



# Lesson 5: Presenting- The Worst Invasive!

Students practice their persuasion and public speaking skills while advocating for their invasive species project.

## Intended Audience

Middle School

## Students Will Be Able To

- Utilize a variety of sources to conduct research
- Creatively form a solution to a problem
- Form and support a fact-based argument
- Make presentations using technology
- Rank projects based on sound arguments

## Activities

- Research
- Create presentations
- Deliver and score presentations
- Rank presentations

## Estimated Time

4-6 class periods

*Varies by allotted in-class preparation time and length of presentation*

## Standards Addressed

NGSS	Common Core
• MS-ETS1-2	• RST.6-8.1
• MS-ESS3-3	• WHST.6-8.1
• MS-LS2-2	• WHST.6-8.2
• MS-LS2-4	• WHST.6-8.6
• MS-LS2-5	• WHST.6-8.8
	• WHST.6-8.9
Ed-Tech	• RI.6.7
• 1.3.2	• SL.6-8.1
• 2.2.1	• SL.6-8.3
• 2.2.2	• SL.6-8.4
• 2.3.1	• SL.6-8.5
• 2.3.2	• 6.SP.B.5

## Introduction

Projects cost money, especially managing for invasive species. In the United States alone we spend over \$137 billion each year on invasive species management. While that might seem like a lot of money, it's still not enough to address all of the invasive species problems in our country. As such, professionals need to focus their efforts and make convincing arguments for why their invasive species project should receive funding. Working in groups, students will present their plan for managing an invasive species and peers will score the plans. The highest scoring plan, if feasible, could provide the basis for a stewardship project for your class.

## Materials

- [Presentation Checklist Handout](#) (1 per group)
- [Rubric](#) or [Feedback Score Sheet](#) (1 per student)
- Optional:
  - Prize for Highest Scoring Project(s)
  - [Prompting Question Cards](#)
  - Materials on Selected Invasive Species (e.g. photos, videos, fact sheets, etc.)
  - Computers, Laptops, or Tablets
  - Materials for Physical Presentations (e.g. poster boards, writing utensils, etc.)

## Preparation

1) Read the **Teacher Notes** to familiarize yourself with invasive species. It is also ideal for students to have an understanding of what an invasive species is prior to this activity. You can use our PowerPoint presentation from **Lesson 1: What is an Invasive Species?**

TED-Ed also has two introductory videos for a brief alternative introduction or review:

“The Threat of Invasive Species”:

[https://youtu.be/spTWwqVP\\_2s](https://youtu.be/spTWwqVP_2s) (4:45)

“Attack of the Killer Algae”:

<https://yoVd4rgN6MYtg> (3:23)

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2) If you plan on using EDDMapS or ArcGIS Online, ensure that you have the necessary accounts. See the **Resources** section for guides on how to set up those accounts.

3) Gather the necessary materials. What you need will depend upon which presentation style your students and you choose. The resources and materials from **Lesson 2: BioBlitz!** could be great resources for your students as they do their research.

There are two score sheet options, the **Rubric Score Sheet** and **Feedback Score Sheet**. Each sheet highlights different skills.

- The **Rubric Score Sheet** is more quantitative in nature. Students will need to allot points based on different criteria and total the points for a final score.
- The **Feedback Score Sheet** is more qualitative in nature. Students will still provide a numerical score, but they choose a number between 0 and 10 for the whole presentation. In addition to the numerical score, they provide constructive feedback, specifically two things the group did well and one way they could improve. For example:
  - *I like how you each took turns talking.*
  - *I like how many details you gave about your invasive species.*
  - *I wish you had used a different colored font, because it was really hard to read neon yellow letters against the green background.*

While this lesson is broken into three class periods, you could expedite the process by assigning the research and presentation construction as take-home portions. Each member of the group, for example, could be responsible for answering one or two of the research questions and the students could have 10-15 minutes during class to discuss what they found out with their group.

## Procedure

### Class 1

#### Introduction (5 minutes)

Define or re-define **invasive species** with the class. If you have completed previous lessons, you can have students mention key points they remember. Tell your students that they will be working in groups to select an invasive species they think is a threat to their community. They must create a presentation that highlights why this invasive species is a threat and how they propose to combat this problem. They will present to their classmates, who will score their presentation. The highest-scoring presentation wins and may even be acted upon by the class if the resources are available.

If you completed **Lesson 3: Be a First Detector** and/or **Lesson 4: Map the Invasion**, the species you found are great candidates for these presentations. However, groups may select an invasive species that is not currently in Washington, but still poses a threat. Remember, prevention and early detection are excellent, and relatively low-cost invasive species management options.

#### Research (30-40 minutes)

Break students into small groups (3-4 students). Assign each group a number; you will use these later during scoring.



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Give each group a **Presentation Checklist** handout to help guide their research. Allow 5-10 minutes for selecting a focal species. If multiple groups want to focus on the same species, that is fine; they may come up with alternative management ideas. Even if multiple groups have the same species and management tactic, they can still distinguish themselves through their presentation skills. This is good experience for students, showing that powerful rhetoric can make you stand out. If students are having trouble choosing a species, you can direct them to the list for your region (included with **Lesson 2: BioBlitz!**) or the Washington Invasive Species Council's priority invasive species list: <https://invasivespecies.wa.gov/documents/priorities/Top50InvasiveSpecies.pdf>.

Allow groups to research their species, answering the questions on their **Presentation Checklist**. If you have materials on the invasive species (fact sheets, photos, brochures, etc.), you can pass these out to the groups. They may ask you clarifying questions, but they should not ask you how to manage the invasive species, that is for them to decide. They can propose a standard method or come up with their own solution, as long as they can support their idea with a sound, fact-based argument.

## **Class 2-3**

### **Build presentations (45 minutes)**

Here are a few options:

- **Spoken presentation:** groups stand in front of their peers and state their argument sans visual materials. While less visually compelling, this presentation style can be quicker to prepare. This style also requires the students to be stronger presenters as they, and not pictures, need to convey their ideas and arguments clearly and convincingly.
- **Poster presentation:** groups create a poster

to illustrate their argument. Have half of the groups set up their posters. The remaining groups visit the posters that are set up. After all the students have visited the posters, have the groups switch. This is a very common presentation style for researchers at conferences.

- **Digital presentation:** groups use a computer program (e.g.-PowerPoint or Prezi) to create a presentation to support their argument.

ArcGIS Online (AGOL) has its own presentation template called story maps. They are a beautiful visual tool and they are easy to use. If your class completed the optional ArcGIS portions of **Lesson 4: Map the Invasion**, students can even directly upload their maps into their story map presentation (see **Resources** page for links to tutorials and examples).

Be sure to tell groups how long you are giving them for their presentations so that they can plan accordingly.

## **Class 4-6**

### **Present and Score (45 minutes)**

Break the presentation time equally amongst the groups. On average, each group will likely receive up to 10 minutes for presenting and answering questions.

Pass out a Rubric Score Sheet or Feedback Score Sheet to each student.

After a group presents, their classmates will have the opportunity to ask a question and/or provide constructive feedback. Assigning extra participation points to students who ask quality questions is a great way to incentivize total participation. The emphasis is on thought provoking, open-ended questions such as, "How do you think removing that invasive plant may impact the other plants in the area?" or, "Once you've removed the invasive species, how do you

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plan on keeping more from getting introduced?" Not, "What is the name of your species again?" A few question prompt cards are provided with this lesson if students need help.

## Score and Rank Presentations (5 minutes)

Have each student add up the scores on their sheet. Then, in their groups, have them average their scores. Have one group member go up to the board and record the average scores from their group. You can draw a table on the board while the students do their calculations so students clearly know where to write the average from their group.

As a class, average the total presentation score for each group and rank the projects. The highest scoring project wins and may be the basis for a stewardship project for your class. You may choose to award the winning group with a prize.

