



Growing a Sock full of Weeds Experiment

Created by: Jake Zollinger	Time Required: Total 45 days (growing period) 4 full class periods, 5 minutes every other day.
Subject: Agriculture, Science	Grade Level: 9-12

Overview	Learn about weeds and the spread of invasive weeds.
Goal(s) & Objective(s)	Students should learn to identify weeds, and realize how easily weed seed is spread. They will learn the impact invasive weeds have on rangelands
Prerequisites & Materials	<u>Plant Science Knowledge</u> <ol style="list-style-type: none"> 1. Large, used knee socks 2. Potting soil 3. Planters 4. Greenhouse or growing light
Teaching Activities: <i>Instructional Approaches/Strategies</i>	<p>Introduction:</p> <p>1-Discuss weeds and how they are spread and the pros and cons about them.</p> <p>Procedures</p> <p>Day 1- Explain assignment to class. Separate into groups. Assign seed gathering sites. Day 2- Visit sites, gather seeds. Day 3- Plant socks, set watering/observation schedule within groups. Days 4-30- Water and observe/log changes. Day 31- Identify plants, prepare presentations on identified weeds. Days 32-33- Students should be using their own time to finish presentations. (**Note- days are estimates depending on when weeds emerge and are mature enough for the students to begin identifying them.)</p> <p>Closure</p> <p>Day 34-35- Give presentations to the class. Dispose of weeds correctly.</p>
Assessment:	<p>Assess students knowledge by their presentations.</p> <p>They should have identified the weed, point out characteristics of the weed, origin (if it is not native), name what animals eat it, if it has natural enemies and the benefits or detriments of this weed. (ex. It's poisonous, or it's fire resistant etc.)</p>

Preparation-

-Large old socks, can get from home, used clothing store, have each student bring one if possible, but have extras on hand for those who don't have any or forget.

-Planters, need to be large enough for the socks. You could use old mineral supplement tubs with holes drilled in the bottom for drainage. Whatever you can find to plant them in will work.

-Potting soil, if you have a greenhouse you may have some left over, if not you could see about getting some donated since it is fall and the stores may want to get rid of it?

-Need to have sites picked out for the groups to go. Have bus if needed, or time to walk to and from sites.

-Weed identification resources, have books available.

Activity Background:

This project would be best if done in the fall when weed seeds are abundant. Students need to be assigned to groups of about 5. Each group needs to go to a different empty lot or range site. This way you should get different seeds. Have the students either put the sock on over their shoe or tie it around their ankle. Have them walk around and try to pick up different seeds on the sock. When they are finished before leaving the lot/range site have the students take off the sock and put them in plastic sacks, realizing this will reduce the spread of the weeds. Once the students return to the classroom each group needs to write a hypothesis of what weed seeds they gathered, how long it will take them to grow. Then they need to plant the socks in the planters with potting soil. Students may want to save one sock with seeds on it to compare seeds with what will actually end up growing. Be sure to have the students label the containers with their group and where they went to collect the seeds. Students should then make a watering schedule within their group and keep a record of any changes they see daily, when plants began to emerge, etc. Once the weeds have grown enough to identify them each group should take a class period to identify using the Weeds of the West books and other weed identification methods and resources. Along with identifying them the students should come up with a report about their weeds and their experience, which can then be given in front of the class, with each member of the group participating. Finally the students should dispose of the plants grown properly to ensure weed seeds will not be left loose or thrown out where they will begin growing and infesting new areas.