

IT'S A BIRD, IT'S A PLANE, IT'S A FISH

6th-8th Grade Discussion Guide

Teacher - Joseph Kanke

GRADE LEVEL: 6-8

TIMEFRAME: 3-5 class periods

MATERIALS: Laptops for research, general access to art materials for one pager, videos are articles embedded within the lesson

KEY WORDS: Silver Carp, Draw Weight, Lead



LEARNING OBJECTIVES

Students will be able to:

- Explain how to bowfish Silver Carp as they jump from the water.
- How bowfishing helps to control invasive species like Silver Carp.
- Synthesize research information.
- Construct a magazine article with an intended audience.

ACTIVITY SUMMARY

This lesson explores aerial fishing of Silver Carp. Students will begin by watching a short informational video about Silver Carp and respond to a set of questions. Following the introduction, in pairs students will engage in research regarding Silver Carp. They will synthesize their learning in the form of a one pager which includes a summary, questions and images.

Then, individually students will use their learning to construct a magazine article with an intended audience of folk new to the sport of aerial bowfishing. Finally, students will summarize their learning by writing a 25 or less word recap for a student who was absent during their lessons.

BACKGROUND INFORMATION

This episode covers the sport of bowfishing for Silver Carp; another invasive fish species. Silver Carp jump from the water boats approach and provide an opportunity for bowfishers to shoot while they are airborne. Unlike bowfishing when the fish are in the water, airborne fish only provide a short window of about two seconds to pull back the bow and take a shot.

As the boat moves through the water it causes the fish to jump both in the front and at the sides. If there are multiple archers on the boat, one safety consideration is positioning yourself so the active shooting range doesn't overlap. Another safety measure is always wearing a PFD.

While you can engage in the sport during the day or night, silver carp tend to be attracted to boat lights and jump higher. For bowfishing Silver Carp, you often use a lighter draw weight on your bow and a flashlight. Similar to other bowfishing is the inclusion of a reel and line.

One way to practice bowfishing Silver Carp on land is using a frisbee as a moving target. Since the target is moving, you want to lead with your shot.

VOCABULARY

DRAW WEIGHT: the measured force, in foot-pounds, stored by an archery bow when fully drawn

LEAD: aim in front of their direction of travel because it takes time for the projectile to travel.

SILVER CARP: a deep-bodied freshwater fish, typically with barbels around the mouth. Considered an invasive species in the United States.

LEARNING PROCEDURE

The instructor states, "What invasive fish species jumps out of the water?"

As an introduction to Silver Carp, play the short video which introduces the fish's ability to jump from water as well as a little of their history and why they are considered an invasive species. Following the clip, pose the following questions:

- 1) How did Silver Carp make their way to the United States?
- 2) Why do Silver Carp jump from the water?
- 3) What makes Silver Carp such a problematic invasive species?



ACTIVITY 1

For this activity, students should work with a partner to synthesize information about Silver Carp. Provide students with the following two resources as a beginning place for their investigation. Encourage students to look for other sources to support their work as well.

<https://invasivecarp.us/SilverCarp.html>

<https://www.dnr.state.mn.us/invasives/aquaticanimals/silver-carp/index.html>

After students have had some time to complete their research, instruct them to develop a one pager. Provide the following guidelines:

One-Pager: A One-Pager is a creative response to your learning experience. It allows you to respond imaginatively while being brief and concise in making connections between words and images. We think about what we see and read differently when we are asked to do something with what we have seen or read. We learn best when we create our own ideas. Your personal thinking about what you have experienced should be understood by the audience that views the One-Pager. (Description from AVID, process adapted from AVID)

Follow this format for your One-Pager.

Title the One-Pager appropriately to reflect the content.

Write two quotations from the reading or activity.

Use three visual images, either drawn, cut out from magazines, or printed images to create a central focus to your page.

Place five essential vocabulary words/phrases around the images. These terms/words/phrases should express the main ideas, your impressions, feelings, or thoughts about what you have seen or read.

Write the main idea of the reading.

Write two or 3 questions and answer them.

Put a symbolic colored border around the edges of the page.



ACTIVITY 2:

For this activity, tell students that they will be writing an article for an outdoor sports magazine. The purpose of this activity is to introduce the sport of aerial sport fishing of Silver Carp. The audience of this article is individuals who have never been exposed to the sport. Some considerations for the article are: history of Silver Carp, who can bowfish, safety considerations, equipment considerations, how bowfishing helps control the invasive species population.

Instructor should create individually, or collectively with the class, a scoring rubric.

After students have finished the first draft of their article, they should exchange with a partner for peer editing. The instructor may want to provide some stems to guide peer feedback. Some sample stems are listed below:

You may want to offer the [TAG Feedback Sentence Starters](#) or collectively develop a list with the class.



CONCLUSION:

Instructor says, "Silver carp jump out of the water when they feel threatened. This causes them to jump to avoid danger. This invasive species can cause damage to boats and people due to them flying through the air and hitting boaters."

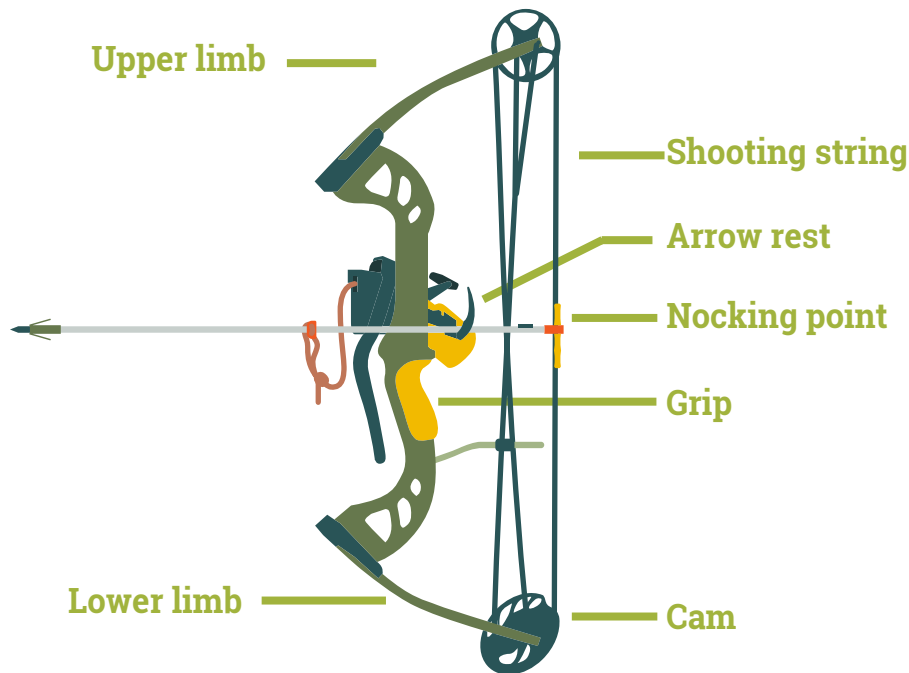
Instructor says, "As a conclusion to our learning about the aerial sport of Silver Carp fishing, imagine a classmate who has been absent for the last week. How would you explain what we've learned in 25 words or less?"

EXTENDING THE LESSON

Example:

Create a visual depiction of a bowfishing bow. Label key components and explain why they are important to the sport. 3-2-1 Write three facts you learned about bowfishing Silver Carp. Next, write two questions you still have about Silver Carp and/or aerial bowfishing. Finally, write one opinion you have regarding Silver Carp and aerial bowfishing. Create an internet scavenger hunt connected to facts related to aerial bowfishing Silver Carp. Create a top 10 list relevant to the topic

Chain notes: Write several questions on pieces of paper and pass each to a student. The first student adds a response (use a timer to keep things moving quickly) and then passes the page along to gather more responses. Multiple contributions help build more complete understanding. Then your class can examine the responses and identify patterns and missing pieces.



RELATED LINKS

[Invasive Carp Regional Coordinating Committee](#)

[Minnesota DNR Silver Carp Information](#)

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.
6.3.	Analyze in detail how a key individual, event, or idea is introduced, illustrated, and elaborated in a text (e.g., through examples or anecdotes).
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.
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.
6.8.	Gather relevant information from multiple print and digital sources; assess the credibility of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and providing basic bibliographic information for sources.
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.6.1.A	Come to discussions prepared, having read or studied required material; explicitly draw on that preparation by referring to evidence on the topic, text, or issue to probe and reflect on ideas under discussion.
CCSS.ELA-LITERACY.SL.6.1.B	Follow rules for collegial discussions, set specific goals and deadlines, and define individual roles as needed.
CSS.ELA-LITERACY.SL.6.1.C	Pose and respond to specific questions with elaboration and detail by making comments that contribute to the topic, text, or issue under discussion.
CCSS.ELA-LITERACY.SL.6.1.D	Review the key ideas expressed and demonstrate understanding of multiple perspectives through reflection and paraphrasing.
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** Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content.
- 7.3.** Analyze the interactions between individuals, events, and ideas in a text (e.g., how ideas influence individuals or events, or how individuals influence ideas or events).
- 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.
- 7.8.** Gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation.
- CCSS.ELA-LITERACY.RI.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.7.1.A** Come to discussions prepared, having read or researched material under study; explicitly draw on that preparation by referring to evidence on the topic, text, or issue to probe and reflect on ideas under discussion.
- CCSS.ELA-LITERACY.SL.7.1.B** Follow rules for collegial discussions, track progress toward specific goals and deadlines, and define individual roles as needed.
- CCSS.ELA-LITERACY.SL.7.1.C** Pose questions that elicit elaboration and respond to others' questions and comments with relevant observations and ideas that bring the discussion back on topic as needed.
- CCSS.ELA-LITERACY.SL.7.1.D** Acknowledge new information expressed by others and, when warranted, modify their own views.
- 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.



8.3.	Analyze how a text makes connections among and distinctions between individuals, ideas, or events (e.g., through comparisons, analogies, or categories)
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	Gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation.
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.8.1.A	Come to discussions prepared, having read or researched material under study; explicitly draw on that preparation by referring to evidence on the topic, text, or issue to probe and reflect on ideas under discussion.
CCSS.ELA-LITERACY.SL.8.1.B	Follow rules for collegial discussions and decision-making, track progress toward specific goals and deadlines, and define individual roles as needed.
CCSS.ELA-LITERACY.SL.8.1.C	Pose questions that connect the ideas of several speakers and respond to others' questions and comments with relevant evidence, observations, and ideas.
CCSS.ELA-LITERACY.SL.8.1.D	Acknowledge new information expressed by others, and, when warranted, qualify or justify their own views in light of the evidence presented.
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.

SCIENCE STANDARDS

MS-ESS3-3 EARTH AND HUMAN ACTIVITY

Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.*

Performance Expectation

Grade: Middle School (6-8)