

LESSON 36

Stop that Weed!

OBJECTIVES

Students will be able to discuss ways that invasive plants (including noxious weeds) can be controlled and describe how unwanted invasive plants compete with native plants.

METHOD

Students learn about methods of weed control while participating in games in which players represent roles in weed control scenarios.

MATERIALS

- 📎 Name tags marked with the following (1 title per tag):
 - WEED and NATIVE PLANT (9 tags of each)
 - HERBICIDE, INSECT and GRAZER (3 tags of each)
- 📎 Blindfolds (enough for all the WEEDS and NATIVE PLANTS combined)
- 📎 Whistle

BACKGROUND

When invasive plants such as those on the Montana's Noxious Weed List spread into natural areas, they can crowd out native plants, changing the structure and function of the entire ecosystem. Fighting the spread of invasive weeds often involves the use of multiple weed control tactics as part of an integrated weed management plan. Herbicides can be effective but expensive and may have harmful effects on other species. Mechanical removal of weeds by pulling, tilling, mowing, burning and grazing can help reduce their spread but usually will not eradicate the plants completely. Biological control agents, such as insects that feed on the plants, can be effective but may take time to establish and may have unintended consequences on other species. When weeds have been reduced, the chances of reinvasion can be minimized by seeding with desirable native plants that are capable of competing with the invasive species.

PROCEDURE

1. Discuss with students the possible effects of a weed invasion. Relate the topic to their experiences of what they have observed on hikes or in their own backyard or garden. Elicit students' ideas about how weeds become numerous. Ask, "What do you think happens to the other plants when weeds take over?"
2. Introduce the idea of competition (when living things need the same resources, such as sunlight, nutrients and water). Remind students of their experiences playing "musical chairs" to reinforce the concept of having too many individuals who want the same space.

Grade level: 2-6**Subject Areas:** Life science, dramatic play**Duration:** 45 minutes**Setting:** Indoors or Outdoors**Season:** Any**Conceptual Framework Topic:**

Integrated weed management, weed control, noxious weeds

3. Tell students that since we have come up with some reasons that we don't want weeds to invade and take over, it's time to think about what we can do to fight them.

Play one or both of the following games:

GAME 1

1. Start with approximately three times as many WEED and NATIVE PLANT name tags as weed control tags (HERBICIDE, INSECT, and GRAZER). Explain that INSECT tags represent insects that feed on the weeds but do not eat the native plants.
2. Lay the name tags face down and allow each student to pick one.
3. Define the boundaries of the game and help students who will be blindfolded by letting them know if they leave the game boundary you will blow the whistle to indicate a quick time out for going "out of bounds," during which you will help them return to the center of the game area, then restart the game. If one of the weed controls (not blindfolded) goes out of bounds, they will be eliminated from the current round of the game and asked to wait in the sidelines.
4. Blindfold the students with the WEED tags. These will stand near one another in the center of the game area. The other students will be dispersed within a small distance around the WEEDS. The blindfolded students try to touch, grab, or hold the other students in the group. The other students can clap and make noise to confuse the blindfolded WEEDS as well as to get attention.
5. If a WEED touches a student with a NATIVE PLANT tag, the native plant becomes a WEED and is also blindfolded. If a WEED touches any control student, the WEED is out of the game.
6. The game continues until all WEEDS are out of the game.
7. Change the number of students in each group to see how the outcome is affected.

GAME 2

1. Start with approximately three times as many WEED and NATIVE PLANT name tags as weed control (HERBICIDE, INSECT, and GRAZER) tags. Explain that INSECT tags represent insects that feed on the weeds but do not eat the native plants.
2. Lay the name tags face down and allow each student to pick one.
3. The students form a circle. Choose one student with a WEED tag to come out of the circle and run around it.
4. At a random time, blow the whistle. The WEED should immediately join the circle by touching, then replacing, another student.
5. Check the name tag of the person that was replaced by the WEED.
6. If the replaced person is a NATIVE PLANT, the WEED gets into the circle and the game continues with the native plant running around the circle until the whistle is blown.
7. If the replaced person is a control, the WEED is not allowed to enter the circle and should stand out. He or she is considered to be “weeded out.” The teacher picks out another WEED or NATIVE PLANT to run around the circle.
8. The game ends when there are no more WEEDS in the circle.
9. Try changing the number of weed control name tags to see how the outcome of the game is changed.

Wrap-up: Gather the students and discuss the activity with them. Students may also write about how weeds affect other plants and how they can be controlled.

Extensions

Students conduct research on the best ways to control one of the plants from *Montana's Noxious Weed List* and present a report to the class.