



THE OZARK SOCIETY
CONSERVATION EDUCATION RECREATION

Lessons from the River: Conservation of America's First National River

First River tells the story of the origin of the Buffalo National River and depicts its persistence as an example of ongoing conservation and stewardship. The efforts of early conservationists laid the foundation for work that continues today.

This series of lessons is designed as a companion to the film to engage students in thinking about conservation in their own communities. As a set, the lessons meet these objectives:

- Students identify human impacts on the environment and describe the role humans play in establishing limits of that impact.
- Students engage in argument about the best practices for managing shared resources.
- Students experience a natural area and explain the impacts of outdoor experiences on social and emotional health.
- Students creatively express their experience in a natural area.
- Students develop a plan for action for conservation in their communities.

Lesson 1 – Making a National River: A Case Study for Establishing a Shared Resource among Diverse Communities


Lesson 1 Objective: The objective of this lesson is to engage students in considering the major themes of conservation and civic engagement that are portrayed in the film. Students examine the 7 Principles of Leave No Trace and develop a position statement that describes what they believe about using and conserving natural resources.

Establishing a Shared Resource

One of the major themes explored in the film is the process through which we engage in discourse to establish when a resource should be shared and how best to go about sharing the resource. This process can sometimes be difficult.

The events surrounding the development of a plan for a landfill in north central Arkansas are detailed in the film. Disposing of waste is a need all communities share, and determining the best methods and locations for waste disposal can be challenging. This work involves engaging stakeholders and working together to determine a course of action that protects both the people and the land.

In the film, Stewart Noland states: “We need landfills, don’t get me wrong. We need flat water recreation, we need moving water recreation. There’s just a time and a place for all that and this just wasn’t the time or the place to put a landfill in north central Arkansas.”

 **Respond:** Do you agree with Noland’s claim? In your response, discuss how you think a location for a landfill should be determined. Explain your thinking.

In *The Buffalo River: A Jurisprudence of Preservation*, law professor John Ragsdale, Jr. writes:

- “Through much of American history, wildness has stood in fundamental opposition to law and economy. The imperatives of growth and market-driven law have not boded well for the continuance of wild-places and free-running rivers. Dams, in particular, have stifled the flow and choked the life out of countless natural streamways, and have covered the corpses with fungible stillwater reservoirs. They have done so generally in the name of progress.”¹
- **Prompt:** The “progress” that Ragsdale describes involves transforming the landscape in order to utilize the natural resources for agreed upon purposes. Coming to an agreement on those purposes is something we do through civil

¹ Ragsdale Jr, John W. "The Buffalo River: A jurisprudence of preservation." *BC Env'tl. Aff. L. Rev.* 21 (1993): 429.



discourse and debate and then describe in law and policy. These agreements involve reconciling the different perspectives, beliefs, and values that shape how we believe shared natural resources should be used. At times, this reconciliation involves conflict.

- Is it possible to align goals for expansion, growth, and development with goals for conservation? Explain your reasoning.
- In your own community, what are the current debates about how to use and conserve natural resources?
- Extension: Explore the public comments on the CAFO in the Buffalo River Watershed at <http://water.adeq.commentinput.com/comment/extra?id=m45xxd>

Exploring Leave No Trace Outdoor Ethics

Focus Question	The 7 Principles of Leave No Trace
What practices will allow us to conserve resources and also enjoy them?	<ol style="list-style-type: none"> 1. Plan Ahead and Prepare 2. Travel and Camp on Durable Surfaces 3. Dispose of Waste Properly 4. Leave What You Find 5. Minimize Campfire Impacts 6. Respect Wildlife 7. Be Considerate of Other Visitors

Read: Navigate to the Leave No Trace website and read about their mission to solve specific problems related to the conservation of our natural areas.

<https://lnt.org/why/problems-we-solve/>

Read: Navigate to the Buffalo National River’s Leave No Trace page on the National Park Service website to read about the 7 Principles and ways to apply them while visiting the River.

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Listen: Listen to Park Interpreters talk about applying the Leave No Trace principles at the Buffalo National River, a Leave No Trace Gold Standard site.

https://drive.google.com/file/d/1YFriKBtMgd3lr62yIpSQpVtsEp_cxKW_/view?usp=sharing

Developing a Position Statement

Consider this quote from the film about the current uses of the Buffalo River and their impacts:

Development in a karst environment is not the only threat. 1.5 million people now visit the Buffalo each year, straining the balance between conservation and recreation.

 **Position Statement:** Develop a position statement that describes what you believe are important practices for identifying resources to share and for establishing the values we will apply to how we share those resources.



Lesson 2 – The Power of Outdoor Experiences

Lesson 2 Objective: The objective of this lesson is to provide students with a shared outdoor experience to draw on for the subsequent lessons. Students make connections between the film and their own personal experiences in the outdoors.

Experiencing Nature

Plan an Outdoor Experience

It is important that students have a shared experience in nature that can be used as a focal point for reflection. A trip to the Buffalo National River would provide additional opportunities to make connections between the field trip and the film. Information about hiking, paddling, horseback riding, camping, and fishing can be accessed here: <https://www.nps.gov/buff/planyourvisit/index.htm>

If a trip to the Buffalo River is not possible, plan a shared outdoor experience like a hike around campus or a field trip to a nature center near you. [Nature Centers](#) are located throughout Arkansas:

- Ozark Highlands Nature Center (Springdale),
- Fred Berry Conservation Education Center (Yellville),
- Ponca Elk Education Center (Ponca),
- Arkansas River Valley Nature Center (Fort Smith),
- Central Arkansas Nature Center (Little Rock),
- Crowley's Ridge Nature Center (Jonesboro),
- Grandview Prairie Conservation Education Center (Columbus),
- Delta Rivers Nature Center (Pine Bluff),
- Potlatch Conservation Education Center (Casscoe)

Connect to Film [during the field trip]

Find a time during the field trip or campus walk to have a discussion with students about what they noticed about Ben Parnell's story and how experiences on the Buffalo River impacted his life. Possible questions for discussion:

- Ben talked about his personal life and how experiences on the Buffalo River influenced him. What resonated with you about Ben's story? What did you notice? What stood out?
- What motivated Ben to set personal goals? How did he and his parents work together to set collective goals?
- Initiative is all about taking on the responsibility to do something independently. In what ways did Ben show the courage to take initiative?



Reflecting on our Experiences in Nature

Reflect on Outdoor Experience [after the field trip, onsite or in the classroom]

- In the article Nurtured by Nature, Kristen Weir² makes some key points about how nature can influence our health and well-being.
 - Cognitive benefits and improvements in mood, mental health and emotional well-being. → *Have you ever experienced a mood lift from an experience in nature?*
 - Feeling connected to nature, like you might experience looking at nature images, has similar benefits. → *Do you ever spend time looking at images of nature? Maybe pictures of mountains, oceans, volcanoes, or caves? How do you feel when you look at images of natural settings?*
 - Land and aquatic environments produce well-being benefits. Experiencing high biodiversity has particular benefits, but being outdoors in city parks works too. → *Why might an experience in an environment with high biodiversity have particularly positive benefits?*

Teacher Note: SEL Connections

This lesson meets SEL standards related to self-management, which are the abilities to manage one's emotions, thoughts, and behaviors effectively in different situations and to achieve goals and aspirations.

- Setting personal and collective goals
- Showing the courage to take initiative
- Demonstrating personal and collective agency

² American Psychological Association. (2020, April). Nurtured by nature. *Monitor on Psychology*, 51(3). <http://www.apa.org/monitor/2020/04/nurtured-nature>



Lesson 3 – Drawing on Outdoor Experiences for Creative Expression

Lesson 3 Objective: The objective of this lesson is to engage students in considering the nature of creative expression and how that relates to experiences we have outdoors. Students reflect on their outdoor experiences and write haiku to share the experience with others.

Outdoor Experiences and Creativity

Music is a creative expression and is woven into the fabric of cultures around the globe, including in the Ozarks. The image here shows people writing songs around a fire after spending time caving in the Buffalo River watershed. Consider your own experiences in nature and respond to one of the following prompts:



What aspects of our experiences in nature drive us to express them creatively?

In your experience, what qualities of outdoor encounters cause you to engage in creative expression? When have you been inspired to be creative by an experience in nature?

An Introduction to Haiku

A Japanese poetic form

- ❖ Related to renku, a collaborative form of poetry dating back to the 1300s
- ❖ Took its modern form in the late 19th century
- ❖ Typically about nature and seasons, but modern forms are broader in scope (senryu)

Structure

- ❖ Three line poem
- ❖ Seventeen syllables total
- ❖ Syllable patter: 5-7-5

A helper haiku:

Five syllable line
Seven syllables go here
Then five more go here



Experiences in Nature Haiku

Consider your recent experiences in nature and those from your past. Recall the sensations and emotions you experienced. How did the experience make you feel? Write at least one haiku that expresses an aspect of your experience in nature.

_____ (first line, 5 syllables)

_____ (second line, 7 syllables)

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_____ (second line, 7 syllables)

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Lesson 4 –Taking Action in Our Communities

Lesson 4 Objective: The objective of this lesson is to engage students in considering important conservation issues in their own communities and to develop a personal action plan to address the issue they identify. Students explore important conservation issues in Arkansas and develop a SMART goal for conservation action.

Background

Opportunities for citizens to engage in conservation activities abound in Arkansas. Visit the Encyclopedia of Arkansas to learn about individuals and organizations that are working to conserve Arkansas' natural resources.

<https://encyclopediaofarkansas.net/entry-category/people-and-organizations/>

<https://www.ozarksociety.net/>

Identify a relevant local problem

There are many common categories of issues related to conservation that apply to any location, including Arkansas. Those are land use changes, invasive species, barriers to animal movement, water quality, air quality, and carbon footprint. There are other specific conservation issues unique to locations.

Set A Personal Conservation Goal

It can be tricky to set meaningful goals that are reasonable, and we often set goals that are too far out of reach based on capacity at the moment. Setting SMART goals is one way to break down the process of goal setting to get more out of it. Use the SMART Goal template to develop a SMART Goal for conservation in your community.



Appendix 1: Student Handout

Lesson 1 – Making a National River: A Case Study for Establishing a Shared Resource among Diverse Communities

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The 7 Principles of Leave No Trace

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Lesson 4 –Taking Action in Our Communities

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Identify a relevant local problem that you believe conservation actions could help solve.

Set A Personal Conservation Goal

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Use this tool to describe what you plan to accomplish

Specific	<i>What conservation issue will you address with your actions?</i> <i>What actions will you take?</i>	
Measurable	<i>What will you measure to know you've achieved the goal?</i>	
Achievable	<i>Is the goal realistic and do you have the ability to accomplish it?</i>	
Relevant	<i>How does the goal relate to the overall goal of engaging in conservation practices?</i>	
Time-bound	<i>What is the time-frame for achieving your goal?</i>	



Appendix 2: Standards Addressed in Lessons

Next Generation Science Standards

Human Impacts on Earth's Systems (NGSS ESS3.C)

Middle School Disciplinary Core Ideas

- Human activities have significantly altered the biosphere, sometimes damaging or destroying natural habitats and causing the extinction of other species. But changes to Earth's environments can have different impacts (negative and positive) for different living things.
- Typically as human populations and per-capita consumption of natural resources increase, so do the negative impacts on Earth unless the activities and technologies involved are engineered otherwise.

High School Disciplinary Core Ideas

- The sustainability of human societies and the biodiversity that supports them requires responsible management of natural resources.
- Scientists and engineers can make major contributions by developing technologies that produce less pollution and waste and that preclude ecosystem degradation.

College, Career, and Civic (C3) Readiness Dimensions

D2.Civ.14.9-12. Analyze historical, contemporary, and emerging means of changing societies, promoting the common good, and protecting rights.

D2.Geo.4.6-8. Explain how cultural patterns and economic decisions influence environments and the daily lives of people in both nearby and distant places.

D2.His.2.9-12. Analyze change and continuity in historical eras.

D2.His.4.9-12. Analyze complex and interacting factors that influenced the perspectives of people during different historical eras.

D2.His.5.9-12. Analyze how historical contexts shaped and continue to shape people's perspectives.

Arkansas Social Studies Framework

Era6.6.AH.9-12.4 Analyze ways that Arkansans addressed a variety of public issues by using or challenging local, state, national, and international laws.

Era6.6.AR.9-12.5 Research contributions made by Arkansans in the fields of art, medicine, politics, science, and technology.



English/Language Arts Standards

Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.

- a. Introduce precise claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that establishes clear relationships among claim(s), counterclaims, reasons, and evidence.
- b. Develop claim(s) and counterclaims fairly, supplying evidence for each while pointing out the strengths and limitations of both in a manner that anticipates the audience's knowledge level and concerns.
- c. Use words, phrases, and clauses to link the major sections of the text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims.

Social and Emotional Learning Standards (CASEL)

Social Awareness: The abilities to understand the perspectives of and empathize with others, including those from diverse backgrounds, cultures, and contexts

- Taking other's perspectives
- Recognizing situational demands and opportunities
- Understanding the influences of organizations and systems on behavior

Self-management: The abilities to manage one's emotions, thoughts, and behaviors effectively in different situations and to achieve goals and aspirations.

- Setting personal and collective goals
- Showing the courage to take initiative
- Demonstrating personal and collective agency

