

Plants in Texas



Subject and Grade Science and Social Studies,
7th grade

Author Audra Roach, revised by Mary
Rodriguez and Jason Terry (2023)

Time duration One or two 45-minute class periods

Overview Students will compare and contrast the ways in which early people used plants in Texas millennia ago with the ways that Texans uses plants today.

Objective Compare and contrast continuity and change over time; identify various plant materials, past and present; compare how people in different communities adapt to the physical environment, past and present; write to record, develop, and reflect on ideas.

TEKS *Science, Grade 7*
(1A), ask questions and define problems based on observations or information from text, phenomena, models, or investigations
(1E), collect quantitative data using the International System of Units (SI) and qualitative data as evidence
(3B), communicate explanations and solutions individually and collaboratively in a variety of settings and formats

Social Studies, Grade 7

(2A), compare the cultures of American Indians in Texas prior to European colonization such as Gulf, Plains, Puebloan, and Southeastern

(9A), identify ways in which Texans have adapted to and modified the environment and explain the positive and negative consequences of the modifications

(22C), create written, oral, and visual presentations of social studies information

Materials

- Computers with Internet access for www.texasbeyondhistory.net/pecos
- Plants in Texas: Then and Now Activity Page (included)
- Background for teacher (included)

Activities and procedures

Step 1: Introduce students to the different ways in which ancient Texan’s used plants by viewing Texas Beyond History’s Lower Pecos Canyonlands exhibit (www.texasbeyondhistory.net/pecos). View displays of artifacts preserved in the dry caves and rock shelters of far west Texas, including a cane flute, a prickly pear pouch, a sewing needle, cords, nets, sandals, and baskets made from plant fibers. Also see the artifacts from Ceremonial Cave near El Paso, including an “apron” made of woven plant fiber cording, a fire hearth made yucca stalk, and spear shafts made of cane and wrapped with plant fibers. View an ancient “backpack” called a kiahha made from plant fibers at Granado Cave.

Step 2: Students list different objects made from plants thousands of years ago on the activity page, and the purpose for each object. *Modification: Fill in artifacts column for students on the activity page.*

Step 3: For homework, students go on a “scavenger hunt” of their own homes and record the modern plant-based materials they find on the Activity Page.

Step 4: Invite students to share their findings in pairs. Then, with the whole class, create a Venn diagram on chart paper that compares and contrasts early and modern people’s uses of plants. Put common purposes/objects in the center of the diagram. Discuss what is different and what has remained the same.

Closure: Ask students to separate a blank sheet of writing paper into two columns. In separate columns, respond to the following situations:

- Column 1: Imagine you are a hunter-gatherer in Texas 11,000 years ago. You are taking a journey and need a new pair of sandals. How will you get them? Where will they come from? How will they be made?
- Column 2: Now imagine that you are a modern person in Texas in the year 2024. You are going camping and need a new pair of sandals. How will you get them? Where will they come from? How will they be made?

Extension Activities

- Challenge students to expand their “scavenger hunt” to their schoolyard or neighborhoods. Wildflowers, leaves, and acorns might be sketched into science journals and identified using field guides and internet resources. Fallen leaves might be pressed and saved into a class-published field guide to local vegetation.

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- Practice weaving necklaces or baskets out of yarn or raffia. For examples of prehistoric weaving, see the Granado Cave exhibit at:

www.texasbeyondhistory.net/granado/artifacts.html

**Student
Product**

Completed Plants in Texas: Then & Now Activity Page

Plants in Texas: Then & Now
Activity Page

By studying the remains of things that people made out of plants, archeologists learn about how people lived daily life thousands of years ago in Texas. Look at the websites and list some organic artifacts that archeologists have discovered in the dry caves of west Texas:

Artifact	Purpose

What do we use plants for today? Take a tour of your home and see how many objects you can find that are made from plants. Circle any purposes for these objects that are the same as they were 11,000 years ago. What has changed and what has remained the same?

Artifact	Purpose

Plants in Texas: Then and Now

(Background for the teacher)

Archeologists know about early people's use of plants from several types of evidence. Some plant artifacts are well preserved. In the Southwestern United States, for example, the hot, dry desert conditions have preserved bits of food such as seeds and root fragments, as well as other items such as sandals, plants, mats, wood, and more. These tell us that early man used plants for food, shelter, medicine, clothing, and for making tools and weapons (including fire starters and atlatls).

Although most organic artifacts decay and disappear over time, archeologists can learn about how early people used plants by more indirect means. At the Gault site in Bell County, Texas, and other sites in areas where plant artifacts are poorly preserved, archeologists can: 1) study charred plant remains (e.g. seeds and nut shells; the burning or carbonization of organic remains tends to preserve them); 2) analyze plant pollen to determine what plants were there in the past and possibly used as a food source or other purpose; and 3) gather indirect evidence (e.g. the polish caused by plant cutting, seed gathering, and wood working that we find on stone tools. This polish is called "sickle sheen.").

Vocabulary:

artifact: an object made by humans

atlatl: (pronounced at-lat-ul or atl-atl) a spear thrower made of wood or bone

fire hearth: a stick of wood or plant stalk (i.e. yucca stalk) with holes drilled into it, and in which another stick is rapidly rubbed in order to make fire

organic: made of living or once-living material