



Teacher Resource Sheets

Activity Time:

30 minutes

Setting:

Open space outdoors, gym or cleared area in classroom

Materials:

Set of native and invasive plant cards (see Activity Black Lines)

Grade Level:

K - Grade 3

Subject Areas:

Science, Dramatic Arts, Language Arts, Physical Education

Skills:

Identification, communication, comparison

Group Size:

class

Vocabulary:

native, non-native, invasive, adaptations

We're Being Invaded!

Objectives

Students will be able to:

1. Recognize that some non-native plants can invade and push out native plants.
2. Identify at least one invasive plant in their region.

Background

A native species is one that naturally occurs in an area. A native plant, for example, is a plant that has lived and evolved in a certain place for a long time (i.e. thousands of years) and is part of the natural ecosystem. Native species have co-evolved with other competing species, predators, diseases, climate factors and other aspects of a region and an ecosystem. Native species are part of a natural balance and a natural system and provide important food and shelter for wildlife.

Non-native plants have been introduced by humans into ecosystems where they don't belong. Some non-native plants do not become particularly harmful to the native species, while others can become invasive and have great impacts on the ecosystem.

Invasive species are one of the biggest threats to native ecosystems throughout the world. The Secretariat of the Convention on Biological Diversity (UN Environment Programme) states that invasive species are recognized as "one of the

greatest biological threats to the environment and economic welfare of the planet. The threat to biodiversity due to invasive alien species is considered second only to that of habitat loss".

Non-native, invasive species are able to out-compete native species for their basic needs such as food, shelter and space. Invasive plants have special adaptations which allow them to spread rapidly. English Ivy (*Hedera helix*) is a good example of an aggressive species that out-competes native species by suppressing other plants and creating a monoculture on the ground as well as climbing trees, eventually leading to the death of the trees.

Material Preparation

Option 1: Prepare one set of supplied cards for native plants and one set of invasive plants with strings or clips for students to wear. See Resources below for information on invasive plants.

Option 2: paste the invasive species card on the back of each native plant card.

Mark the different cards e.g. draw a green border around the native plant cards and a red border around the invasive cards.

Consider doing the **What's Native?** activity before introducing invasive species in this activity. If you do the **What's Native?** activity you can also create a poster or collage of invasive plants.



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The Activity

1. Introduce this activity with a short discussion. What are native plants? (see Background). What do you think plants need to survive? (soil, water, sun...)
2. Provide boundaries in an outdoor setting or create space indoors for the group to spread out so that most students are still able to touch if they spread out their arms or legs (it is good to have a few farther away from the group). Hand out the native plant cards and explain that most of them are native plants in a forest that has been around for a long time. Point out that some students (i.e. one to three, depending on your group size) are non-native plants that do not belong in this forest.
3. All the native plants stay in one spot and let their roots go deep into the ground. Throughout the activity they move their arms and bodies and blow in the wind to spread their seeds. You may want to lead them through a visualization having them spread their roots into the ground and transform into a plant.

4. The invasive plants are going to shoot their seeds, like the invader plant Scotch Broom. To do this they can move one arm and one leg and stretch it out. If a native plant gets touched when this happens they turn into an invasive plant (getting a new tag or flipping their tag over if it is on the back). Students transformed into invasive plants can now stretch out one arm and leg.
5. Eventually most, if not all the students, will be transformed into the invasive plants. Stop the game when there are a few native plants remaining. Ask all the invasive species to sit down and the remaining native plants to remain standing. How many native plants did you start with? How many are left? Ask the students what happened. (The invasive plants took over)
6. Debrief: what is an invasive plant and what does it do to the plants that belong here? Look at what species used to be in their "forest" (the original plant cards) and talk about what might depend on them for food and shelter (birds, mammals, insects). What will happen to the wildlife that need those

plants? (This discussion will be especially effective if the students have played the Web of Life game.) Talk about some examples of non-native invasive plants and animals that they might know of in their area. You can also share some stories about the effects of these plants and animals.

Note: This activity can be played as an active game of tag if you use native and non-native animal species or if your students are old enough to make the conceptual leap of plants "running around".

Resources

BC Ministry of Agriculture and Lands, Invasive Species Alert Page: <http://www.agf.gov.bc.ca/crop-prot/invasiveplant.htm>

Invasive Plant Council of BC <http://www.invasiveplantcouncilbc.ca/>

