

Plant Classification Activity

Created by: Karen Williams, Diane Wilson	Time Required: Four to six 30 min class periods Teacher prep time: 30 minutes to gather plant material
Subject: Science	Grade Level: 3 rd & 5 th

Overview	5 th and 3 rd grade classes will learn how to identify plants by groups: grasses, forbs, shrubs.
Goal(s) & Objective(s)	1. Students in the 5 th grade class will teach the 3 rd grade class how to identify plants according to groups: grasses, forbs, and shrubs.
Materials	<ol style="list-style-type: none"> 1. Variety of Collected Plants 2. Plant presses 3. Copies of Plant Identification Guide
Teaching Activities: Instructional Approaches/Strategies	<p>Procedures</p> <ol style="list-style-type: none"> 1. Teach the 5th grade students characteristics of grasses, forbs and shrubs. Give them samples obtained by instructor to classify, label, and press. Students will work in small groups. 2. When students feel comfortable and are able to independently identify samples, join the 3rd grade class. 5th graders will bring the new samples they have gathered. In one or more sessions the 5th graders will teach the 3rd grade how to identify grasses, forbs, and shrubs. <p>Optional: Arrange a field trip to a meadow (ex: Meadow at Grangemont, Orofino Idaho) to identify at least 2 kinds of each group. Press and label each sample. If possible, have a guest speaker accompany the classes on the field trip to explain how the meadow has changed over the last half century</p> <p>Closure</p> <p>5th grade- Have students write a short summary of what they learned and what their favorite part of the activity was. 3rd grade- Have a class discussion on about plants and what they learned from the 5th graders.</p>
Assessment:	Assess how much both 3 rd and 5 th graders learned with a discussion after the combined activity.

Background:

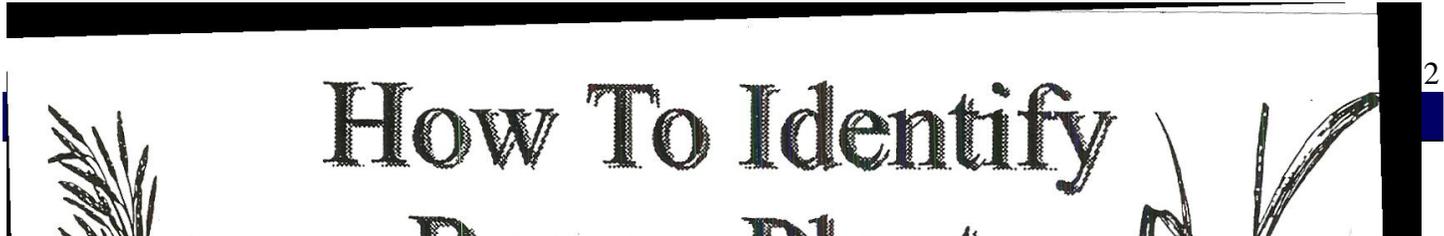
Instructors must be able to distinguish between grasses, forbs and shrubs. The following sites will be helpful in learning to identify each group.

www.idrange.org

<http://www.cnr.uidaho.edu/what-is-range/>

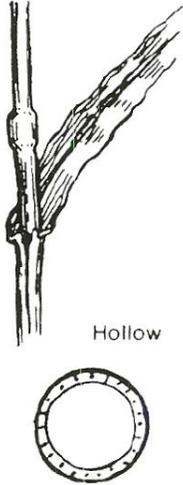
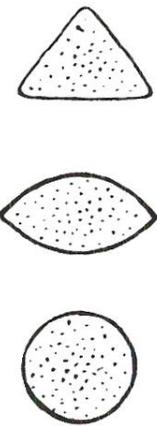
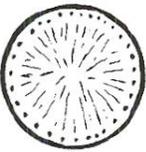
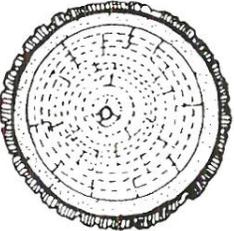
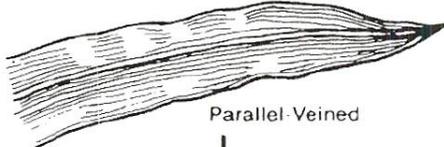
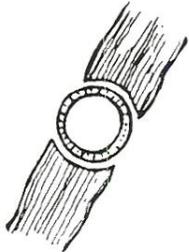
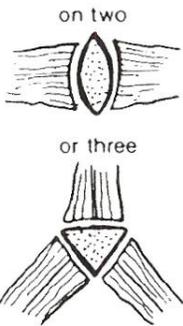
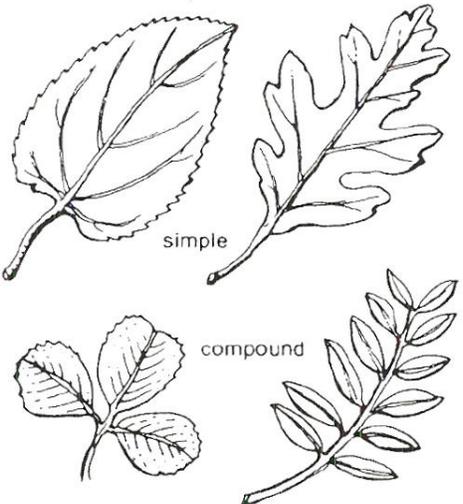
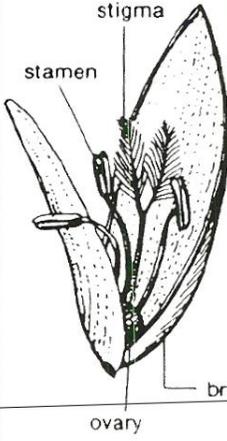
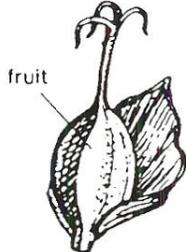
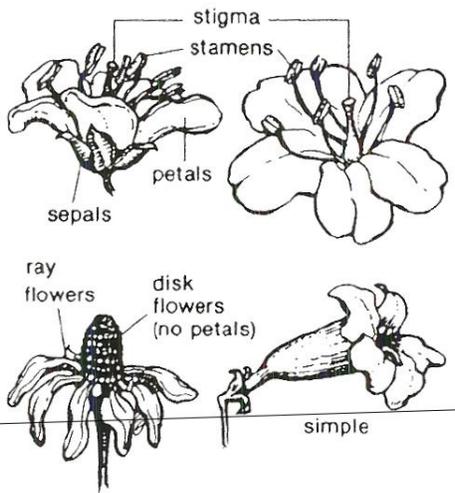
<http://www.cnr.uidaho.edu/what-is-range/identify.htm>

Note: Each student will need a plant press that can easily be made from pegboard. Cut the sheet of pegboard into 4"x6" pieces. Put the presses together by putting several pieces of newspaper or newsprint between two pieces of pegboard. Hold the entire press together with two wide rubber bands. Cost of the pegboard will be about \$10. It will take about 3 hours to put the boards together. An additional option would be to have all materials ready and let the 5th graders assemble the presses.

A decorative header at the bottom of the page features a black horizontal bar. Below it, the text "How To Identify" is written in a large, stylized, serif font. The text is flanked by two line drawings of plants: a grass-like plant on the left and a leafy plant on the right. The page number "2" is visible in the bottom right corner.

How To Identify

From: Stechman, John V. Common Western Range Plants- Their Fundamental Structure, Growth, Value, and Management, 3rd Ed. California Polytechnic State University, San Luis Obispo, 1986.

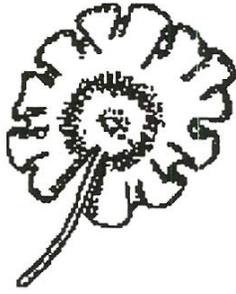
	GRASSES	GRASS-LIKE	FORBS	SHRUBS & TREES
STEMS	<p>Jointed with nodes, round</p>  <p>Hollow</p>	<p>Not jointed, irregular shape</p>  <p>Mostly Solid</p>	<p>Fleshy or pithy</p>  <p>Mostly Solid</p>	<p>Woody with growth rings</p>  <p>Solid</p>
LEAVES	<p>Parallel-Veined</p>  <p>on two sides</p>  <p>on two or three</p> 	<p>Net-Veined</p>  <p>simple</p> <p>compound</p>		
FLOWERS	<p>Small, Greenish</p>  <p>stamen</p> <p>stigma</p> <p>ovary</p> <p>bracts</p>  <p>fruit</p>	<p>Large, Colored</p>  <p>stigma</p> <p>stamens</p> <p>petals</p> <p>sepals</p> <p>ray flowers</p> <p>disk flowers (no petals)</p> <p>composite</p> <p>simple</p>		

MKH

Leaf Margins (what the edges of the leaves look like)



Entire



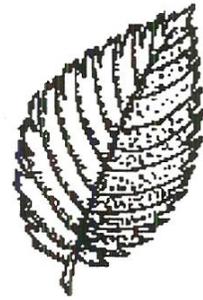
Undulate



Crenate



Serrate



Double-Serrate



Dentate



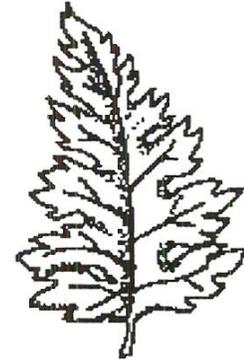
Denticulate



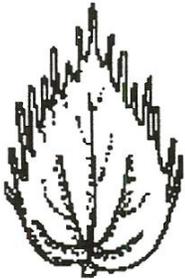
Ciliate



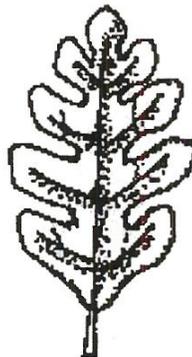
Incised



Lacerate



Lacinate



Lobed



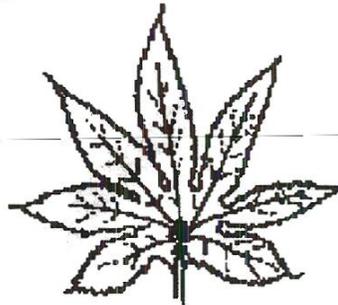
Cleft



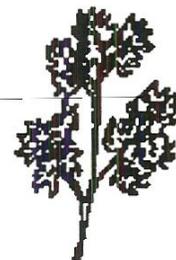
Parted



Pinnatifid



Palmatifid



Crispate

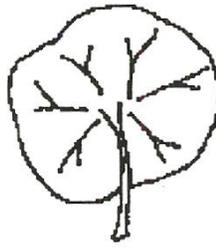
Leaf Shapes (what the shape of the leaf is)



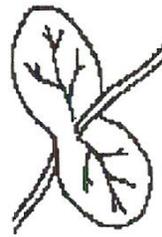
Obovate



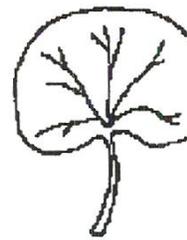
Ovate



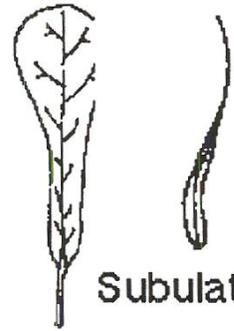
Peltate



Perfoliate



Reniform



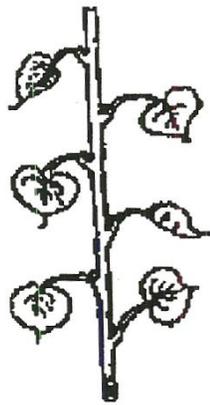
Spathulate

Subulate

Leaf Arrangement (how the leaves are arranged on the stem)



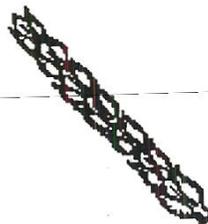
Opposite



Alternate



Whorled



Imbricate



Fascicled