

• LESSON PLAN •

# North Atlantic Right Whale Conservation and Vessel Strike Protections

**Grade Level:** 10<sup>th</sup>–12<sup>th</sup> Grade

**Subject:** Environmental Science/Biology

**Duration:** 110 minutes



## OBJECTIVE

- Students will learn about North Atlantic right whale (NARW) conservation efforts along the East Coast of the United States, focusing on protections from vessel strikes, one of their leading threats.
- Students will understand the relationship between human activity and wildlife conservation.
- Students will evaluate the effectiveness of policy measures in wildlife protection and discuss broader implications for conservation efforts.

## STANDARDS MET

This lesson plan integrates interactive exploration with critical thinking and creativity, helping students understand the significance of wildlife conservation efforts like seasonal speed zones.

### SCIENCE-NGSS

**HS-LS2-7.** • Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.

**HS-LS4-6.** • Create or revise a simulation to test a solution to mitigate adverse impacts of human activity on biodiversity.

**HS-LS4-5.** • Evaluate the evidence supporting claims that changes in environmental conditions may result in: (1) increases in the number of individuals of some species, (2) the emergence of new species over time, and (3) the extinction of other species.

### ELA/LITERACY -COMMON CORE

**RST.11-12.7** • Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.

**WHST.9-12.7** • 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.

## MATERIALS

- Computers or tablets with internet access
- Projector and screen for class discussions
- Paper and pen/pencil for notetaking

## LESSON PLAN

### 1. INTRODUCTION TO NORTH ATLANTIC RIGHT WHALE CONSERVATION (15 MINUTES)

**Objective:** To provide background on NARWs and the importance of conservation.

**Instructions:**

1. Begin with a brief discussion on what students know about NARWs and their habitats.
  2. Show a short video clip (such as [videos.fisheries.noaa.gov/detail/videos/whales/video/6118402940001/species-in-the-spotlight-north-atlantic-right-whale](https://videos.fisheries.noaa.gov/detail/videos/whales/video/6118402940001/species-in-the-spotlight-north-atlantic-right-whale)), or present information about NARWs, emphasizing their status as an endangered species and the threats they face from human activities.
  3. Introduce the concept of vessel strikes as a leading threat to NARWs and how protective measures (such as slowing down vessels) for NARWs in US waters can reduce this threat.
  4. Introduce the current policy of the “vessel speed rule” and its role in protecting NARWs from vessel strikes. Information can be found at: [fisheries.noaa.gov/national/endangered-species-conservation/reducing-vessel-strikes-north-atlantic-right-whales#current-vessel-speed-restrictions](https://fisheries.noaa.gov/national/endangered-species-conservation/reducing-vessel-strikes-north-atlantic-right-whales#current-vessel-speed-restrictions)
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### 2. EXPLORATION OF THE WHALE MAP (30 MINUTES)

**Objective:** To explore the vessel speed rule’s seasonal management areas and understand their significance in NARW conservation.

**Instructions:**

1. Direct students to [whalemap.org](http://whalemap.org) and have them explore the content individually or in pairs. To demonstrate how to navigate the map, as well as improve visibility of the details, teachers may wish to also display the site on their Smart Boards.  
  
**For initial viewing and introduction to the map, the following is suggested:** Once at the website, click on “Interactive Map.” On the data tab, users can choose the dates they wish to display. Farther down on the left, uncheck the box marked “Effort.” On the layers tab, check the boxes for shipping lanes, legends, and seasonal management areas under “US Management Areas.” This will provide an uncluttered visual of the seasonal management areas and the whale sightings. From here, students may then modify dates and toggle the map layers as they choose.
  2. Encourage students to focus on the following aspects:
    - The purpose and function of seasonal management areas
    - The geographic areas where and times of year when these zones are implemented (Note: the active dates can be viewed by clicking anywhere in the shaded area)
    - The reasons why these zones are necessary during specific times of the year
    - The locations of the sighted whales compared to the seasonal management areas
  3. As they explore, students should take notes on the key points and be prepared to discuss how these zones contribute to NARW conservation.
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### 3. GROUP DISCUSSION AND ANALYSIS (25 MINUTES)

**Objective:** To reflect on and analyze the information from [whalemap.org](https://whalemap.org).

**Instructions:**

1. Facilitate a class discussion where students share what they learned
  2. Guide the discussion with questions such as:
    - Why are NARWs particularly vulnerable to boat strikes?
    - How do seasonal management areas help reduce these risks?
    - What challenges might exist in enforcing these zones?
    - How might changes in environmental conditions (such as water temperature) affect NARWs and the effectiveness of these zones?
  3. Discuss how the rule currently falls short, and brainstorm ideas for how to better protect NARWs from vessel strikes.
  4. Discuss the broader implications of wildlife conservation policies and how similar measures might be applied to other endangered species such as sea turtles or manatees.
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### 4. ACTIVITY: DESIGNING A CONSERVATION CAMPAIGN (30 MINUTES)

**Objective:** To apply knowledge creatively by designing a campaign to raise awareness about NARW conservation.

**Instructions:**

1. Divide students into small groups and assign them the task of creating a mock conservation campaign.
  2. Each group should design a poster or digital campaign that highlights the importance of following seasonal speed zones to protect NARWs.
  3. Campaigns should include key facts, visual elements (such as maps and/or infographics), and a clear call to action.
  4. If time permits, have each group present their campaign to the class.
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### 5. CONCLUSION AND HOMEWORK (10 MINUTES)

**Objective:** To consolidate learning and extend the lesson beyond the classroom.

**Instructions:**

1. Summarize the key points discussed during the lesson, emphasizing the role of speed limits in marine conservation.
  2. Assign a short essay or reflection in which students explore the question: "What can individuals do to contribute to the conservation of vulnerable marine species?"
  3. Encourage students to include ideas from the class discussion and their own research.
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### ASSESSMENT:

- Participation in class discussions.
- Quality of notes taken during the exploration of the Whale Map.
- Creativity and effectiveness of the conservation campaign.
- Reflection or essay assessing students' understanding of the topic.