



Washington
Department of
**FISH and
WILDLIFE**

Aquatic Invasive Species

6-8th Grade

Themes: Invasive Species, Community Science

Location:

The PowerPoints and activity sheets can be done in the classroom. Please see Washington Invasive Species Council lessons for more indoor/outdoor modifications. **Remote learning modification:** Lessons can be taught over Zoom and projects can be done in students' yards or nearby greenspaces with an adult.

Standards:

See Washington Invasive Species Council Lesson Plans for Next Generation and Common Core standards.

Modifications, Adaptations:

For COVID-19 distance learning, or other remote learning modification, look for **remote learning modifications** throughout the lesson plan.

Materials:

Washington Invasive Species Council curriculum: [Lesson 1](#) and [Lesson 3](#), WDFW Aquatic Invasive Species PowerPoint, [Washington's Crabby New Resident blog](#), [NOAA Invasive mussels sheet](#).

Objectives:

See Washington Invasive Species Council lesson plans for other objective information.

Students will...

1. Identify a European green crab by recognizing their five spines.
2. Research the impacts of zebra and quagga mussels on Lake Michigan and predict what could happen if these invasive species establish populations in Washington.
3. Explain why aquatic invasive species are a threat to Washington's ecosystems, cultures, and economies.

Vocabulary:

Adaptation: A physical or behavioral trait an organism has to be well suited to its habitat.

Biodiversity: The full range of life in all its forms. This includes the habitats in which life occurs, the ways that species and habitats interact with each other, and the physical environment and the processes necessary for those interactions.

Ecology: The study of the relationships between living organisms and their physical environment.
Ecosystem services: Benefits people obtain from ecosystems, plants, and wildlife.

Invasive Species: An organism that causes ecological or economic harm in a new environment where it is not native.

Vocabulary (continued):

Population: The number of organisms of the same species that live and reproduce in a particular geographic area at the same time.

Watershed: An area of land from which water drains into a river, lake, or underground water.

Procedure:

Part one

This lesson modifies and builds on Washington Invasive Species Council's middle school curriculum. We encourage you to [check out the rest of the curriculum](#).

Open lesson one, "[What Is an Invasive Species](#)" from the Washington Invasive Species Council (WISC). In step three, "**Select invasive species to work on**", choose zebra mussels, quagga mussels, and European green crab. Under "**procedure: class one**", set up different sections in your classroom or virtual classroom (we suggest using [Google Jamboard](#)) on zebra/ quagga mussels and European green crab. Additional resources you are available in [this Google Doc](#). If you want to set up more areas or species for the students to explore, please choose an aquatic invasive species from [this list](#). Follow the procedure for class one on the lesson plan. As a class, popcorn read, "[Washington's Crabby New Resident](#)". After reading the article as a class, ask students to pair with a partner and have them write:

- 1) One thing they learned.
 - 2) What surprised them most about the article.
 - 3) What emotions they felt while reading the article.
- Give students three to five minutes to discuss and then share some answers as a class.

Next, follow **class two** instructions on the "[What Is an Invasive Species](#)" lesson plan. After going through the introductory PowerPoint, open the WDFW Aquatic Invasive Species PowerPoint and ask students what they remember from their aquatic invasive species exploration. Present the WDFW PowerPoint, make sure presenter notes are turned on for more information and activity prompts. After the PowerPoint is finished (if there is extra class time) distribute the [NOAA zebra/quagga mussel sheet](#) and supplemental question sheet. Give students class time to work on this reading comprehension and research activity with a partner or ask them to complete the assignment as overnight homework. Share out answers as a class.

In your next class, you can continue with the review section of the "What Is an Invasive Species" lesson plan. Play the Loteria game and finish the lesson as instructed.



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Part two:

In this part of the lesson, students will use the information they learned about invasive species to learn how to detect them.

Lesson 3: Be a First Detector Follow instructions as directed and modify as needed.



Idea: Show off your students' work! Share student projects from this lesson with WDFW.

Facebook: @WashingtonFishWildlife

Instagram: @TheWDFW

Twitter: @WDFW

#WildWashington #WildWa

Did you teach this lesson? [Give us your feedback.](#)

Additional Resources :

We encourage you to use the following resources as either a supplement to this lesson, or to share the resources with students for their project.

Supplemental activities:

- [European Green Crab Story Map](#)-Washington Sea Grant
- [Aquatic Invasive Species Menace to the West Lessons](#)-Oregon Sea Grant
- [Invasive Species Activities for Pre K-8](#)-Project Learning Tree
- [Invent Your Own Device to Battle Invasive Species](#)-PBS

Other resources:

- [European Green Crab Species of concern](#)- WDFW
- [European Green Crab Species Profile](#)-WDFW
- [Zebra and Quagga Mussels](#)-WDFW
- [Preventing the Spread of Invasive Species](#)-WDFW
- [Hey Washington, Feeling Crabby?](#)- USFWS
- [How Invasive Species Threaten Salmon](#) Story Map- Washington State Recreation and Conservation Office
- [Silent Invaders: Zebra and Quagga Mussels](#) (video)- Wildlife Forever
- [Washington Aquatic Invasive Species Boat Inspection Sites- Story Map](#)
- [Stop Aquatic Hitchhikers](#)