

Little Fish, Big Impact

1. Question & Research Task

Did you know that something as simple as taking an Omega 3 fish oil supplement can change the entire [food chain](#) of the Chesapeake Bay, and even alter the process of natural selection for many fish species? A little fish like the menhaden can have a big impact!

In this Slam Dunk, you will consider benefits and risks associated with menhaden fishing to respond to the inquiry question:



This is a [menhaden](#). They can grow to 14-18” in size.

Image Source: [Wikimedia Commons](#)

Should the menhaden fishing industry be more strictly regulated?

2. Information Sources

Choose several of the information sources linked here to complete the Student Activity on Slide 3.

- [Overview of Menhaden](#) text
- [Menhaden Fish Facts](#) text
- [Menhaden Facts](#) text
- [Menhaden Madness: Chesapeake Bay Suffers](#) text/video
- [Tiny Fish, Mighty Purpose](#) text/infographic
- [Omega-3/Fish Oil](#) text/infographics
- [Not Just Another Stinky Fish](#) text
- [US Commerce Department Takes Action](#) text



Menhaden are considered one of the most important fisheries in the Chesapeake despite not being harvested for human consumption. *Photo by Carlin Stiehl/Chesapeake Bay Program*

3. Student Activity

Use the sources on Slide 2 and this [organizer](#) to gather information about the benefits and problems associated with menhaden fishing. Consider these from the perspective of various stakeholders.

The facts you gather will help you take an informed stance about sustainability and the menhaden fishing industry.



Menhaden are caught with nets and hauled aboard Captain Boo Polly's workboat on the Chesapeake Bay, west of Barren Island in Dorchester County, Md., on June 27, 2020. [Photo](#) by Carlin Stiehl/Chesapeake Bay Program

4. Assessment Activity

Should the menhaden fishing industry be more strictly regulated?

Reflect on your new knowledge to decide on an informed position in response to the inquiry question:

Should the menhaden fishing industry be more strictly regulated?

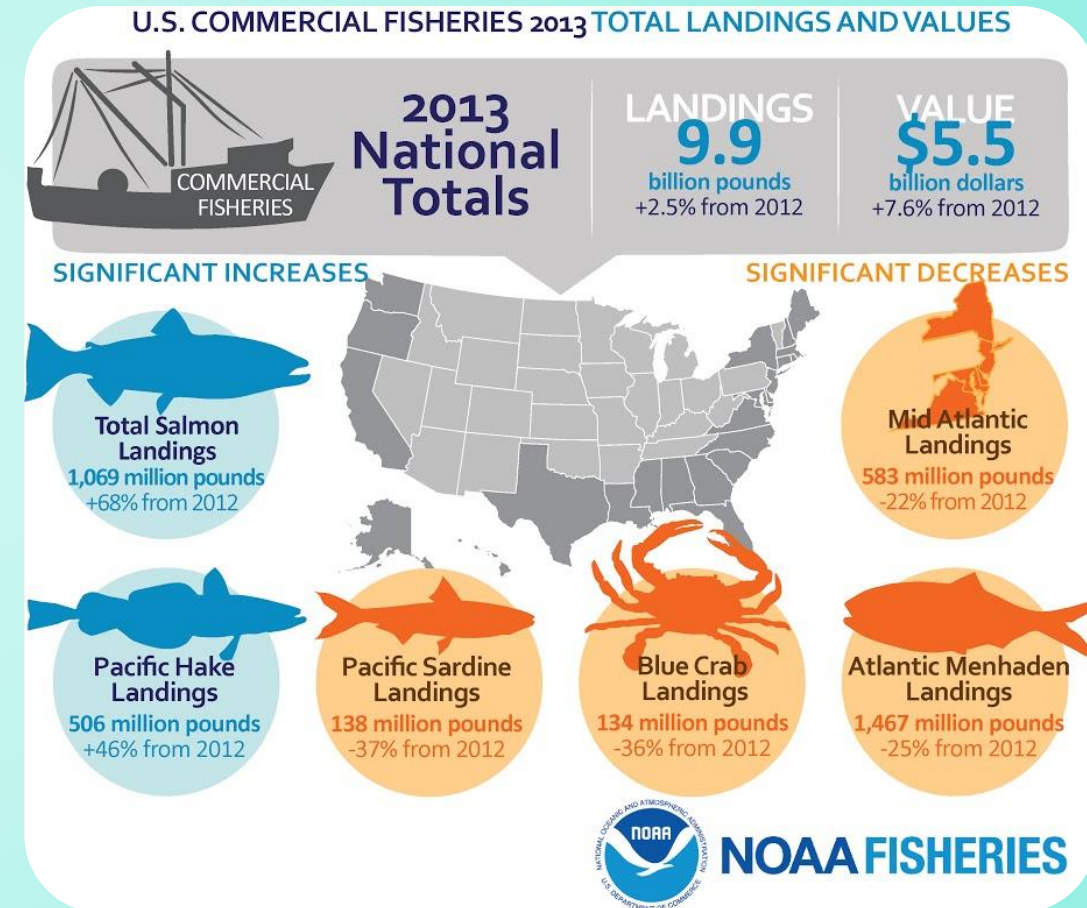
1. From the perspective of a particular stakeholder, justify your position using facts from your research.
2. Your response must address sustainability and the effects of menhaden fishing on the environment.

Your position statement may take one of the following forms:

- Written response
- Audio/Video recording using Wixie or Voice Thread found in the [Apps Portal](#) or another tool suggested by your teacher.

You may want to use [this organizer](#) to help you plan.

You may also use the success criteria on [this rubric](#) as a guide.



Changes in seafood catches and values.

5. Enrichment Activities

SLIDE NAVIGATION

1

2

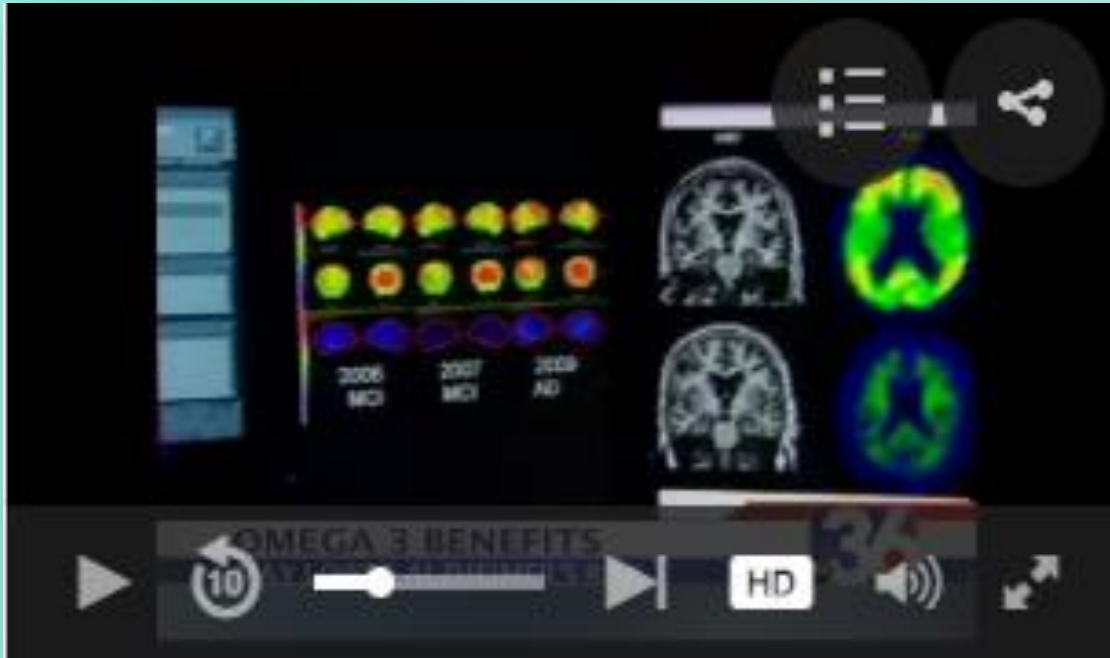
3

4

5

6

Next



Click the image to launch a video about Omega 3 benefits.

Image Source: Gale in Context, by subscription

Are there ways people can obtain healthy Omega 3's, other than fish or fish oil supplements?

Review the following sites to find out:

- [14 Best Vegan Sources of Omega 3](#)
- [Omega 3 & Omega 6 for Vegans](#)
- [8 Fish-Free Vegan Omega Fatty Acid Rich Foods](#)

Does this new information change the position you took previously on the menhaden fishing industry?

Create a Public Service Announcement (PSA) that addresses your position. Include additional information from the resources on this slide to support your new/existing position.

6. Teacher Resources

Learning Standards Alignment

NGSS Standards:

MS-ESS3-4. Construct an argument supported by evidence for how increases in human population and per-capita consumption of natural resources impact Earth's systems.

Common Core State Standards

Reading: 1. Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.

Writing: 7. Conduct short as well as more sustained research projects based on focused questions, demonstrating understanding of the subject under investigation.

AASL Standards for the 21st Century Learner

1.1.6 Read, view, and listen for information presented in any format (e.g. textual, visual, media, digital) in order to make inferences and gather meaning.

2.1.3 Use strategies to draw conclusions from information and apply knowledge to curricular areas, real-world situations, and further investigations.

P21 Framework: 21st Century Student Outcomes

3. Information, Media & Technology Skills: Information Literacy: Access information efficiently (time) and effectively (sources); Use information accurately and creatively for the issue or problem at hand.

ICT Literacy: Use technology as a tool to research, organize, evaluate and communicate information.

Grade 8 Science - Unit: Overstepping Our Resources

Objective: By the end of this lesson students will be able to analyze the environmental costs of the Omega-3 fish oil industry in order to develop a plan for more sustainable practices that minimize negative impacts on Chesapeake Bay natural resources.

Time Frame: One to two 45-minute sessions

Differentiation strategies for this lesson:

- Have students use learning supports provided in BCPS Digital Content found in the [Apps Portal](#). Refer to [Digital Content Snapshot/Support pages](#) as needed.

Notes to the teacher:

- Collaborate with your school library media specialist to plan and implement this lesson.
- Some videos in this lesson may not be closed-captioned; however, other text-based resources are provided.
- Assist students in differentiating between objective and subjective information when reviewing resources.
- Provide students with login information as needed to authenticate BCPS Digital Content. Login information is available on the **BCPS Digital Content** page found via the [Apps Portal](#)