



# HISTORIC NATIVE PLANTS

## AN OUTDOOR SCAVENGER HUNT

Grades 4-6

*(Complete with indoor adaptations)*



### LESSON INTRODUCTION:

In this lesson, students will identify and research historical uses for plants indigenous to Fort Davis National Historic Site. The lesson will weave history and science together to incorporate medicinal and economical uses by both native and other settled inhabitants on or around the fort. The study will culminate in a challenging and competitive scavenger hunt of native plants. Evaluation will include students recognizing the physical appearances and characteristics of native plants found on the fort grounds, and presenting their historical uses to the group. This lesson could be used on or off site. Indoor adaptations are included.



**National Educational Curriculum Standards:**

<b>Grade Level</b>	<b>Elementary</b>	<b>Middle School</b>
<b>Science</b>	NS.k-4.4ASI1.3 NS.k-4.4ASI1.4 NS.k-4.4ASI1.5 NS.k-4.4ASI1.6 NS.CLS.2 NS.CLS.3.2 NS.CLS.3.4 NS.4DESS1.2 NS.4FSPSP1.4 NS.4FSPSP3.1 NS.4FSPSP5.1 NS.4GHNS1.1	NS.8ASI1.3 NS.8CLS2.4 NS.8CLS3.1 NS.8FSPSP3.2 NS.8FSPSP3.3 NS.8FSPSP4.3 NS.GHNS3.2
<b>Social Studies</b>	NS.K-4.1A NS.K-4.2.B NS.K-4.3.A NS.K-4.3.B NS.K-4.5.A NS.K-4.6.A NS.K-4.7.A NS.K-4.8.A	NS.S-WH.5-12.7

**HISTORY AND SCIENCE PROCESS TEKS:**

<b>Grade Level</b>	<b>4<sup>th</sup></b>	<b>5<sup>th</sup></b>	<b>6<sup>th</sup></b>
<b>Science</b>	§112.15.2B §112.15.7C	§112.16.2C §112.16.4A §112.16.9A §112.16.10.B	112.22.10.C 112.22.12.C
<b>Social Studies</b>	§113.15.9A, 9B, 9C §113.15.10A, 10B §113.15. 12.C	§113.16.4C, 4G §113.16.7B §113.16.8B §113.16.9A, 9B	§113.18. 1A, 1B §113.18.2B §113.18.3A §113.18.4C §113.18.6B, 6C







**VOCABULARY OF INSTRUCTION:**

<i>Common name</i>	<i>Habitat</i>	<i>Economical uses</i>	<i>Leaflet</i>
<i>Scientific name</i>	<i>Preparation</i>	<i>Shrub</i>	<i>Fragrant</i>
<i>Appearance</i>	<i>Medicinal uses</i>	<i>Foliage</i>	<i>Texture</i>
<i>Toxic</i>	<i>Fibrous</i>	<i>Catkins</i>	<i>Forage</i>
<i>Infusion</i>	<i>Aromatic</i>	<i>Indigenous</i>	<i>Hectic</i>

**MATERIALS:**

-  Self adhesive labels or sticky notes
-  Markers
-  Hand lens

**ATTACHMENTS:**

-  Set of CLUE CARDS
-  Set of INFORMATION CARDS
-  Set of PLANT PICTURE CARDS
-  Set of ALTERNATIVE PLANT CARDS

**RESOURCES AND REFERENCES:**

Warnock, Barton H. *Wildflowers of the Davis Mountains and the Marathon Basin*. Alpine, Texas. Sul Ross State University, 1977.

Moore, Michael. *Medicinal Plants of the Desert and Canyon West*. Santa Fe, New Mexico. Museum of New Mexico Press. 1941.

[http://www.livingdesert.org/desert\\_plants](http://www.livingdesert.org/desert_plants)

[www.swcoloradowildflowers.com/Tree](http://www.swcoloradowildflowers.com/Tree)

<http://www.wildflower.org/plants>

<http://www.wordcentral.com/cgi-bin/student>



### **BACKGROUND INFORMATION:**

*This activity was developed to serve a dual purpose. The first is to teach proper identification of native species, so that children are familiar with the physical appearance of the plant, its name, and to be able to recognize the plant at a later time and another place. Some geology will be embedded into the lesson, mainly dealing with soil types. (Scientific) The second purpose would be to learn historical uses of these plants. Students will become aware that early inhabitants utilized the resources that were available to them in their environment. This would include uses such as food, shelter, medicinal, and economical. (History)*

*This activity requires an outdoor setting for optimum results, possibly near the oak grove picnic area. If off site, or indoors, teachers will need to use the Alternative Plant Cards and set them out as if the plant is growing in that spot. The scavenger hunt could be completed successfully in as little as 45 to 60 minutes. It could also be extended to allow time to identify the native species on a hike through the park. The activity may also be spaced out over a period of several days if so desired. An extension for gifted and talented students might be to research the Latin scientific names, noting their meanings, and seeing the connections.*

### **TEACHER ADVANCE PREPARATION:**

Obtain or download the 3 sets of cards mentioned in the attachments. Find a good spot or central area located on the fort grounds. (Preferably find a picnic table to use as a meeting place.) Each group **MUST** have an adult with them if you are on the fort grounds. This is a park requirement.

If off site or inside, adapt the learning environment to the lesson. (Use the Alternative Plant Cards and set them out inside the building to symbolize the native plant.)

1. Take the 3 sets of cards (Clue Cards, Information Cards, and Plant Cards), hand lenses, self adhesive labels, and a marker with you to the selected location.
2. Find a central area (preferably with a picnic table) to use as a meeting place. You, the plant cards, labels, and marker stay here.
3. Match up a clue card and information card for each native plant. (Cards will be numbered.) (Plant and Alternative Plant cards will have letters on them.)
4. Establish the boundaries or rules for the hunt.



5. Either provide students with digital cameras or allow them to use their cell phones to capture a photo of the plant when they find it.


### **INSTRUCTIONAL PROCEDURES:**


1. Upon reaching the designated area ask students to think about what living in this environment in the late 1880's would be like for them. (Discussion should include grocery and drug stores not being available then!)

2. Explain that the goal is to identify as many plants as they can in the allotted time.

3. Explain the boundaries or rules:

-  *Stay within the boundaries, or on the walking trails.*

-  *NEVER pick any plants! This is a park requirement.*

-  *Use a digital camera or your cell phone to capture the photo of the plant you find so that you may prove to the teacher that you actually saw it.*

-  *Do not step or climb on ruins.*

6. Divide students into pairs or small groups.

7. Explain and demonstrate to students without them moving.

8. Read the clues from a CLUE CARD. Have students look around and try to locate the plant without moving from where they are standing.

9. Show and model reading the students the INFORMATION CARD.



***Make sure students understand the Scavenger Hunt directions below!***

**SCAVENGER HUNT GAME DIRECTIONS FOR STUDENTS:**

1. Each team of students will receive a pair of cards, (a clue card, an information card, and a hand lens.) The teacher keeps the plant card.
2. They are to go search for the plant described on the cards.
3. Once they find the plant, take a digital photo and return to the picnic table and find the picture that matches the plant they found.
4. The two (*clue card and information card*) cards are then taken to the teacher to see if they have correctly identified the plant.
5. If they have correctly identified the plant, they will receive a label with the name of the plant on it and be given another set of cards for another plant.
6. If they are wrong, they try again to ID the same plant with some help from the teacher.
7. Keep identifying plants until the time runs out.
8. When the game is over, have each group chose a plant to present to the entire group. Students will get their information from the **INFORMATION CARDS**. (They need to present all of the information on the card orally.)
9. Never harm a plant in any way, by removing leaves, flowers, or fruits. (Show respect)

**EVALUATION:**

After their presentations, ask students to talk about their perceptions about historic native plant uses and if they feel differently about plants now. (Be sure to discuss the value of historic and scientific knowledge from the past and future and how it impacts our society.)



***SPECIAL ACKNOWLEDGEMENT***

***This lesson is written and dedicated to the late Dr. Barton H. Warnock, former Professor of Biology at Sul Ross State University, in Alpine, TX. Dr. Warnock devoted much of his professional life to the study of the native vegetation of the Trans-Pecos region in Texas. He was my mentor, friend, and inspiration in the teaching profession.***

***Felicia Brailas***