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# Wilderness

## Lesson Plans

- Use with the **Wilderness** module.
- Use with the **Wilderness** worksheets.
- Appropriate for grades **6** and higher.

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# The Big Idea (or Central Theme)

What is the overall concept that we would like students to understand after exploring this module?

## **Earth and Space Science**

- Wilderness is a uniquely American concept that has shaped the culture and society of the United States.
- Wilderness preserves unique ecological, geological, scientific, historical, educational and scenic values of America.
- The American Wilderness is threatened by the activities of humans, and must be thoughtfully managed in order to preserve it for future generations.

Step One

# Essential Questions

What questions will encourage student inquiry?

- 1.** How has wilderness affected the history and development of the United States?
- 2.** What and where is wilderness today?
- 3.** What benefits does wilderness provide to American society and culture?
- 4.** What is the future of wilderness in the United States?

# Assessment

What evidence is there that students have achieved understanding of the Big Idea?

## ◆ Performance Tasks / Projects

1. Students will create a brochure encouraging Americans to appreciate and support wilderness in the United States.
2. Students will create a “Wilderness Timeline” showing changing views of wilderness and important events that led to the creation of the National Wilderness Preservation System.
3. Students will illustrate, using media of their choice, the diversity of wilderness areas in the United States. (Examples of media might include maps, posters, tabletop displays, power point or other computer presentation, etc.)

## ◆ Quizzes / Tests

1. Vocabulary quiz, if desired

## ◆ Prompts

1. Students will create a brochure about an area that could become wilderness.
2. Students will write a paragraph describing their personal perspectives on wilderness.
3. Students will write a persuasive paragraph that states their opinions about what poses the greatest threat to the preservation of wilderness.
4. Students will write a poem, song or rap inspired by wilderness.

## ◆ Observation Data

1. Observation data will be collected during class discussions, presentations and during work on the performance tasks and projects.

## ◆ Self-assessments

1. Students will self-assess their performance tasks, projects, and prompts.

Step Three

# Planning Lessons

Lessons should take teachers and students step-by-step through the modules. There will be several lessons per module.

**Lesson One: What is Wilderness?**

**Lesson Two: Where is Wilderness?**

**Lesson Three: Why is Wilderness Preserved?**

**Lesson Four: How is Wilderness Managed?**

**Lesson Five: Wilderness and You**

# What is Wilderness?

## Curriculum Standards

- ◆ National Science Education Standards
  - Science as Inquiry
  - Earth Science
  - Science and Technology
  - Science in Social and Personal Perspectives
  
- ◆ Standards for the English Language Arts:
  - #1 – Students read a wide range of texts...
  - #3 – Students apply a wide range of strategies to comprehend...
  - #4 – Students will adjust their use of written language...
  
- ◆ National Council for the Social Studies Curriculum Standards
  - Time, Continuity and Change
  - People, Places and Environments
  - Science, Technology and Society

## Objectives

Students Will Be Able To define wilderness in their own words, as well as compare and contrast their definition to an accepted definition of wilderness.

SWBAT describe several values preserved by wilderness.

SWBAT describe how American views of wilderness have changed over time.

## Inquiry Questions

1. What is wilderness?
2. How are wilderness areas different from parks, refuges or forests?
3. How have Americans changed their views of wilderness?
4. What are some things that made Americans change their views?

## Materials

- ◆ *Views of the National Parks* CD
- ◆ [Vocabulary Definition Map overhead and handouts](#)
- ◆ [Definition Compare and Contrast Worksheet](#)
- ◆ [Brochure Rubric](#)
- ◆ Sample brochures, if desired
- ◆ [Timeline Notes Worksheet](#)
- ◆ Large sheets of white construction paper

**Procedure (Part One - Definition of Wilderness)**

1. If students have not had a chance to explore the Views CD, allow them some time to explore on their own or in small groups.
2. After students have looked at the disc in general, ask them to find and explore the **Wilderness Knowledge Center**. (At the Visitor Center, click on "Knowledge Centers," then on the "Wilderness.") Together, read the **"Introduction."**
3. If students have never completed a Vocabulary Definition Map, introduce the concept by:
  1. Model the use of the Vocabulary Definition Map
    - ◆ Select a word from your unit of study to use as a model. (For example, abode, from the Grand Canyon module.)
    - ◆ On an overhead of the Vocabulary Definition Map sheet, write the word in the center.
    - ◆ Say, as if thinking to yourself, *"I think I might have heard this word abode before, but I can't quite remember what it means. Maybe I can get a clue from the context. Hmm, the sentence says 'Packrats build a protective abode called a midden.' And before that, the text was describing how packrats collect things to help build their homes. So I think an abode is some kind of a home. I'll write that her under synonyms."*
    - ◆ Continue "thinking aloud" as you fill out the rest of the Vocabulary Definition Map. Model looking in the dictionary, as well as consulting with peers for ideas as you fill out the form. (See completed worksheet example in the Wilderness Worksheets.)
  2. Repeat the procedure above with a new term, asking students to fill out their own Vocabulary Definition Maps along with you as you fill out the overhead. Encourage students to contribute ideas as you fill out the worksheet.
  3. The next time the Vocabulary Definition Map is used, ask students to complete the worksheet in groups. After you feel students have had enough guided practice, students can complete the worksheet individually.
4. Complete a Vocabulary Definition Map using the word wilderness, as a whole class, in small groups or individually, depending your students' level of familiarity with the Map.
5. Once students have created their own definitions of wilderness, ask them to click on **The Wilderness Act**, and compare their definition to the definition created by Congress in 1964. (Click first on **"What"** at the top of the screen, then on **"The Wilderness Act"** at the bottom of the screen.) Ask:
  1. Which definition is more comprehensive, yours or Congress'?
  2. What does "untrammled" mean?"
  3. Why do you think Congress defined wilderness the way it did?
  4. How are wilderness areas different from parks, refuges or forests?
6. Students should complete the [Definition Compare and Contrast Worksheet](#).

**Procedure (Part Two - Preserved Values and Resources)**

1. Direct students' attention to the **"Preserved Values and Resources"** page of the Wilderness module.

2. After students have had an opportunity to read (individually or in pairs/small groups) the sections on Recreational Values, Ecological Values, Geological Values, Scientific Values, Educational Values, and Historical and Cultural Values, assign the following project: Create a brochure encouraging Americans to appreciate and support wilderness in the United States.
3. Ask the following discussion questions:
  1. What is the purpose of a brochure, generally?
  2. What types of language/writing are used in creating a brochure?
  3. What types of things would make a brochure effective?  
(Provide sample brochures for students to look at, if possible.)
4. Distribute copies of the [Brochure Rubric](#) and discuss requirements for the project, including requirements for values described, illustrations, format and language, and mechanics.

### **Procedure (Part Three - Timeline)**

1. Direct students' attention to the "[Landmark Legislation](#)" page of the Wilderness module.
2. Ask students to read the section, either individually or in pairs/small groups, completing the [Timeline Notes Worksheet](#) as they read.
3. Distribute large pieces of white construction paper. Ask students to create a "Wilderness Timeline" showing changing views of wilderness and important events that led to the creation of the National Wilderness Preservation System. Remind them to use the information they have noted on their Timeline Notes Worksheets.
4. If desired, save timelines for use with Lesson Three, "Why is Wilderness Preserved?"

### **Key Vocabulary**

- ◆ untrammeled
- ◆ primeval
- ◆ ecological
- ◆ watershed
- ◆ Precambrian
- ◆ stocks
- ◆ dikes
- ◆ sills
- ◆ Pleistocene
- ◆ indigenous

### **Discussion Questions**

1. Which definition is more comprehensive, yours or Congress'?
2. What does "untrammeled" mean?
3. Why do you think Congress defined "wilderness" the way it did?
4. How are wilderness areas different from parks, refuges or forests?

**Assessment**

Students Will Be Assessed On ...

1. Participation in classroom activities and discussions.
2. Completed worksheets, brochure and timeline.

**Differentiation**

To best meet all students' needs, we suggest ...

1. Providing sentence starters or fill-in-the-blank sentences on the Definition Compare and Contrast and Timeline Notes Worksheets.
2. Pairing/grouping a less able reader with a more able reader when asking students to read.

# Where is Wilderness?

## Curriculum Standards

- ◆ National Science Education Standards
  - Earth Science
  - Science and Technology
  - Science in Social and Personal Perspectives
- ◆ Standards for the English Language Arts
  - #1 – Students read a wide range of texts...
  - #3 – Students apply a wide range of strategies to comprehend...
  - #4 – Students will adjust their use of written language...
- ◆ National Council for the Social Studies Curriculum Standards
  - People, Places and Environments
  - Science, Technology and Society
  - Civic Ideas and Practices
- ◆ National Council for Teachers of Mathematics Standards
  - Data Analysis and Probability

## Objectives

Students Will Be Able To identify a wilderness area near their home (using a map of the United States), as well as a wilderness area far from their home.

SWBAT compare and contrast a wilderness area to the area in which they live.

SWBAT illustrate the different types of areas that are wilderness.

SWBAT read and interpret various types of graphs.

## Inquiry Questions

1. Where is most of the wilderness in the United States located?
2. Why were these areas designated wilderness? What makes them special?
3. What types of ecosystems are found in wilderness?

## Materials

- ◆ *Views of the National Parks* CD
- ◆ [Wilderness Map Worksheet](#)

**Procedure (Part One - Where is Wilderness?)**

1. Ask: What kinds of places in the United States do you think should be preserved as wilderness? Why do you think so?
2. How much/what percentage of land in the United States should be preserved as wilderness? Why do you think so?
3. Direct students' attention to the "[Where is Wilderness?](#)" page of the Wilderness module. (Click on "[Where](#)" at the top of the screen.)
4. Divide the class into groups of five students each. Within groups, assign each member a section to read: either the introduction to "Where is Wilderness," or the quotes by Tom McFadden, Meg Weesner, Steve Bair, and Dave Shirokauer.
5. After students have a few minutes to read their assigned section, they should take turns sharing what they've read with their group of five.

**Procedure (Part Two - Map)**

1. Ask: Why do you think it is important to preserve as wilderness areas close to America's major cities?
2. Direct students' attention to the "[Map](#)" page of the Wilderness module.
3. Students should complete the [Wilderness Map Worksheet](#) while exploring the Interactive Map.
4. Direct students' attention to the graphs located in the "[Facts and Figures](#)" section of the module.
5. Ask: Based on a total of 106 million acres of wilderness, how many acres are under the management of the Forest Service? The National Park Service? Etc.

**Procedure (Part Three - Creating Wilderness)**

1. Direct students' attention to the "[Creating Wilderness Areas](#)" page of the Wilderness module, and instruct students to read the information, either individually or in pairs. Students should also read the "[Wildlands](#)" section.
2. Ask: What characteristics do you think make an area suitable to become designated as wilderness? What kinds of things would make an area not suitable for being designated as wilderness?
3. Ask: What do you know about how Congress goes about making a law? Discuss this process.
4. Divide the class into two heterogeneous groups. Explain that they will be holding a mock debate. They will be assuming the role of Congress, debating whether or not to pass the original 1964 Wilderness Act.
5. One group should brainstorm reasons why they, as Congress, should pass this act, protecting land as wilderness. Ask: Who would benefit from the passage of this act?
6. The second group should brainstorm reasons why Congress might not want to pass this act. Ask: Who would benefit from not preserving these lands as wilderness?

7. After groups have had an opportunity to discuss their “positions,” hold the debate. Give each group a set amount of time to state their positions, and an opportunity to refute the position of the “opposition.”
8. Discuss the process. Ask: Do you think it was easy for Congress to reach agreement on this act and the others that followed?

### Key Vocabulary

- ◆ designate
  
- ◆ refuge

### Discussion Questions

1. What kinds of places in the United States do you think should be preserved as wilderness? Why do you think so?
2. How much/what percentage of land in the United States should be preserved as wilderness? Why do you think so?
3. Why do you think it is important to preserve areas close to America’s major cities as wilderness?
4. Based on a total of 106 million acres of wilderness, how many acres are under the management of the Forest Service? The National Park Service? Etc.
5. What characteristics do you think make an area suitable to become designated as wilderness?
6. What kinds of things would make an area not suitable for being designated as wilderness?
7. What do you know about how Congress goes about making a law?
8. Who would benefit from the passage of this act?
9. Who would benefit from not preserving these lands as wilderness?

**Assessment**

Students Will Be Assessed On ...

1. Participation in classroom activities and discussions.
2. Completed Wilderness Map Worksheet.

**Differentiation**

To best meet all students' needs, we suggest ...

1. Pairing/grouping less able readers with more able readers.

# Why is Wilderness Preserved?

## Curriculum Standards

- ◆ National Science Education Standards
  - Earth Science
  - Science and Technology
  - Science in Social and Personal Perspectives
- ◆ Standards for the English Language Arts
  - #1 – Students read a wide range of texts...
  - #4 – Students will adjust their use of written language...
- ◆ National Council for the Social Studies Curriculum Standards
  - Time, Continuity and Change
  - People, Places and Environments
  - Science, Technology and Society

## Objectives

Students Will Be Able To compare and contrast historical and current perspectives on the importance of wilderness.

SWBAT describe their personal perspectives on wilderness.

## Inquiry Questions

1. Why do you think U.S. citizens feel the need to legally protect wilderness?
2. Which of the benefits or values of wilderness are most important to you? To your parents? To the class? Why?
3. What can scientists learn by studying wilderness?

## Materials

- ◆ *Views of the National Parks* CD
- ◆ Timelines created by students in Lesson One, if applicable
- ◆ Large sheets of white construction paper
- ◆ [Current Perspectives Worksheet](#)

**Procedure (Part One - Why do we protect wilderness?)**

1. Ask: Why do you think U.S. citizens feel the need to legally protect wilderness?
2. Direct students' attention to the "Why" section of the Wilderness Knowledge Center.
3. Ask students to read the introduction to this section, either individually or in pairs.
4. Discuss the quote from President Johnson, *"If future generations are to remember us with gratitude rather than contempt, we must leave them something more than the miracles of technology."* Ask students what they think of this reasoning. Should the advancement of technology be accompanied by the preservation of natural resources? Why or Why not? How might the United States be different if Congress had not taken these steps to preserve wilderness?

**Procedure (Part Two - Timeline)**

1. Ask students to click on the "Timeline" footprint, and read the information presented.
2. In pairs or small groups, ask students to choose the 10 events from the timeline that they feel have been most important to wilderness over the years. (If students completed Lesson One: What Is Wilderness, they should choose events other than those already on their timelines.) Students should be able to defend their choices.
3. If students have completed timelines from Lesson One, ask them to add these 10 chosen events to their existing timelines. Additional construction paper may be necessary.
4. If students do not have completed timelines from Lesson One, ask them to create a timeline including their 10 chosen events.

**Procedure (Part Three - Historical Perspectives)**

1. Direct students' attention to the **Historical Perspectives** section of the Wilderness module.
2. Divide the class into five heterogeneous groups. Ask each group to read the biographical information about one of the Americans who influenced the preservation of wilderness (Aldo Leopold, Arthur Carhart, Bob Marshall, Margaret Murie or Howard Zahniser.)
3. After reading the biographical information, each group should write a short summary of the information presented. These summaries can be copied and distributed or posted in the classroom so that classmates can read them.
4. Optional extension activity: To learn more about American citizens who have contributed to the preservation of wilderness, students can choose one of the "Others for Wilderness" listed for further research.

**Procedure (Part Four - Current Perspectives)**

1. Direct students' attention to the **Current Perspectives** section of the Wilderness module.
2. Distribute copies of the **Current Perspectives Worksheet**. Students should listen to at least 5 "Current Perspectives" from the Wilderness module. Ask: How have perspectives on wilderness changed over the years? How have they remained the same? Which person's views most closely resemble your personal views about the preservation of wilderness? What are your personal views about the preservation of wilderness?
3. Students should then write a paragraph describing their personal perspectives on wilderness.

**Key Vocabulary**

- ◆ mechanization
- ◆ nomadic
- ◆ encroaching
- ◆ conservation
- ◆ conservationist
- ◆ ecologist
- ◆ refuge
- ◆ bipartisan
- ◆ land ethic
- ◆ biotic

**Discussion Questions**

1. Should advancement of technology be accompanied by the preservation of natural resources? Why or Why not?
2. How might the United States be different if Congress had not taken these steps to preserve wilderness?
3. How have perspectives on wilderness changed over the years?
4. How have they remained the same?
5. Which person's views most closely resemble your personal views about the preservation of wilderness?
6. What are your personal views about the preservation of wilderness?

**Assessment**

Students Will Be Assessed On ...

1. Participation in classroom activities and discussions.
2. Completed Wilderness Timeline, Historical Perspectives Summaries, and Current Perspectives Worksheet.

**Differentiation**

To best meet all students' needs, we suggest ...

1. Providing sentence starters or fill-in-the-blank sentences on the Wilderness Timeline, Historical Perspectives Summaries, and Current Perspectives Worksheet.
2. Heterogeneous grouping for the Historical Perspectives Summaries.
3. Pairing/grouping a less able reader with a more able reader when asking students to read.

# How is Wilderness Managed?

## Curriculum Standards

- ◆ National Science Education Standards
  - Earth Science
  - Science and Technology
  - Science in Social and Personal Perspectives
- ◆ Standards for the English Language Arts
  - #1 – Students read a wide range of texts...
  - #4 – Students will adjust their use of written language...
- ◆ National Council for the Social Studies Curriculum Standards
  - People, Places and Environments
  - Individuals, Groups and Institutions
  - Science, Technology and Society
  - Civic Ideals and Practices

## Objectives

Students Will Be Able To list the federal agencies that share responsibilities for managing wilderness.

SWBAT articulate an opinion about what poses the greatest threat to wilderness by writing a persuasive paragraph.

SWBAT apply their knowledge of the Wilderness Act and other wilderness legislation to make decisions about wilderness in real life management scenarios.

## Inquiry Questions

1. Is “draw a line around it and leave it alone” enough to protect wilderness from current threats? Why or why not?
2. Which is more important to you in regards to wilderness; use or protection?
3. What poses the greatest threat to wilderness?

## Materials

- ◆ *Views of the National Parks* CD
- ◆ [Wilderness Bureaus Outline](#)
- ◆ [Wilderness Threats Worksheet](#)
- ◆ 5 sheets of blank construction paper or card stock
- ◆ Post-It notes or similar-sized pieces of paper, 1 for each student

**Procedure (Part One - Who manages wilderness?)**

1. Direct students' attention to the "How" section of the Wilderness Knowledge Center, and ask them to read the introduction.
2. Discuss the statement that "we have learned that the 'draw a line around it and leave it alone' method does not protect wilderness from current threats." Ask: Do you agree with this statement? Why or why not? If that method does not work, what suggestions do you have?
3. Ask students to read the **Managing Agencies** section, individually or in pairs. Students should fill out the **Wilderness Bureaus Outline** as they read.

**Procedure (Part Two - Threats to Wilderness)**

1. Ask: What kinds of things do you think pose threats to wilderness? Allow some time to brainstorm as a class or in small groups.
2. In pairs, have students read the information presented in the **Threats** section of the module. As they read, students should complete the **Wilderness Threats Worksheet**.
3. On each of 5 blank sheets of construction paper or card stock, write one of the threats discussed in the module: Overuse, Fire Suppression, Invasive Species, Pollution and Public Awareness. Post these around the room.
4. Distribute a small piece of paper to each student (Post-It notes work well).
5. Ask students to jot down which of the 5 threats discussed poses the greatest risk, in their opinion, to the preservation of wilderness.
6. Once all students have jotted down their opinions, ask them to move to the sign that matches the threat they have chosen.
7. Once in groups, students should discuss their choices. Ask: Why did you choose this threat? Why do you think it poses the greatest risk to the preservation of wilderness? What kinds of things do you think might reduce that threat?
8. Have students pair up with someone who chose a different threat. Once again, ask students to explain the reasons for their choices.
9. Assign the writing prompt: Write a good quality persuasive paragraph that states your opinion about what poses the greatest threat to the preservation of wilderness. Back up your opinion with at least three reasons.

**Procedure (Part Three - Scenarios)**

1. Ask students to click on "**Prohibitions and Exceptions**" and read the material presented.
2. Next, students should click on "**Management Scenarios**" and, individually, or in pairs, work through the examples and scenarios provided, making decisions based on what they've learned about wilderness preservation.

**Key Vocabulary**

- ◆ stewardship
- ◆ sanctuary
- ◆ mandate
- ◆ sky glow
- ◆ celestial

**Discussion Questions**

1. Discuss the statement that “we have learned that the ‘draw a line around it and leave it alone’ method does not protect wilderness from current threats.” Ask: Do you agree with this statement? Why or why not?
2. If that method does not work, what suggestions do you have?
3. What kinds of things do you think pose threats to wilderness?
4. Why do you think this threat poses the greatest risk to the preservation of wilderness?
5. What kinds of things do you think might reduce that threat?

**Assessment**

Students Will Be Assessed On ...

1. Participation in classroom activities and discussions.
2. Completed Wilderness Agencies Outline and Threats Worksheet.

**Differentiation**

To best meet all students' needs, we suggest ...

1. Providing sentence starters or fill-in-the-blank sentences on the Wilderness Agencies Outline and Threats Worksheet.
2. Heterogeneous grouping for the Management Scenarios.
3. Pairing/grouping a less able reader with a more able reader when asking students to read.

# Wilderness and You

## Curriculum Standards

- ◆ National Science Education Standards
  - Earth Science
  - Science and Technology
  - Science in Social and Personal Perspectives
- ◆ Standards for the English Language Arts
  - #1 – Students read a wide range of texts...
  - #4 – Students will adjust their use of written language...
- ◆ National Council for the Social Studies Curriculum Standards
  - People, Places and Environments
  - Science, Technology and Society

## Objectives

Students Will Be Able To describe personal choices that can help preserve wilderness.

SWBAT illustrate the diversity of wilderness.

## Inquiry Questions

1. Do any of your daily activities depend on wilderness?
2. Do any of your daily activities affect wilderness?

## Materials

- ◆ *Views of the National Parks* CD
- ◆ [Wilderness and You Project Planner](#)
- ◆ Examples of poems or other writings inspired by nature

**Procedure (Part One - "Up Close")**

1. Direct students' attention to the "Up Close" section of the Wilderness Knowledge Center, and allow them some time to explore the information presented about various wilderness areas around the country.
2. After students have had some exploration time, ask: How are all of these wilderness areas similar? How are they different? Do you think it is important to preserve diverse types of wilderness? Have the wilderness agencies done a good job of preserving diverse areas?
3. Explain Part One of the [Wilderness and You Project](#), distributing copies of the Wilderness and You Project Planner. (This project can be completed either individually or in pairs/small groups.)
4. Ask students to choose at least 3 diverse wilderness areas to explore further. Students should read the information that has been provided about those three areas.
5. Brainstorm types of media that students can choose to illustrate the diversity of the wilderness areas they have chosen. Examples of media might include a map, a tabletop display, a poster, a Power Point presentation, etc. Encourage students to be creative!
6. Part two of the project is to write a poem, song or rap inspired by one of the wilderness areas described in the "Up Close" section of the Wilderness module, or by a wilderness area students have visited.
7. Ask: What does it mean to be "inspired" by something? What kinds of things do you think inspire writers and songwriters?
8. If possible, share examples of poems and other writings inspired by nature.

**Procedure (Part Two - "You")**

1. Direct students' attention to the "You" section of the Wilderness Knowledge Center. Read the introduction, "[How you can help.](#)"
2. Ask students to use the information presented in "[Careers in wilderness,](#)" "[The first step](#)" and "[The second step](#)" to complete the [Wilderness and You Project Planner](#).

**Key Vocabulary**

- ◆ Vocabulary will vary depending on which wilderness areas students choose to explore.

**Discussion Questions**

1. How are all of these wilderness areas similar?
2. How are they different?
3. Do you think it is important to preserve diverse types of wilderness?
4. Have the wilderness agencies done a good job of preserving diverse areas?
5. What does it mean to be “inspired” by something?
6. What kinds of things do you think inspire writers and songwriters?

**Assessment**

Students Will Be Assessed On ...

1. Participation in classroom activities and discussions.
2. Completed Wilderness and You projects.

**Differentiation**

To best meet all students' needs, we suggest ...

1. Heterogeneous grouping for the projects.
2. Pairing/grouping a less able reader with a more able reader when asking students to read.