

SHORE LUNCH TACOS

6th-12th Grade Discussion Guide

Teacher - Joseph Kanke

GRADE LEVEL: 6-12

TIMEFRAME: 3-5 class periods

MATERIALS: Sticky notes, laptops or computers to research and build out a presentation, device to record podcast

KEY WORDS: Retrieval Reel, Longnose Gar, Snakeheads, Goldfish, Catfish, Common Carp, Invasive Species, Tidal Waters

CATEGORIES: Aquatic & Angling Science



LEARNING OBJECTIVES

Students will be able to:

- Write a podcast on a variety of topics connected to bowfishing.
- Write using a counter-argument style to debunk the myth that bottom-feeders are not a good food source.
- Understand and explain that bowfishing fish can be good sources of food.

BACKGROUND INFORMATION

Bowfishing is a sport that can be enjoyed by all ages.

One of the first steps of bowfishing is getting to know your equipment. Depending on the manufacturer there may be differences in bows, reels and arrows so getting to know the bowfishing equipment you are using is key. It is also important to practice shooting before you begin to take aim at real fish. And never forget that when you are learning something new, you can always ask for help.

Some of the fish you can bowfish can become a meal. One of these is the catfish and one meal that can be made with them is fried catfish tacos.



VOCABULARY

RETRIEVAL REEL: a spin cast bowfishing reel has all the hallmarks of a traditional fishing reel; they have a spool to hold the line and a crank handle that allows for quick retrieval of the line.

LONGNOSE GAR: a fish with long, narrow snouts more than twice as long as the rest of the head and they have abundant, sharp teeth.

SNAKEHEADS: native to parts of Africa and Asia. These elongated, predatory fish are distinguished by their long dorsal fins, large mouths, and shiny teeth. They breathe air with gills, which allows them to migrate short distances over land.

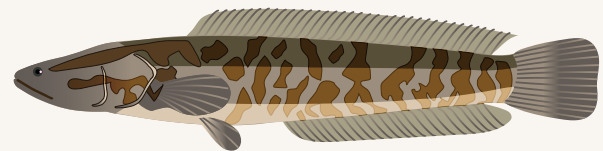
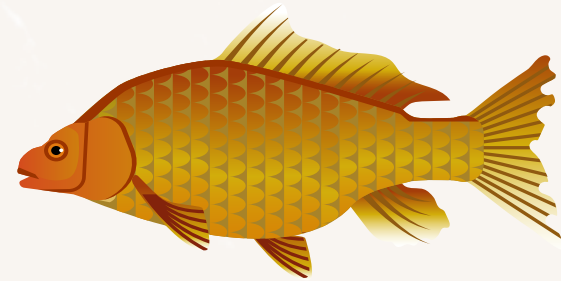
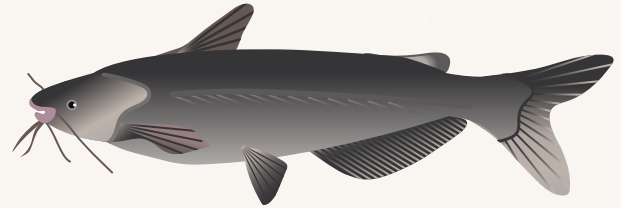
GOLDFISH: goldfish belong to the carp family and were domesticated in China in the Tang Dynasty. They can reach up to 59 cm in size, and 3 kg in weight.

CATFISH: a fish that has one or more pairs of whisker-like feelers by its mouth. These feelers, known as barbels, help the fish to taste and to feel.

COMMON CARP: are various species of oily freshwater fish, a very large group of fish native to Europe and Asia; considered an invasive species in The United States.

INVASIVE SPECIES: an invasive species is an organism that is not indigenous, or native, to a particular area.

TIDAL WATERS: those waters that rise and fall in a predictable and measurable rhythm or cycle due to the gravitational pulls of the moon and sun.



LEARNING PROCEDURE

Stand up, Sit Down

To activate interest and prior knowledge in the subject, engage students in several rounds of stand up, sit down. The instructor will inform students that they will hear a series of statements. If the statement is true for them, they should stand up. If the statement is not true, they remain seated, or if standing, take a seat.

- I have been bowfishing.
- I have eaten carp or catfish.
- Before today's video clip, I knew what at least one of the species mentioned was.
- I have seen one of the species mentioned.
- I would try catfish tacos.
- I can explain what an invasive species is.

ACTIVITY 1:

Students will work in dyads to develop a podcast episode about bowfishing. Students will first write a script and then record their podcast. Students can have a lot of flexibility in how they approach their individual roles within a podcast. They can act as two experts, an expert and an interviewer, new-to-sport, scientists, equipment engineers, etc. Students should be provided with some guidelines. Some considerations are as follows-

- information is research-based and factual
- introduction to material
- sound effects or music matches content delivery

Provide students with the following list of podcast topics, but consider allowing students to pitch their own ideas connected to bowfishing.

- Bowfishing doesn't have to be done at night; it can be done during the day, from shore, variety of locations
- Various types of equipment- reels, arrows, bow type involved in bowfishing; it can be inexpensive and minimal gear is needed to get started
- Bowfishing is a social and fun activity
- Being able to identify fish by shape and in the water is crucial
- Fast paced activity with lots of shooting opportunities
- There are ecosystem benefits of bowfishing
- You are going to get messy (fish slime, water, sweat, dirt)
- Respect the Resource- fish, habitat, other people and activities, being legal

ACTIVITY 2:

(Independent or team project)

The instructor states, "Many Americans may have heard that carp and other bottom-feeding fish are bad to eat. Your task is to write a counter-argument to this belief. Write a pamphlet convincing individuals that carp are a potential source of food."

For this activity each individual student will research carp (bottom-feeders) as a potential food source. A recipe for carp, or another bottom feeder, should be included within the pamphlet. The instructor should provide or co-create a rubric for students to develop their pamphlet. Some considerations for the rubric are listed below:

- multiple counter-arguments.
- images
- accuracy of information
- cited sources

When pamphlets are complete, ask students to form dyads and exchange pamphlets. After reading students should respond to the following two prompts on a separate sheet of paper or sticky notes to provide to their peer.

I felt your strongest counter-argument was _____ because. . .

I felt your weakest counter-argument was _____ because. . .

CONCLUSION:

Visual Summarization:

On chart paper, small groups of students draw what they learned.

After the completed works are attached to the classroom walls, other students affix sticky notes to the posters to extend on the ideas, add questions, or offer praise.

EXTENDING THE LESSON

Example:

Assign students to research and find a recipe for a bowfishing fish and try to cook it at home (with guardian permission). Students will then write a review of the recipe.

Assign each student to choose a recipe for a bowfishing species that has an interesting story, sounds (or is) tasty or seems intriguing for another reason. Students will compile their recipes into a cookbook with an explanation of why they chose that recipe.

RELATED LINKS

[What Fish Can I Eat from Bowfishing? Can I Eat Carp?](#)

[Three Great Ways to Utilize Your Bowfishing Harvest](#)

[Archery Trade Association](#)

[Sport and Fish Restoration](#)



Educational Standards

ELA Standards

6th Grade

- CCSS.ELA-LITERACY.RI.6.1** Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.
- CCSS.ELA-LITERACY.RI.6.2** Determine a central idea of a text and how it is conveyed through particular details; provide a summary of the text distinct from personal opinions or judgments.
- CCSS.ELA-LITERACY.RI.6.7** Integrate information presented in different media or formats (e.g., visually, quantitatively) as well as in words to develop a coherent understanding of a topic or issue.
- 6.8.** Trace and evaluate the argument and specific claims in a text, distinguishing claims that are supported by reasons and evidence from claims that are not.
- 6.1.** Write arguments to support claims with clear reasons and relevant evidence.
- CCSS.ELA-LITERACY.W.6.2** Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.
- CCSS.ELA-LITERACY.W.6.4** Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
- CCSS.ELA-LITERACY.W.6.5** With some guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.
- CCSS.ELA-LITERACY.W.6.7** Conduct short research projects to answer a question, drawing on several sources and refocusing the inquiry when appropriate.
- CCSS.ELA-LITERACY.SL.6.1** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 6 topics, texts, and issues, building on others' ideas and expressing their own clearly.
- CCSS.ELA-LITERACY.SL.6.2** Interpret information presented in diverse media and formats (e.g., visually, quantitatively, orally) and explain how it contributes to a topic, text, or issue under study.



CCSS.ELA-LITERACY.SL.6.5 Include multimedia components (e.g., graphics, images, music, sound) and visual displays in presentations to clarify information.

7th Grade

CCSS.ELA-LITERACY.RI.7.1 Cite several pieces of textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.

CCSS.ELA-LITERACY.RI.7.2 Determine two or more central ideas in a text and analyze their development over the course of the text; provide an objective summary of the text.

7.8. Trace and evaluate the argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is relevant and sufficient to support the claims.

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

CCSS.ELA-LITERACY.W.7.2 Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.

CCSS.ELA-LITERACY.W.7.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

CCSS.ELA-LITERACY.W.7.5 With some guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on how well purpose and audience have been addressed.

CCSS.ELA-LITERACY.W.7.7 Conduct short research projects to answer a question, drawing on several sources and generating additional related, focused questions for further research and investigation.

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.SL.7.2 Analyze the main ideas and supporting details presented in diverse media and formats (e.g., visually, quantitatively, orally) and explain how the ideas clarify a topic, text, or issue under study.

CCSS.ELA-LITERACY.SL.7.5 Include multimedia components and visual displays in presentations to clarify claims and findings and emphasize salient points.

8th Grade

CCSS.ELA-LITERACY.RI.8.1 Cite the textual evidence that most strongly supports an analysis of what the text says explicitly as well as inferences drawn from the text.

CCSS.ELA-LITERACY.RI.8.2 Determine a central idea of a text and analyze its development over the course of the text, including its relationship to supporting ideas; provide an objective summary of the text.

8.8. Delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is relevant and sufficient; recognize when irrelevant evidence is introduced.

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

CCSS.ELA-LITERACY.W.8.2 Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.

CCSS.ELA-LITERACY.W.8.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

CCSS.ELA-LITERACY.W.8.5 With some guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on how well purpose and audience have been addressed.

CCSS.ELA-LITERACY.W.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.

CCSS.ELA-LITERACY.SL.8.1 Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 8 topics, texts, and issues, building on others' ideas and expressing their own clearly.

CCSS.ELA-LITERACY.SL.8.2 Analyze the purpose of information presented in diverse media and formats (e.g., visually, quantitatively, orally) and evaluate the motives (e.g., social, commercial, political) behind its presentation.

CCSS.ELA-LITERACY.SL.8.5 Integrate multimedia and visual displays into presentations to clarify information, strengthen claims and evidence, and add interest.

9-10th Grades

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.9-10.2 Determine a central idea of a text and analyze its development over the course of the text, including how it emerges and is shaped and refined by specific details; provide an objective summary of the text.

9-10.8. Delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is valid and the evidence is relevant and sufficient; identify false statements and fallacious reasoning.

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.9-10.4 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.9-10.7 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.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.9-10.5 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.

11-12th Grades

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.11-12.2 Determine two or more central ideas of a text and analyze their development over the course of the text, including how they interact and build on one another to provide a complex analysis; provide an objective summary of the text.

11-12.8. Delineate and evaluate the reasoning in seminal U.S. texts, including the application of constitutional principles and use of legal reasoning (e.g., in U.S. Supreme Court majority opinions and dissents) and the premises, purposes, and arguments in works of public advocacy (e.g., The Federalist, presidential addresses).

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.11-12.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

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.11-12.7 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.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.11-12.5 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.

MS-LS2-4 Ecosystems: Interactions, Energy, and Dynamics

Construct an argument supported by empirical evidence that changes to physical or biological components of an ecosystem affect populations.

Performance Expectation

Grade: Middle School (6-8)

HS-LS2-7 Ecosystems: Interactions, Energy, and Dynamics

Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.*

Performance Expectation

Grade: High School (9-12)