

Leafy Spurge Activities

Chow Down. Mapping Investigation.
Play Audio Track #4
(30 minutes)

Levels
Grades 4-8
Subjects
Mathematics, Geography, Science
Skills
Locating, Examining, Solving, Discussing
Concepts
Interactions among technology, science and society
Objectives
Students will learn how to survey and inventory using Global Positioning System technology.
Students will learn how to collect coordinates and make maps.
Students will understand that ecosystems differ and the differences influence the development of a land management plan.

Materials (20 student class-size) <i>What's in Your World?</i> CD audio track #4 (inside the back cover) - 1 per class 1 large laminated map dry erase markers
Time Considerations Preparation - 10 minutes Activity - 30 minutes
Lesson Overview • Mapping Investigation (30 minutes)
Background Integrated Weed Management (IWM) is the use of more than one method to control noxious weeds. The most widely used methods are mechanical, chemical, biological, and cultural. Mechanical control is the physical removal of weeds by hand pulling, mowing, digging and tilling. Herbicide control is the wiping on or spray application of herbicide, typically with a backpack, hand gun, or boom spray-unit. Biological control is the use of natural enemies like insects and domestic livestock to eat noxious weeds. Goats eat weeds in many areas of crop and forest lands. Insects are distributed in the back country and remote locations hard to get to with equipment, and along waterways where herbicide use is restricted. Insects take 5 to 10 years to establish and slow weed spread. Cultural control means good land management practices: education, washing equipment, revegetation, grazing, crop rotation, and Weed Free Forage.

CHOW DOWN LESSON DETAILS

STEP ONE. Write the four categories of noxious weed management methods and two examples of each on the board: mechanical (hand-pull, mow), chemical (herbicide), biological (insects, sheep), cultural (education, crop rotation). Tell the students that every good weed management plan uses all of the appropriate methods. Not all methods are appropriate for every site. For example, many herbicide labels state that the product may not be used near surface water. Another example is the grazing of weeds by sheep in areas where they cannot be contained or protected from dogs, and moved according to plan. Tell the students that they will be developing an Integrated Weed Management plan (IWM) and ask them-- *What is the first thing you need to know before you begin making a management plan?* (which weeds are troublesome there and which methods are appropriate)

STEP TWO. Display the laminated map and draw three different size polygons representing weed infestations on it. Draw one polygon in a Wilderness area, one along a river, and one on ranchland bordering Forest (public) land.

STEP THREE. Arrange the students in four groups and tell them to choose one polygon and develop a plan, an IWM plan. Next ask the students-- *What will you do to manage these weed infestations for up to 10 years?* Using leafy spurge as an example, tell the students that mechanical does not work on leafy spurge because of its extensive root system. It spreads laterally 30 feet under ground and up to 20 feet deep. Mowing and pulling leaves small root fragments in the ground that regenerate into new sprouts. So, the first thing you need to learn is which weeds are present and what management methods work.

STEP FOUR. Ask each group to stand and tell the other students their chosen methods for which polygon. Ask the students to discuss-- *Why might you introduce insects in riparian areas?* (when herbicide application is restrictive) *When might you not introduce sheep or goats to an infestation?* (wildlife, dogs) *When can you pull weeds successfully?* (small infestations of taprooted plants)