

**Teacher:** Lauren Schafer

**Subject Area:** Science

**Grade Level:** 7

**Unit Title:** Ecology

**Lesson Title:** Invasive Species: How did they get here and how do we get them to leave?

**Objectives:**

- Students will be able to describe invasive species and explain their impact on the environment.
- Students will be able to complete research on their specific invasive species using the Internet.
- Students will be able to work collaboratively in a group to create a Public Service Announcement from their research using PowToon.
- Students will be able to write a paragraph using claim, evidence, and reasoning to explain what they think should be done about a particular invasive species to minimize their impact.

**Standard:**

[MS-LS2-2 Ecosystems: Interactions, Energy, and Dynamics](#)

Construct an explanation that predicts patterns of interactions among organisms across multiple ecosystems.

**Materials/Resources Needed:**

- Google Chromebooks
- Internet access
- [YouTube](#)
- [PowToon](#)
- [ARKive.org](#)
- Google Classroom
- Google Docs-[Invasive Species list](#), [PSA Planning Doc](#), [MYP Rubric for PSA](#), [MYP Rubric for paragraph](#)

**Objective/Purpose:** Students will be able to explain how invasive species can impact the environment and why it is important that we develop plans to attempt to minimize their impact. This concept will deepen students understanding about the balance of ecosystems and how invasive species can change organism interactions.

**Anticipatory Set (~5 min):** The lesson will begin with students watching the video titled "[Silent Invaders](#)" on YouTube that covers the impact of Zebra Mussels on fresh water, such as Lake Michigan. Students will be asked to reflect on the following questions which will be discussed as a class after viewing the video.

- 1) What is the problem?
- 2) How is it impacting the environment?
- 3) What was a suggested solution to solve the problem?

## Input:

### Skills

- Google Classroom will be used throughout the school year to give students access to resources and documents. They will also have the knowledge of how to attach any files and submit their work on Google Classroom.
- How to share Google Docs with classmates and collaborate by editing a Google Doc at the same time.
- PowToon will be utilized in lessons prior to this lesson so students have an understanding of how to use the program.
- Student created class norms for collaborating with peers will be discussed and reviewed with students prior to starting group work activity.
- Rubrics for evaluation will be shared with students prior to beginning their work so expectations are clear.

### Information

Students will browse the following resources to be introduced to invasive species. Links will be provided in Google Classroom.

- <https://www.nationalgeographic.org/encyclopedia/invasive-species/>
- <https://www.ck12.org/c/life-science/food-chain/rwa/New-To-The-Neighborhood/?collectionCreatorID=3&conceptCollectionHandle=life-science-%3A%3A-food-chain&collectionHandle=life-science>
- <https://www.nwf.org/Educational-Resources/Wildlife-Guide/Threats-to-Wildlife/Invasive-Species>

**Model:** Students will watch an example of a completed Public Service Announcement (PSA) about Zebra/Quagga Mussels before they are asked to create their own. This invasive species will be used as an example and will not be an option for student groups to pick, but will give students an idea of what is expected of their completed project. (~3 min)

### **Guided Practice:**

- After the video, the class will discuss what a Public Service Announcement (PSA) is and what they think the purpose behind someone creating a PSA may be. The class will then discuss what they noticed about the PSA and develop a list of criteria that their PSA should follow that the teacher will write on the board. (Teacher will provide guidance so that criteria is along the lines of the [rubric](#), which is how the teacher will evaluate the presentations.) This will be posted for students while they work so they know how their final product is being evaluated. (~10 min)
- Students will work in small groups (2-3 students) and choose an invasive species to research using this [list](#) on ARKive.org. (Students will be able to select a species not on the list if they are able to give reasoning for why they want to research that particular species and provide reliable resources for information). (~45 min)

Students will research their species using the provided Google Doc on Google Classroom and sharing the doc with the group members to be able to contribute and collaborate. The Google

Doc includes the following information:

- Name of invasive species
  - Image of invasive species
  - Where has this species been introduced?
  - How was it introduced?
  - Which native species does it affect and how?
  - What is the impact on the ecosystem?
  - What characteristics make this species a good invader?
  - What management or control methods are being used?
- Student groups will brainstorm and develop a plan for their PSA PowToon using this [template](#). (**~20 min**)
  - Using their research and planning, student groups will create a mock PSA using [PowToon](#) to demonstrate what they have learned about the impact of their particular species. (**~45 min**)
  - Student groups will play their PSA video to share what they have learned with the rest of the class. This will allow students to learn about the impacts of species other than the one their group researched. After they share their video, students will have the opportunity to ask questions of the presenting group. While they are watching presentations, students will be taking notes on five groups of their choice including compliments, constructive feedback, and at least two new facts that they learned from the video. (**~60 min**)

**Independent Practice:** Students will independently write a persuasive paragraph explaining what they think should be done about their researched invasive species using Claim, Evidence, and Reasoning (CLEAR). This will be assessed using the [MYP Criterion A rubric](#). (**~30 min**)

*Accommodation:* Students with writing accommodations will be provided a template to organize their paragraph including sentence starters to assist them in the writing process.

**Closure:** Students will engage in a Think-Pair-Share discussion at the conclusion of the lesson to explain what they have learned about the impact of invasive species and the environmental impacts. (**~10 min**)

**Check for Understanding:**

*Formative assessment-*Teacher will evaluate student understanding through discussions and by rotating to each group during work time to prompt students with questions and provide feedback on their work.

*Summative assessment-*Teacher will evaluate student understanding through PSA presentations as well as student individual CLEAR paragraphs. Both of these assignments will be assessed using the MYP rubric for Criterion A and Criterion D.