A KID'S JOURNEY to UNDERSTANDING WEEDS

ACTIVITIES FOR THE THIRD GRADE CLASSROOM

Note to Teachers

Welcome to the classroom education activity portion of the Kids' Journey to Understanding Weeds project. The project consists of a video, classroom activities, and CD ROM program for third graders. The classroom activities were developed to help teach students about the harmful effects of the ten most invasive weeds in your region while increasing students' awareness of the sensitive balance of natural resource areas. The activities were designed by teachers with the third-grade science and math curriculum in mind with a special emphasis on habitat. Each activity includes background information about the weed pictured on the back and an activity.A picture of each invasive weed is shown taking over a natural resource area. The insert is a closeup of the plant's flower.

Even if you don't have an outdoor classroom, students can still learn about the effects of invasive weeds on habitat, productive lands, and healthy waterways. If your school has not received the video, please write or fax us at: A Kid's Journey to Understanding Weeds Project, 417 E. Fremont, Laramie, WY, 82072-3143, FAX: 307-745-8733.

Most people know weeds exist, but what is needed is **weed awareness**. This means people are able to identify the weeds they see and understand their role in nature. Did you know if you pick the pretty flowers from a noxious weed plant to put in a vase at home you could be helping to spread that weed plant? Do you know **weed seeds** can stick in the tires of your car or truck and be carried to other locations? After hiking outdoors with your family and your dog, you might realize weed seeds may be stuck in your dog's fur, but have you thought about how many hundreds of seeds could be spread? Do you know weed seeds could cling to camping gear and be carried to a new location? If we think about these possibilities and others, it could be said we have weed awareness.

Like all plants in their native environment, native weeds are kept in balance by the insects, pathogens, fungi and other plants that evolved at the same time. The pictures you see on the back of the activites show a weed successfully crowding out all the vegetation native to the area. What impact does this have on the wildlife dependent upon native vegetation for their food and shelter?

Field trip: Contact your local county weed district or extension office. They will be able to help you identify an area representing biodiversity versus the monoculture represented in this picture. Have small groups of students investigate different sections of the area and record the different plants, insects and animals they find. Your local county extension agent will provide the students with the correct names.

"A Kid's Journey to Understanding Weeds"

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Meagher County Weed District, MT
Wyoming Rural Electric Association

Teachers' Glossary

ACRE: A unit of measure, considered to be a little smaller than one and a half football fields.

BIO-AGENT: An insect or animal which reduces the available nutrients to a plant by feeding on it.

BRACTS: A miniature leaf found just below the flower of a plant.

CONTROL METHODS: Ways to control weeds by one of the following methods:

- mechanical: mowing, digging or chopping;
- chemical: spraying with a chemical mixture to stop growth;
- biological: releasing a bio-agent (usually an insect) that will eat certain parts of the weed and prevent it from growing;
- prevention: not allowing weeds to become established.

HABITAT: Place where a native plant naturally lives.

HERBICIDE: A chemical compound which kills or suppresses the growth of plants.

INFESTED AREA: An area where certain weeds have grown out of control.

INHIBITOR: A chemical substance that slows down or stops a chemical reaction.

INVASIVE PLANT: A plant that takes over native plants.

NATIVE PLANT: A plant found in North America before settlers came from other countries.

NATURAL RESOURCE AREA: An area of native plants that provides food and shelter for wild and domestic animals and recreation opportunities for people. The area can have a mixture of desirable trees, shrubs and grasses.

NOXIOUS WEED: A weed specified by law as being harmful and difficult to control.

PLANT: Any member of the vegetable family, such as trees, shrubs, or grasses. Examples are oranges, peaches or the grass growing in your lawn.

RIPARIAN: The area of land immediately next to a water supply, such as a river, lake, or pond.

ROSETTE: The part of a plant which first comes out of the ground. It is a whorl of tiny leaves which are shaped like a crown.

SHRUB: A woody perennial plant smaller than a tree, usually having a permanent stem branching from or near the ground.

WEED: Any plant out of place or an unwanted plant.

WEED AWARENESS: Being able to identify weeds and understand their role in nature.

WEED CLASSIFICATION:

- An annual plant lives no more than one year;
- A biennial plant lives more than one year but not over two years;
- A perennial plant lives for more than two years.

Classroom activities created by: *Third grade teacher Diana Schmitt, Laramie, Wyoming, and fourth grade teacher Marjorie L. Patton, Lander Wyoming, and Educational Consultant Susan H. Sherman of Sherman Associates, Laramie, Wyoming*

Slides provided by: *Steve Dewey, Utah State University; Roy Reichenbach, Wyoming Weed and Pest Council; George Beck, Colorado State University; Keith Duncan, New Mexico State University; Tom Whitson, University of Wyoming; Barbra Mullin, Montana Department of Agriculture; and Jerry Asher, Bureau of Land Managemem*

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Dalmation Toadflax

BACKGROUND INFORMATION: Dalmation toadflax is a beautiful flowering plant, native to southeastern Europe. It was brought to the United States as an ornamental plant. Unfortunately, outside of a flower garden, this is an ornamental plant gone wild. This plant is a serious problem in pasture and on rangelands where it crowds out food for wildlife and livestock.

It is a perennial plant and grows up to three feet tall. Heart-shaped leaves clasp the stem. The flowers are bright yellow with spurs on the bottom. The plant has long roots, which make it hard to cut or pull. There are a half dozen insects that may, in the future, turn out to be good bio-agents for this plant. One is the root-galling weevil.

Student Activity:

Using a world map or an atlas, locate eastern Europe. Put the number from the map next to the name of the country in the list. Cross out the countries not in eastern Europe.

___Austria
___Poland
___Albania
___United States
___Slovak Republic
___Japan
___Germany
___Hungary
___Slovenia
___Yugoslavia
___Canada
___Bosnia and Hercegovina
___Australia
___Mexico
___Croatia
___Czech Republic

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ANSWER KEY: 5-Austria, 2-Poland, 11-Albania, 4-Slovak Republic, 1-Germany, 6-Hungary, 7-Slovenia, 10-Yugoslavia, 9-Bosnia & Hercegovina, 8-Croatia, 3-Czech Republic

Diffuse Knapweed

BACKGROUND INFORMATION: Diffuse Knapweed has many branches and flowers on its tall, rough stem. The flowers are usually white but can be pink or lavender. Each plant averages 1,200 seeds on each flower stalk. The weed looks ball-shaped, and when something disturbs it, it can break off and tumble for long distances, leaving behind its seeds. Diffuse Knapweed likes to grow in sunny areas and doesn't like too much moisture. It especially likes natural resource areas where it competes with native grasses. Wildlife and livestock will not eat knapweed. When knapweed takes over, the wildlife moves away.

Student Activity:

Herman is a Diffuse Knapweed plant. He is very proud of his 10 flower stalks. Herman is growing along peacefully until the day a four wheeler travels a little too close and dislodges him. Two flowers stalks are dragged off by the four wheeler and the rest of Herman is tumbled by the wind.

HINT: Use information found in the first paragraph on this page.

1. **How many seeds does the four wheeler spread?** _____

2. **Could the four wheeler carry seeds all the way home?**
   yes or no (circle one)

3. **How many seeds are spread by the wind?**

   _____ X _____ =

BONUS:
If all the seeds left behind become plants identical to Herman, how many plants could grow the next year ?

_____

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Downy Brome

BACKGROUND INFORMATION: Like all noxious weeds, Downy Brome -- also know as cheat grass -- is a strong invader. Downy Brome is a grassy weed and reproduces only by seed. It does not have a brightly colored flower. Seeds germinate in the fall and resume growth in the spring. Its seeds are long and flat and its leaves are 1/8 to 1/4 inch wide and flat. The plant grows from six inches to two feet high. It grows in fields, waste places, railroad right of ways and roadsides. The plant matures and dies in June or July when it goes to seed. At this point the plant becomes a very serious fire hazard. Many natural resource areas have been destroyed when Downy Brome along the road has caught on fire and spread. The seeds are spread by hikers, birds, antelope, deer, small rodents, vehicles, and contaminate grain, hay, and manure.

Student Activity:

True or False

_____ Downy Brome fires can be started by someone throwing out a lit cigarette, lightning strike, or the spark from a train on the tracks.

_____ Invasive plants are not a serious problem because they are so pretty.

_____ A noxious weed can be dangerous or harmful to natural resources and agriculture.

_____ You should always pick the flowers or the seeds of weeds and take them home.

_____ Camping and driving in a weed-infested area is a good idea.

_____ Four wheelers and other recreational vehicles should be driven on established roads and trails.

_____ Weed seeds can cling to your socks and shoes.

_____ I can help stop the spread of weeds.

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