any area that is not clear to you.
- d. What can the author do to improve this paper? Be specific!
- e. Please respond directly to the author's stated concerns.

Editor #3:

- a. Does the author use a *voice* that is appropriate and effective in persuading the reader? Underline words that reveal the author's persuasive voice.
- b. Write a sentence describing what you like about the essay.
- c. Question the author about any area that is not clear to you.
- d. What can the author do to improve this paper? Be specific!
- e. Please respond directly to the author's stated concerns.

