

Spotted Knapweed Activities

Spoons: Seeds and their Travels
Play Audio Track #12
(15 minutes)

Levels
Grades 3-6

Subjects
Science, Geography, Sociology

Skills
Locating, Predicting, Planning, Discussing

Concepts
Structure and functions of living things;
interactions among technology, science and society

Objectives
Students will learn reasons why seeds are introduced from a global perspective.
Students will understand societal uses of plants for medicinal purposes, horticulture, and industry.
Students will learn many ways that seeds get to the United States from unintentional sources.

Materials (20 student class-size)
What's in Your World? CD audio track #12
(inside the back cover) - 1 per class
brown rice and grass seed - 1 bag each for the class
package of labeled wild-flower seeds - 1 bag
white paper - 1 per student
tweezer - 1 per student

Time Considerations
Preparation - 10 minutes
Activity - 15 minutes

Lesson Overview
• Seeds and their Travels (15 minutes)

Background
Plants are introduced for a variety of reasons--their beauty, their chemistry, and their produce. Dyer's woad was introduced for its blue dye, St. Johnswort for its medicinal properties, leafy spurge for its forage value, and toadflax for its beautiful "butter-and-egg" flowers. Sometimes plants arrive in the United States unintentionally--in the bottoms of boats in the dirt balast that keeps the boat stable in the water. Sometimes crop seeds are contaminated such as alfalfa seeds contaminated with spotted knapweed. Researchers can pinpoint the first reported infestation in Oregon in a farmer's alfalfa field planted with contaminated seed from Europe. Sometimes plant seeds hitchhike on clothing, luggage, undercarriages, and on pets.

What plant seeds might be hiding in your sox?

SEEDS AND THEIR TRAVELS LESSON DETAILS

STEP ONE. Pre-mix some of the brown rice into the bag of grass seed. Give each student a white sheet of paper, a tweezer, and a handful of the rice/seed mix piled on the sheet of paper. Tell the students to imagine that the brown rice represents weed seeds and the rice/grass mixture represents a bag of livestock feed you purchased overseas and brought to the United States.

If your county weed coordinator has access to Timothy and Tall Buttercup weed seeds, you can expand this project to illustrate how difficult it is to see that weed seed has contaminated the Timothy seed. Both seeds look very close to the same.

STEP TWO. Tell the students to use the tweezer and separate the brown rice (weed seeds) from the grass seed mix. This will take the some time. Ask them to discuss among themselves how difficult it is to remove weed seeds once a seed mix is contaminated. Ask them to consider things they might do to prevent the seed mix contamination.

STEP THREE. Ask the students-- *Where do weed seeds come from? How do seeds from weeds get into flower and grass seed mixes? Are there weeds in flower seed packets?* Tell one student to pick up the wild-flower seed packet and read the names of the plants listed as included in the mix. Before the student reads the names ask all of the students to vote if each plant represented by the seed name is a noxious weed listed in their state or county. (purple lithrum, toadflax "butter and eggs", sulfur sinquefoil, Oxeye daisy and more)

STEP FOUR. Ask the students to think of all the ways seeds get to their community and what they might do to prevent noxious weed seeds from contaminating the seed mixes. Tell each student to describe one thing they would do to prevent noxious weed seed contamination.