



Community Efforts to Curb the Spread of Invasives

Organization:

Title: Community Efforts to Curb the Spread of Invasives

Summary: Students learn about how Haudenosaunee community members in Akwesasne are utilizing a variety of strategies, including planting trees, to manage the impact of the emerald ash borer on black ash tree stands. After learning about the value of planting native tree species students practice saving and planting native tree seeds.

Inquiry Question: Inquiry Question 4. What can be done to protect these plant species?

Duration: 1-2 Class Periods

Learning Environment: Classroom, outdoor

Season: Fall

Materials:

- Video focused on impact of emerald ash borer:
<https://americanindian.si.edu/environment/akwesasne/Challenge.cshtml>
- Spread of Emerald Ash Borer.pdf
- Video on community response to emerald ash borer:
<https://americanindian.si.edu/environment/akwesasne/Strategies.cshtml>
- Seed Saving and Tree Planting.pdf

Curriculum Links:

Grade 7 Science and Technology: A1.1, A1.4, A3.1, A3.2, A3.3, B1.1, B1.2, B1.3, B2.1, B2.8

Grade 9 Science: A1.1, A1.5, A2.2, A2.3, A2.4, A2.5, B1.3, B2.4, B2.5

Grade 9 Academic Geography: B1.4

Meta Data:

Content Type: Activity, community action project

Bundle: Tools

Theme: Invasive Species

Subject Area: Biology, Environmental Education, Geography, Outdoor Education, Science

Curriculum Focus: 7, 9

- Haudenosaunee Knowledge Keeper Abraham Francis from Akwesasne shared with QUILLS many strategies community members are engaged in, to combat the emerald ash borer. These approaches are contained within a larger initiative to protect Ash trees and the traditional (and contemporary) practice of basket weaving.



- Students read the following CBC article:
<https://www.cbc.ca/news/indigenous/emerald-ash-borer-threat-first-nations-basket-making-1.4779536>
made available in handout titled **Spread of Emerald Ash Borer Article.pdf** to learn more about this issue.
- As an example of what Indigenous communities are doing in response to the emergence of the Emerald Ash Borer students watch the following video:
<https://americanindian.si.edu/environment/akwesasne/Strategies.cshtml>
- Video highlights primary strategies including:
 - By encouraging people not to move firewood, the Akwesasne Task Force on the Environment is working to prevent the spread of wood infested by the emerald ash borer.
 - Removing some healthy black ash trees makes it more difficult for the emerald ash borer to travel from tree to tree. (It also helps make sure the trees have enough sunlight.)
 - TreeAzin is a mild chemical (similar to dish detergent) that is injected into black ash trees, making them taste bad to emerald ash borers in hopes they will leave the trees alone.
 - Over the past twenty years, the Akwesasne Task force on the Environment has collected thousands of black ash seeds that are used to grow saplings and are stored for replanting in the future.
 - With so many black ash trees dying due to emerald ash borer infestations in other parts of Turtle Island, planting new trees in Akwesasne is crucial to ensuring their preservation.
- Like what is being done in Akwesasne, students collect black ash seeds (or seeds from other native trees) and plant them.
- Information regarding how to do this is available in worksheet titled **Seed Saving and Tree Planting.pdf** for teachers.
- Teacher discusses with students the potential negative implications of simply cutting down infected Ash trees and replacing them with non-native tree species. Students discuss the importance of planting a native tree in their place (to ensure that invasive species aren't further propagating.)

Please note that the learning represented in these activities reflects Big Idea C. in the Indigenous Knowledge Learning Bundle: "Reciprocity, Interdependence, and Holism are at the Heart of Indigenous Ways of Knowing and Being". To help your students learn more about these foundational concepts check out the Learning Activities titled: *Holism*, *The Honorable Harvest*, and *Our Responsibilities* found in the *Indigenous Ways of Knowing and Being with the Natural World* Learning Bundle (Grades 7-10).