Into the Outdoors

PRODUCING VIDEOS FOR FISHERY CONSERVATION

Developed by: Rachel Konkle

In This Activity ...

Students will research, debate, and develop a Public Service Announcement (PSA) video for fishing regulations. Their PSA video will use research and logic to produce a creative message that promotes healthy fisheries, ecosystems, and recreation.

Educational Partners

Natural Resource
Management

GRADE LEVELS
High School - Grades 9-12

CONTENT AREA
Natural Resource Management,
Life Science

UNIT THEME
Fishing Regulations

TOPIC
Social Responsibility, Fishing Laws,
Regulations, Natural Resource
Management

TIME REQUIRED
Four, 45-minute sessions

OVERVIEW

About 15 percent of Americans today enjoy angling and harvesting fish from waterbodies in the United States … about 50 million people to be exact. However, there is the common concern on how this sport can sustain itself and aquatic ecosystems when so many fish are removed from the environment. That's why anglers are required to abide by their state's fishing regulations. These regulations are laws that limit how wildlife resources are taken from the environment. Anglers who follow regulations also help conserve and improve fish populations and ecosystems. That is because laws are based on sound science and research from fisheries biologists who study these ecosystems. When science reveals changes in fish populations or their ecosystem, the laws are altered to improve the health of the fisheries.

Because fishing laws are consistently updated or changed, it is important anglers frequently review their current regulations. Some of the common laws anglers may discover are:

Fishing license: It is illegal for anglers to go fishing without a license (unless they are younger than the minimum age). These licenses are an angler's ticket to harvesting fish from fisheries. Also, all the money from license sales is given to state and wildlife conservation programs that focus on the management, conservation, and restoration of fishery resources. So obeying this law can do a lot of good for the environment.

Size or Slot limits: These restrict the length of fish you can keep. Size limits determine the minimum length a fish must be to keep. This prevents the harvest of immature fish and gives them a chance to grow strong and reproduce! Meanwhile, slot limits prevent the harvest of fish within a certain size range in order to keep a healthy breeding population. Anglers will measure their fish on a measuring board.
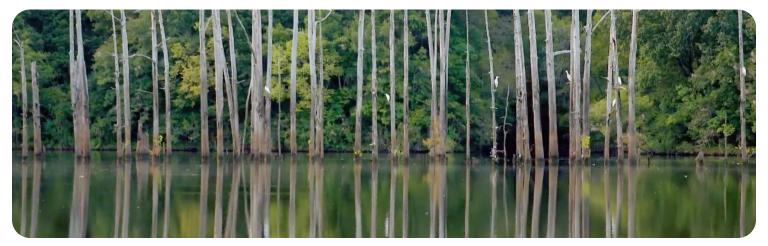
Creel limits: This law controls the number of a species each person can take in a day. This limit ensures anglers do not overfish an aquatic area and maintain fish populations at healthy levels.

Seasonal limits: Anglers are sometimes prohibited from legally fishing during certain seasons. Closing a fishing season protects fish species during their vulnerable life stages, such as spawning and rearing. Seasonal limits may also be used to prevent overharvesting and increase the fish population, or can be used to protect spawning habitat.

Baitfish Release: Some states say it is illegal to release unused baitfish or dump their water into the aquatic areas. This reduces the introduction of new species or diseases (VHS for example) into the area. Therefore, anglers are required to take their bait with them or dispose of them in the trash.

Unattended Fishing Lines: Anglers should be vigilant and present when they have a fishing line in the water. Fishing lines in the water can be hazardous to swimmers, water skiers, and other water recreationists. Also, watching your line can reduce the time a fish is hooked and prevent the loss of wildlife.

In this lesson, students will research and develop storyboards and PSA videos about fishing regulations. The students will debate on the video's accuracy of fishing laws and creativity in promoting healthy fisheries, ecosystems, and recreation.

ENDURING UNDERSTANDING: Students will understand the consequences and rewards of obeying fishing laws while participating in the sport of fishing. Students will also discover pathways to reviewing fishing laws that promote responsible behavior in anglers.

CONTENT OBJECTIVES: Students will research and evaluate the various fishing laws that determine responsible angler behaviors. They will also determine how obeying the rules can benefit human recreation and the long-term health of aquatic ecosystems and fisheries.

LEARNER OUTCOMES: Students will use video and online research to develop their own PSA video that identifies fishing laws and promotes responsible angler behaviors in individual anglers. Students will also discuss and debate on their PSA videos to develop their understanding of fishing laws and fishery conservation.

PROCESS OBJECTIVES: Students will work in small and large groups to process new information and use evidence to come to conclusions

MATERIALS NEEDED:

(for each group, for each student)

• Access to computers and the internet

• Crappie Stewardship video and background information at: http://intotheoutdoors.org/topics/crappie-stewardship/

• Pre-lesson Student Worksheet with questions to fill in while watching the video

• Student Worksheets for each group (free downloadable PDF)

• Colored pencils

• Video cameras or cellphones that record video.

• Have no video cameras? Use PowerPoint instead.

• Projector

PROCEDURES

Session 1:

Before watching the *Crappie Stewardship* video or reading the website background information, ask students what they already know about fishing laws and what those protect. Also ask students who may have fished before to describe what kind of laws they followed and where they read up on those laws.

Have students download, or print and distribute the Pre-Lesson Student Worksheet (copy contained in 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.

Next, divide the class into small groups (3-4 students). Then, have each group draw a slip of paper from a hat. These slips of paper will assign them to a specific fishing law:

• **Fishing license**

• **Fishing limits**

• **Baitfish**

• **Fishing lines**

Have students download and print, or hand out to each student their respective **Student Worksheet** (copy contained in the web link). Ask them to review the details and assignments of the worksheet in preparation for Session 2.

Session 2: Team Research and PSA Storyboard Development

In their small groups, have students perform online research from links provided and from other sources they discover. The worksheets give instructions and research options that will guide students in their information gathering. Then, have the small groups discuss, plan, and develop a storyboard for a 30-60 second PSA video on why anglers should follow their fishing law. The PSA video should highlight the fishing law, the consequences or rewards to following the law, and where people can find out more about the law. Students may use the supplied storyboard sheet or draw out their scenes on larger sheets of paper. Inform each group they will present their storyboard to the class and their presentation must be supported by factual research and reasons for their storyline/scenes.

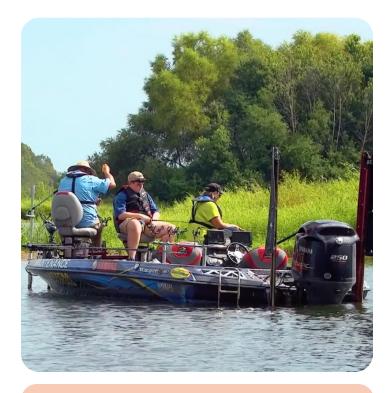## Session 3: Storyboard Presentations and Class Debate

Have each group present their **PSA Video Storyboard** and supporting research and logic to the class. Limit each group to a three-minute presentation time followed by four minutes of discussion by the other groups. The class should analyze the storyboard and debate on the accuracy, goals, and creativity of the plot. Students may offer new story ideas, edit suggestions, or ways the group can build upon their story idea.

Conclude Session 3 by suggesting the groups modify their storyboard according to editorial input given by the class. Then assign each group to produce their PSA video into video format. Encourage students to be creative in their use of audio, text, and visuals. Inform students their videos will be shown to the class at a screening during Session 4.

Session 4: Video Presentations and Class Vote

Have each group present their PSA video via projector to the class. The groups may also present their reasoning for story plot/scenes with supporting research. Limit each group to four-minute presentations.

After all the groups have presented, let the class openly debate the accuracy and creativity of the videos. Then have the class vote on who should win the "Best Picture" award with a ballot.

NOTE: If your school does not have video or camera resources, have the students translate their storyboard into a PowerPoint slideshow instead! They can build their own visuals with artwork, clipart, or with their own paintings or drawings. They can also include text, transitions, and audio into the slideshow.

Conclude the session by discussing the overall rewards to anglers following fishing laws and the resources anglers can use to read up on them. Then offer to help interested students distribute their PSA videos to your state wildlife agency offices or local bait shops to showcase.

ASSESSMENT

- Students will be informally assessed based on their participation within their groups and during class presentations and discussions.

- Teachers could collect the Pre-Lesson Student Worksheets and formally assess the discussion notes students took during the video to check for completion.

- Students can be assessed on meeting the formal learning objectives based on how thoroughly students completed their group worksheets or storyboards

- Students can be evaluated on their presentations during Session 3 and 4

EXTENSION ACTIVITY

Students may use this activity and worksheets as a model to develop customized PSA videos for other angler concerns (boating safety, catch and release, invasive species). The students can present their video in class and compare to others.

RESOURCES FOR TEACHERS & STUDENT RESEARCH

https://www.youtube.com/watch?v=GfPplBAWciA

https://www.fws.gov/fishing/FishingLicense.html

https://www.maisrc.umn.edu/about-baitfish

https://mdc.mo.gov/conmag/2005/03/watch-those-lines

https://www.maine.gov/ifw/fishing-boating/fishing/laws-rules/laws-definitions.html

STANDARDS

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

PRODUCING VIDEOS FOR FISHERY CONSERVATION

Grades 9-10:

CCSS.ELA-LITERACY.RI.9-10.1	Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.
CCSS.ELA-LITERACY.RI.9-10.4	Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze the cumulative impact of specific word choices on meaning and tone (e.g., how the language of a court opinion differs from that of a newspaper).
CCSS.ELA-LITERACY.W.9-10.1	Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.
CCSS.ELA-LITERACY.W.9-10.2	Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and analysis of content.

CCSS.ELA-LITERACY.W.9-10.3	Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences.
CCSS.ELA-LITERACY.W.9-10.4	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
CCSS.ELA-LITERACY.W.9-10.5	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.
CCSS.ELA-LITERACY.W.9-10.6	Use technology, including the Internet, to produce, publish, and update individual or shared writing products, taking advantage of technology's capacity to link to other information and to display information flexibly and dynamically.
CCSS.ELA-LITERACY.W.9-10.7	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.
CCSS.ELA-LITERACY.W.9-10.8	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation.
CCSS.ELA-LITERACY.W.9-10.9	Draw evidence from literary or informational texts to support analysis, reflection, and research.
CCSS.ELA-LITERACY.SL.9-10.1	Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 9-10 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively.
CCSS.ELA-LITERACY.SL.9-10.2	Integrate multiple sources of information presented in diverse media or formats (e.g., visually, quantitatively, orally) evaluating the credibility and accuracy of each source.
CCSS.ELA-LITERACY.SL.9-10.3	Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric, identifying any fallacious reasoning or exaggerated or distorted evidence.
CCSS.ELA-LITERACY.SL.9-10.4	Present information, findings, and supporting evidence clearly, concisely, and logically such that listeners can follow the line of reasoning and the organization, development, substance, and style are appropriate to purpose, audience, and task.
CCSS.ELA-LITERACY.SL.9-10.5	Make strategic use of digital media (e.g., textual, graphical, audio, visual, and interactive elements) in presentations to enhance understanding of findings, reasoning, and evidence and to add interest.
CCSS.ELA-LITERACY.SL.9-10.6	Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate.
CCSS.ELA-LITERACY.L.9-10.1	Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
CCSS.ELA-LITERACY.L.9-10.2	Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
CCSS.ELA-LITERACY.L.9-10.3	Apply knowledge of language to understand how language functions in different contexts, to make effective choices for meaning or style, and to comprehend more fully when reading or listening.
CCSS.ELA-LITERACY.L.9-10.4	Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grades 9-10 reading and content, choosing flexibly from a range of strategies.
CCSS.ELA-LITERACY.L.9-10.5	Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.
CCSS.ELA-LITERACY.L.9-10.6	Acquire and use accurately general academic and domain-specific words and phrases, sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when considering a word or phrase important to comprehension or expression.

CCSS.ELA-LITERACY.RST.9-10.1	Cite specific textual evidence to support analysis of science and technical texts, attending to the precise details of explanations or descriptions.
CCSS.ELA-LITERACY.RST.9-10.2	Determine the central ideas or conclusions of a text; trace the text's explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.
CCSS.ELA-LITERACY.RST.9-10.4	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 9-10 texts and topics.
CCSS.ELA-LITERACY.RST.9-10.9	Compare and contrast findings presented in a text to those from other sources (including their own experiments), noting when the findings support or contradict previous explanations or accounts.
CCSS.ELA-LITERACY.WHST.9-10.1	Write arguments focused on discipline-specific content.
CCSS.ELA-LITERACY.WHST.9-10.2	Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes.
CCSS.ELA-LITERACY.WHST.9-10.4	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
CCSS.ELA-LITERACY.WHST.9-10.5	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.
CCSS.ELA-LITERACY.WHST.9-10.6	Use technology, including the Internet, to produce, publish, and update individual or shared writing products, taking advantage of technology's capacity to link to other information and to display information flexibly and dynamically.
CCSS.ELA-LITERACY.WHST.9-10.7	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.
CCSS.ELA-LITERACY.WHST.9-10.8	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation.
CCSS.ELA-LITERACY.WHST.9-10.9	Draw evidence from informational texts to support analysis, reflection, and research.

Grades 11-12:

CCSS.ELA-LITERACY.RI.11-12.1	Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text, including determining where the text leaves matters uncertain.
CCSS.ELA-LITERACY.RI.11-12.4	Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze how an author uses and refines the meaning of a key term or terms over the course of a text (e.g., how Madison defines faction in Federalist No. 10).
CCSS.ELA-LITERACY.W.11-12.1	Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.
CCSS.ELA-LITERACY.W.11-12.2	Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and analysis of content.
CCSS.ELA-LITERACY.W.11-12.3	Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences.
CCSS.ELA-LITERACY.W.11-12.4	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

CCSS.ELA-LITERACY.W.11-12.5	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.
CCSS.ELA-LITERACY.W.11-12.6	Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.
CCSS.ELA-LITERACY.W.11-12.7	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.
CCSS.ELA-LITERACY.W.11-12.8	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.
CCSS.ELA-LITERACY.W.11-12.9	Draw evidence from literary or informational texts to support analysis, reflection, and research.
CCSS.ELA-LITERACY.SL.11-12.1	Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 11-12 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively.
CCSS.ELA-LITERACY.SL.11-12.2	Integrate multiple sources of information presented in diverse formats and media (e.g., visually, quantitatively, orally) in order to make informed decisions and solve problems, evaluating the credibility and accuracy of each source and noting any discrepancies among the data.
CCSS.ELA-LITERACY.SL.11-12.3	Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric, assessing the stance, premises, links among ideas, word choice, points of emphasis, and tone used.
CCSS.ELA-LITERACY.SL.11-12.4	Present information, findings, and supporting evidence, conveying a clear and distinct perspective, such that listeners can follow the line of reasoning, alternative or opposing perspectives are addressed, and the organization, development, substance, and style are appropriate to purpose, audience, and a range of formal and informal tasks.
CCSS.ELA-LITERACY.SL.11-12.5	Make strategic use of digital media (e.g., textual, graphical, audio, visual, and interactive elements) in presentations to enhance understanding of findings, reasoning, and evidence and to add interest.
CCSS.ELA-LITERACY.SL.11-12.6	Adapt speech to a variety of contexts and tasks, demonstrating a command of formal English when indicated or appropriate.
CCSS.ELA-LITERACY.L.11-12.1	Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
CCSS.ELA-LITERACY.L.11-12.2	Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
CCSS.ELA-LITERACY.L.11-12.3	Apply knowledge of language to understand how language functions in different contexts, to make effective choices for meaning or style, and to comprehend more fully when reading or listening.
CCSS.ELA-LITERACY.L.11-12.4	Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grades 11-12 reading and content, choosing flexibly from a range of strategies.
CCSS.ELA-LITERACY.L.11-12.5	Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.
CCSS.ELA-LITERACY.L.11-12.6	Acquire and use accurately general academic and domain-specific words and phrases, sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when considering a word or phrase important to comprehension or expression.
CCSS.ELA-LITERACY.RST.11-12.1	Cite specific textual evidence to support analysis of science and technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account.

CCSS.ELA-LITERACY.RST.11-12.2	Determine the central ideas or conclusions of a text; summarize complex concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms.
CCSS.ELA-LITERACY.RST.11-12.4	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 11-12 texts and topics.
CCSS.ELA-LITERACY.RST.11-12.9	Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.
CCSS.ELA-LITERACY.WHST.11-12.1	Write arguments focused on discipline-specific content.
CCSS.ELA-LITERACY.WHST.11-12.2	Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes.
CCSS.ELA-LITERACY.WHST.11-12.4	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
CCSS.ELA-LITERACY.WHST.11-12.5	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.
CCSS.ELA-LITERACY.WHST.11-12.6	Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.
CCSS.ELA-LITERACY.WHST.11-12.7	Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.
CCSS.ELA-LITERACY.WHST.11-12.8	Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.
CCSS.ELA-LITERACY.WHST.11-12.9	Draw evidence from informational texts to support analysis, reflection, and research.

Next Generation Science Standards for...

PRODUCING VIDEOS FOR FISHERY CONSERVATION

HS-LS2-6.	Evaluate claims, evidence, and reasoning that the complex interactions in ecosystems maintain relatively consistent numbers and types of organisms in stable conditions, but changing conditions may result in a new ecosystem. [Clarification Statement: Examples of changes in ecosystem conditions could include modest biological or physical changes, such as moderate hunting or a seasonal flood; and extreme changes, such as volcanic eruption or sea level rise.]
HS-LS2-7.	Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.* [Clarification Statement: Examples of human activities can include urbanization, building dams, and dissemination of invasive species.]