

Am I Eating an Alien?!

An investigation into the origin of the plants we depend on



Activity

Students use a checklist to learn more about the origins of the plants they depend on for food, clothing, and medicine.

Grade level: 4-5

Subjects: Geography, Science, Social Studies

Setting: Classroom

Duration: 1-2 class periods

Key Terms: alien, introduced, native, naturalized, non-native

Objectives

- Students will determine that not all non-native species are invasive in Oregon and Washington.
- Students will learn to identify many of the non-native plant species we use each day.
- Students will gain an appreciation for where our food comes and how people move plants (as well as other non-native species) around the globe.

Materials

- *Am I eating an alien* activity sheet
- Computers with internet access
- Laminated world map (supplied)
- Post-it notes

Background

Throughout history people have traveled the world, often carrying the plant and animal species they relied on for food, clothing, shelter and medicine. In North America, many non-native plants were brought over from other continents by European settlers for agriculture, hunting, fishing, medicinal and ornamental purposes. Today, with increased travel and international trade, it has become even easier for plants and animals to be transported from one place to the next. Fortunately the majority of these non-native plant and animal species never become a problem in their new environment. Out of all non-native species that are released into new ecosystems, only 10% will survive and only 1% will ever become invasive and harmful to native habitats.

Interestingly, many of the plants and animals we depend on as a society are in fact non-native species. Livestock such as cattle, sheep, pigs and chickens are all non-native as are most of the

plants and fruit we grow in our gardens or buy in grocery stores. It might be surprising to learn that 98% of food produced in United States comes from non-native Species! The goal of this lesson is to demonstrate that not all non-native species are harmful, and that many of the plants we depend on for food have foreign origins.

Preparation

- Make a copy of the *Am I eating an alien* activity sheet for each student.
- Assemble a few examples of the food, clothing and medicines listed in the World Plant Table (below) (e.g., Chocolate candy bar, oatmeal, cotton t-shirt, linen table napkin, can of corn, empty aspirin bottle, raisins and wheat crackers).

Directions

- As a group, examine a few real life examples of the common foods, clothing and medicines from the World Plant Table. Ask students what plants these foods, fibers or medicines come from. While some are obvious, others such as the chocolate, linen and aspirin are not. Discuss where these plants may have originated from and whether they are native plants to Oregon or Washington.
- Hand out the *Am I eating an alien* activity sheet. Have students check off how often they think they use the items on the list. Then have them guess if the plants are native to Oregon/Washington or North America, or to some other region in the world.
- After students have completed the activity sheet, assign each student a plant to research on the internet or in the school library. Students must discover which continent or country their plant is native to.
- Students present their findings to the class and affix a post-it note with the name of his or her plant to the plant's place of origin on the world map. All students correct their activity sheets as they learn the origin of each plant from their classmates.

Evaluation

After students have shared their findings, discuss the following questions as a class:

- Did the students find any of the results surprising?
- Did any of the plants the students use on a daily basis originate from places outside of Oregon/Washington or North America?
- Did the students find anything interesting about the plants native to North America?

Extensions

- In addition to finding place of origin, students can present short histories of their plants' movements around the globe.

- Have students investigate if any plants native to North America have been introduced to other parts of the world.
- Have students research the major food crops grown in Oregon/Washington. How many of these plants are native and how many are introduced?
- Create a menu using only plants that are native to Oregon/Washington. Include native wild berries, edible leaves, shoots, seeds and roots.

Source

This activity is an adaptation of Not All Non-Natives Invade from “Weed Wackers” K-6 Educators Guide to Invasive Plants of Alaska.

Washington State Science & Environmental Science Standards:

4-5 LS1E – Nutrition is essential to health. Various kinds of foods are necessary to build and maintain body structures. Individuals have responsibility for their own health and food choices.

4-5 LS2D – Ecosystems can change slowly or rapidly. Big changes over a short period of time can have a major impact on the ecosystem and the populations of plants and animals living there.

4-5 LS2E – All plants and animals change the ecosystem where they live. If this change reduces another organism’s access to resources, that organism may move to another location or die.

ESE Standard 1 - Students develop knowledge of the interconnections and interdependency of ecological, social, and economic systems. They demonstrate understanding of how the health of these systems determines the sustainability of natural and human communities at local, regional, national, and global levels.

Am I Eating An Alien?! *World Plant Table*

Origins of common plants used to make food, clothing or medicine in the United States.

Plant	Use	Region of Origin
Almonds	Food	Asia
Apple	Food	Southeast Europe, Western Asia
Aloe Vera	Medicinal, cosmetics	North Africa
Banana	Food	Southeast Asia
Blackberry	Food	Canada, North America (Including OR/WA)
Cacao	Food (source of chocolate)	Mexico
Carrot	Food	Afghanistan, NW India
Cinnamon	Food	Sri Lanka
Corn	Food	Southern Mexico, Guatemala
Cotton	Clothing	Central America, India
Cranberry	Food	Canada, North America (Including OR/WA)
Echinacea	Medicine	Canada, North America
Ephedra	Medicine (nasal decongestants)	Asia
Flax	Clothing (source of linen)	Eastern Mediterranean, India
Grapes	Food	Canada, Europe, North America
Hazelnut	Food	Canada, Europe, North America (Including OR/WA)
Huckleberry	Food	Canada, North America (Including OR/WA)
Lettuce	Food	Iran, Turkey, Turkistan
Macadamia nut	Food	Africa, Australia
Oats	Food	Eastern Mediterranean, Eurasia
Onion	Food	Afghanistan, N. & Central China, NW India
Peanut	Food	Brazil
Pecan	Food	North America
Potato	Food	Bolivia, Chile, Ecuador, Peru
Pumpkin	Food	Bolivia, Ecuador, Peru
Raspberry	Food	Canada, North America (Including OR/WA)
Rice	Food	India, Southeast Asia
Strawberry	Food	Canada, North America (Including OR/WA)
Tomato	Food	Bolivia, Ecuador, Peru
Vanilla	Food	Mexico
Walnut	Food	Asia, Canada, North America (Including OR/WA)
Watermelon	Food	Africa, Asia
Wheat	Food	Eastern Mediterranean, Eurasia
Wild rice	Food	Canada, North America
Willow	Medicine (source of aspirin)	Canada, North America (Including OR/WA)

Am I Eating An Alien?! *Activity Sheet*

Name _____

How much do you know about the plants you depend on?				
Plant Name	How often do you use this plant?		Where is this plant originally from?	
	Often or Sometimes	Rarely or Never	North America, Oregon/Washington	Some other region
Almonds				
Apple				
Aloe Vera				
Banana				
Blackberry				
Cacao				
Carrot				
Cinnamon				
Corn				
Cotton				
Cranberry				
Echinacea				
Ephedra				
Flax				
Grapes				
Hazelnut				
Huckleberry				
Lettuce				
Macadamia nut				
Oats				
Onion				
Peanut				
Pecan				
Potato				
Pumpkin				
Raspberry				
Rice				
Strawberry				
Tomato				
Vanilla				
Walnut				
Watermelon				
Wheat				
Wild rice				
Willow				