

25. DESERT TREES ARE TERRIFIC

Overview: Students make rubbings of and examine tree bark and leaves to classify and identify desert trees. They will also discover adaptations desert trees make to adjust to their environment.

Objective: Students will describe how leaf shape, color, and size, and bark texture and color vary from tree to tree and attempt to explain how leaves and bark can indicate adaptations trees make for a lack of water.

Time needed: One to two hours.

Group Size: Small to large

Age appropriateness: 4th grade and up

Site: Any region in the Garden where trees are present.

Background:

Materials:

Provided at the Garden

Magnifying lenses, microscopes (if desired), Easy Field Guide to Trees, Yuma
Conservation Garden Guide, plant laminates.

Provided by the classroom teacher

Data sheets, pencils, crayons

Preparation:

Pre Activity: The activity can be done first on the school grounds to familiarize students with exploring different types of trees. Class discussions about the leaves and bark from trees on the playground will provide sufficient background for studying desert trees. Pictures or sketches of leaf arrangements to share with students would also be helpful.

Procedure:

1. Demonstrate how to make leaf and bark rubbings without removing leaves from the trees.
2. Pairs of students select a tree to study.
3. Leaf rubbings and bark rubbings are taken as part of the data record to bring back to the large group for study.
4. Students should record information on the data sheet such as:
 - Do the leaves have hairs or teeth?
 - Are veins visible on both sides?
 - Color of the leaf
 - Where on the branches do the leaves grow?
 - How are they attached?
 - Color of the bark
 - Are there flowers, fruits, seed pods, or nuts on the tree?
 - What are possible desert adaptations for survival?

5. Students return to the large group to share and compare their data with others.
6. Pairs can share their tree data with another pair, or they can give their data to another group and have them see if they can find their tree. [scavenger hunt]

Modifications:

Extensions: Create a book of rubbings as a field guide. Do the same activity with bushes then compare and contrast trees with bushes.

Reference List:

Project Learning Tree

100 Desert Wildflowers by Janice Emily Bowers. Southwest Parks and Monument Association, Tucson, 1989.

Arizona Highways

Easy Field Guides, "Trees"

Assorted Field Guides

Time of Year: any

**This activity was adopted from Project Learning Tree activity "Looking at Leaves" and "Name That Tree."

Some Trees Found in the Garden

#		Listed in the Yuma Conservation Guide	Easy Guide to Arizona Trees
4	Blue Palo Verde	X	X
10	Ironwood	X	X
11	Honey Mesquite	X	X
13	Yucca, Soaptree	X	
27	Chilean Mesquite	X	
32	Josua Tree	X	
	Screw Bean Mesquite	X	X
35	Desert Fern Tree	X	
	Desert Sweet Acacia	X	
	Desert Willow		X
	California Fan Palm		X
	Cottonwood, Freemont		X