



FISHING YOUR NATIONAL FORESTS

In This Activity...

Students will be able to evaluate the accessibility and recreational opportunities in a National Forest. They will also be able to research and develop a personal plan for learning about aquatic ecology on a National Forest through the process of angling.

GRADE LEVELS

Middle School - Grades 6-8

CONTENT AREAS

Natural Resource Science, Ecology, Social Studies

UNIT THEME

Aquatic Natural Resource Evaluation and Use

TOPICS

Resource Management, Fisheries and Aquatic Ecology

TIME REQUIRED

Three 45-minute Sessions



OVERVIEW

Today's students have become significantly more disconnected from the natural world than previous generations. Reasons range from an increase of time spent on a variety of digital-based activities, fear of the natural outdoors, time commitments on structured group activities, often in cities and suburban areas, and the growing financial and logistical challenges in accessing undeveloped lands and waters. In short, many of today's youth are so disconnected from the natural world that many fail to understand how the management and use of natural resources affects ecosystems and their lives. This phenomenon is well known to many parents and teachers, yet clear pathways to connect today's youth with nature remains challenging for most families and educators. As more students become disconnected from the natural world, fewer are interested in pursuing future studies or careers in natural resource management.

Another challenge facing youth and families that might consider pursuing activities in nature is the financial and physical access to undeveloped places that might offer a quality outdoor experience. Of those potential outdoor experiences, many also require a significant investment for the family or youth. Even seemingly simple activities such as birding or camping can cost hundreds of dollars to get outfitted, while hunting or boating can cost thousands. Fortunately, there's one activity that is both affordable and connects youth with nature while offering the benefits of learning, having fun, and building relationships... fishing on National Forests.

In this lesson, students will learn how to research and evaluate where to find fishing opportunities on National Forests. They will also learn how to develop their own personal plan to successfully discovering nature through angling on a National Forest.

CONCEPT Natural Resource Management

ENDURING UNDERSTANDING:

Students will understand that our National Forests essentially belong to the public and are managed in the best interests of their ecosystems and sustainable public use. Those ecosystems include a variety of aquatic ecosystems that significantly contribute to overall forest health and public use.

CONTENT OBJECTIVES:

Students will be able to evaluate the accessibility and recreational opportunities in a National Forest. They will also be able to research and develop a personal plan for learning about aquatic ecology on a National Forest through the process of angling.

LEARNER OBJECTIVES:

Students will use geographic online tools to determine where they can access a National Forest and where within the forest they can learn about aquatic ecology through fishing on lakes or rivers. Students will use other online research and group discussions to develop a logistical plan to evaluate opportunities and actually go fishing within a National Forest..

PROCESS OBJECTIVES:

Students will work in small and large groups to process new information and use evidence to come to a conclusion.

MATERIALS NEEDED (each group, each student):

1. Access to computers and Internet
2. Video, background information, worksheets (all available for free download, including HD video) <http://intotheoutdoors.org/topics/fishing-your-national-forests/>
3. Student Worksheet with Pre-lesson questions to fill in while watching video
4. Student Angling Adventure Plan Worksheet



PROCEDURES

Session 1

Before watching the video or reading the background information, ask students how many have visited a National Forest. Also ask students how many have gone fishing. Lead a short discussion on what students learned about themselves and nature in doing either or both.

Have students download, or print and distribute the Pre-Lesson Student Worksheet (copy contained in this PDF and on the web link) Instruct students to fill in the worksheet while watching the video. Go over the questions with the students before viewing so they know what to look and listen for.

After viewing the video, review and discuss the answers to the questions as a class.

Divide the class into four (4) groups. Assign each group one of four different National Forest within your National Forest Region. Assigned Forest may be located in nearby states. Assist students in selecting different Forests with geographic significance.

PROCEDURES *(continued)*

Session 2

Have students download and print, or hand out the **Student Angling Adventure Plan Worksheet** (copy contained in this PDF and on the web link). In their separate assigned “National Forest Groups”, have students perform online research from the links provided, and other sources, to discuss and develop their forest **Angling Adventure Plan**. The worksheet provides instructions and research options for students to gather information. Inform each group that two members of each group will also prepare a presentation to present to their findings to the class during Session 3.

Session 3

Have each group present their findings and their group **Student Angling Adventure Plan**. Lead group discussion on particular differences and similarities of each forest and angling plan. Topics to discuss:

- Travel and lodging logistics
- Angling Opportunities
- Species of fish to catch – where/why/when/how
- Challenges to overcome
- Other biology-ecology learning opportunities

Conclude the discussion with a sampling of students who would actually want to try fishing a National Forest from their plans. Students interested in going fishing on a forest from their plan, as a group with mentors, or with families, should access the **Extension Activity** below.

ASSESSMENT

Students will be informally assessed based on their participation in the class discussion. Teachers could collect the discussion notes students took during the video to check for completion.

Students can be formally assessed using their Pre-Lesson Student Worksheets. Students can be assessed on meeting the formal learning objectives on how thoroughly students completed their Student Angling Adventure Plan Worksheets

EXTENSION ACTIVITIES

1. Students working as groups with mentors, or with families, actually go fishing in a National Forest. During their angling adventure, they can take photos of various aspects that highlight key points of their trip defined from their **Student Angling Adventure Plan worksheet**. Students can later present their actual findings in the forest compared to what they determined from their research.

2. Students who go fishing, on a National Forest, or other public lands, can present (using photos, images, or video):

- What species they fished for and caught?
- What did they observe about the aquatic ecosystems they encountered?
- What pre-trip research helped in their success and what other factors could have helped more in their success?



SPECIAL CONSIDERATIONS:

1. During the video, the instructor may want to pause the video after the defined “Steps” (1 through 7) to allow students time to fill in their Pre-Lesson Student Worksheet.
2. Sessions 2 & 3 of this activity are richest when completed in groups with answers shared with and discussed as a whole class. The Student Angling Adventure Plan worksheet is not a typical worksheet as it encourages students to research and construct knowledge as they answer questions.



RESOURCES for Teachers & Student Research

- <http://intotheoutdoors.org/topics/fishing-your-national-forests/>
- <https://www.fs.fed.us/fishing/>
- <https://www.fs.fed.us/fishing/regionalmap/index.html>
- <https://www.takemefishing.org/>
- <http://kidsfishing.us/>
- Internet Search "Fishing Regulations" in your State

The following **National Common Core Standards** can be met teaching **NATURAL RESOURCE MANAGEMENT**:

NATIONAL COMMON CORE STANDARDS

College and Career Readiness (CCR) Anchor Standard 1: Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.

Grade 8

Write arguments to support claims with clear reasons and relevant evidence.

- a. Introduce claim(s), acknowledge and distinguish the claim(s) from alternate or opposing claims, and organize the reasons and evidence logically.
- b. Support claim(s) with logical reasoning and relevant evidence, using accurate, credible sources and demonstrating an understanding of the topic or text.
- c. Use words, phrases, and clauses to create cohesion and clarify the relationships among claim(s), counterclaims, reasons, and evidence.
- d. Establish and maintain a formal style.
- e. Provide a concluding statement or section that follows from and supports the argument presented.

CCSS.ELA-Literacy.CCRA.SL.1 Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively.

CCSS.ELA-Literacy.CCRA.SL.2 Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally.

CCSS.ELA-Literacy.CCRA.SL.4 Present information, findings, and supporting evidence such that listeners can follow the line of reasoning and the organization, development, and style are appropriate to task, purpose, and audience.



National Common Core Standards Continued:

CCSS.ELA-LITERACY.RST.6-8.4 Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 6-8 texts and topics.

CCSS.ELA-LITERACY.RH.6-8.7 Integrate visual information (e.g., in charts, graphs, photographs, videos, or maps) with other information in print and digital texts.

CCSS.ELA-LITERACY.SL.7.1 Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 7 topics, texts, and issues, building on others' ideas and expressing their own clearly.

CCSS.ELA-LITERACY.WHST.6-8.1.B Support claim(s) with logical reasoning and relevant, accurate data and evidence that demonstrate an understanding of the topic or text, using credible sources.

CCSS.ELA-LITERACY.WHST.6-8.7 Conduct short research projects to answer a question (including a self-generated question), drawing on several sources and generating additional related, focused questions that allow for multiple avenues of exploration.

Next Generation Science Standards:

MS-LS2 Ecosystems: Interactions, Energy, and Dynamics

MS-LS2-1. Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem. [Clarification Statement: Emphasis is on cause and effect relationships between resources and growth of individual organisms and the numbers of organisms in ecosystems during periods of abundant and scarce resources.]

MS-LS2-2. Construct an explanation that predicts patterns of interactions among organisms across multiple ecosystems. [Clarification Statement: Emphasis is on predicting consistent patterns of interactions in different ecosystems in terms of the relationships among and between organisms and abiotic components of ecosystems. Examples of types of interactions could include competitive, predatory, and mutually beneficial.]

MS-LS2-4. Construct an argument supported by empirical evidence that changes to physical or biological components of an ecosystem affect populations. [Clarification Statement: Emphasis is on recognizing patterns in data and making warranted inferences about changes in populations, and on evaluating empirical evidence supporting arguments about changes to ecosystems.]

Pre-Lesson Student Worksheet

Student Name:

Class:

Date:

1. Would you rather... go fishing, play basketball, or skateboard?
2. Where would you do those activities?
3. Of the 7 Steps presented in this video, which ones would be easiest for you to accomplish?
4. Of the 7 Steps presented in this video, which ones would be hardest for you to accomplish?
5. What kinds of support would you need for each step?
6. What personal benefits or rewards might you get from each step or fishing?
7. What other challenges or benefits did you observe?



Student Angling Adventure Plan Worksheet

(Create a separate sheet for additional plan information)

Student Name:

Class:

Date:

1. USFS Region where you live: _____
2. Name and location of National Forest selected (your Forest Group): _____

3. Location and contact information of your Forest Service Headquarters; _____

4. Questions you will ask of Forest Service HQ Representatives (create separate sheet with questions)
5. Distance and transportation time/cost to your National Forest _____

6. Persons/Relationships whom you can recruit to take you fishing _____

7. Names/Locations of your proposed Lake or Stream to fish within the forest

8. What species of fish will you attempt to catch? _____
9. License and/or fishing regulations for that species? _____

10. What bait or fishing technique will you use? _____

11. Can they be fished from shore or will you need watercraft? _____
12. Where and what type of watercraft can you secure? _____

13. Where will you stay if an overnight trip is required? _____
14. Camping within the forest – where to camp and what will you need? _____

15. How will you record events during your fishing adventure for class presentation?

