



Sonoran Supermarket

A fifty-minute Discovery Class program for students
in grades 3-12.

To the Teacher:

Thank you for making the “*Sonoran Supermarket*” Desert Discovery Class a part of your curriculum. During this exciting educational program, students will see live desert animals, handle many different types of artifacts, and work with classmates to draw conclusions based on the clues presented in the program.

This packet contains pre- and post- program information and activities along with a vocabulary list and suggested resources. These materials were developed to help you extend this class topic with both introductory and follow-up lessons. The pre-visit information will introduce students to some of the basic concepts presented in *Sonoran Supermarket* and help prepare them for the class. We hope you’ll find this information useful and easy to incorporate into your science and social studies curriculum. For more information about the Desert Museum and the Sonoran Desert, visit our website at www.desertmuseum.org.

For teachers who may wish to extend this program content further, we offer Sonoran Supermarket Lending Kits and periodic training workshops to train teachers to utilize their materials with their students. Please contact Jesús García at jgarcia@desertmuseum.org or 520-883-3089 for more information.

Sincerely,
ASDM Department of Conservation Education and Science

SONORAN SUPERMARKET

Today, basic survival for most of us means regular trips to the supermarket. But imagine living in the Sonoran Desert five hundred years ago. Everything you needed came from right here. This program explores local resources that native peoples of the Sonoran Desert – Tohono O’odham, Yaqui, and Seri – have traditionally used for food, medicines, fibers, and more. Students will experiment with ethnobotanical materials to make their own cordage and discover foods and tools they might find in their own backyards. (No live animals used in this program.)

CLASS OBJECTIVES:

Through the examination of ethnobotanical materials, artifacts, and interactive demonstrations, students will:

- Compare three Native American groups of the Sonoran Desert region – the Tohono O’odham, Yaqui, and Seri – in terms of resource use and related cultural traditions.
- Locate traditional homelands of these three groups on a Sonoran Desert map.
- Identify plants of the region and describe their use for food, medicine, tools, building materials, and more required for human survival.
- Describe applications and uses of regional natural resources.
- List and describe ways people of the region have traditionally used plants and plant materials in the past as well as in the present.
- Describe the impacts of Native Americans on the cultural identity and economy in the Sonoran Desert region today.

ARIZONA ACADEMIC STANDARDS CORRELATION:

Social Studies (Grade 4):

Strand 1, American History

Concept 2: Early Civilizations

PO 1. Describe the legacy and cultures of prehistoric people in the Americas:

- a. characteristics of hunter-gatherer societies
- b. development of agriculture

Concept 5: Westward Expansion

PO 4. Describe the impact of Native Americans, Hispanics, and newcomers from the United States and the world on the culture of Arizona (e.g., art, language, architecture, mining, ranching).

Concept 7: Emergence of the Modern United States

PO 5. Recognize the formation of Native American communities and reservations in Arizona (e.g., Gila River Reservation, Yaquis, Colorado River Indian Tribes).

Concept 10: Contemporary United States

PO 4. Discuss the contributions of diverse populations to Arizona.

Strand 4, Geography

Concept 1: The World in Spatial Terms

PO 7. Locate physical and human features in Arizona using maps, illustrations, or images:

- a. physical (e.g., Grand Canyon, Mogollon Rim, Colorado River, Gila River, Salt River)
- b. human (e.g., Phoenix, Yuma, Flagstaff, Tucson, Prescott, Hoover Dam, Roosevelt Dam)

Concept 2: Places and Regions

PO 1. Describe how the Southwest has distinct physical and cultural characteristics.

PO 3. Locate the landform regions of Arizona (plateau, mountain, desert) on a map.

PO 4. Compare the landform regions of Arizona according to their physical features, plants, and animals.

PO 5. Describe how regions and places (e.g., Grand Canyon, Colorado River, Casa Grande Ruin, Canyon de Chelly, Yucatan Peninsula) have distinct characteristics. (Connect to content studied.)

Concept 3: Physical Systems

(Science Strands are summarized below as they apply to Social Studies content. These concepts are reinforced in Social Studies classes, but assessed through Science.)

Connect with:

Science Strand 3 Concept 1 Describe how natural events and human activities impact environments.

Science Strand 4 Concept 3

Describe uses, types, and conservation of natural resources.

Concept 4: Human Systems

PO 2. Describe how Mexico and Arizona are connected by the movement of people, goods, and ideas.

PO 4. Describe the cultural characteristics (e.g., food, clothing, housing, sports, customs, beliefs) of Arizona's diverse population.

Concept 5: Environment and Society

PO 1. Describe human dependence on the physical environment and natural resources to satisfy basic needs.

Concept 6: Geographic Applications

PO 1. Describe the impact of geographic features (e.g., rivers, mountains, resources, deserts, climate) on migration and the location of human activities (e.g., exploration, mining, transportation routes, settlement patterns).

RESOURCES AND SUGGESTED READING

LITERATURE:

Arizona-Sonora Desert Museum. *A Natural History of the Sonoran Desert*. Tucson, ASDM Press, 1999.

Dahl, Kevin. *Wild Foods of the Sonoran Desert*. Tucson: Arizona-Sonora Desert Museum Press, 1996.

Felger, Richard, and Mary Beck Moser. *People of the Desert and Sea: Ethnobotany of the Seri Indians*. Tucson, University of Arizona Press. 1985.

Hodgson, Wendy. *Food Plants of the Sonoran Desert*. Tucson, University of Arizona Press, 2001.

Kane, Charles W. *Sonoran Desert Food Plants: Edible Uses for the Desert's Wild Bounty*. Lincoln Town Press. 2011.

Lazaroff, David. *ASDM Book of Answers: Answers 42 most commonly asked questions by visitors*. Tucson, Arizona-Sonora Desert Museum Press, 1998.

Moore, Michael. *Los Remedios, Traditional Herbal Remedies of the Southwest*. Red Crane Books. 1990.

Moore, Michael. *Medicinal Plants of the Desert and Canyon West*. Santa Fe, Museum of New Mexico Press, 1990.

Nabhan, Gary Paul. *Gathering the Desert*. Tucson, University of Arizona Press, 1985.

Rea, Amadeo. *At the Desert's Green Edge: An Ethnobotany of the Gila River Pima*. Tucson, University of Arizona Press. 1993
Yetman David. *50 Common Edible & Useful Plants of the Southwest*. Western National Parks Association, 2009.

WEB-BASED RESOURCES:

Johnston, Bernice. *The Seri Indians of Sonora, Mexico*. University of Arizona Press. 1970.
www.uapress.arizona.edu/onlinebks/SERIS/HISTORY.htm

McKoy, Kyle Lyn. *Downtown Underground: Archaeological Clues to Tucson's Past*. A teachers' guide that includes elementary classroom activities.
<http://www.archaeologysouthwest.org/what-we-do/investigations/to/reports/downtown-underground/>

Te Wechel, Edith. Yaqui: A Short History. 2004. www.lasculturas.com/aa/vs_EdithYaqui.htm

Theil, J. Homer, and Johnathan B. Mabry. Final Report: Rio Nuevo Archaeology, 2000-2003. Archaeology Southwest. <http://www.archaeologysouthwest.org/what-we-do/investigations/to/reports/final/>

Arizona: A Voice In The Desert - Video Documentary On Tohono O'odham And Disruption Of Cultural Unity By International Borders - Indigenous Peoples Issues and Resources
http://indigenouspeoplesissues.com/index.php?option=com_content&view=article&id=13498%3AArizona-a-voice-in-the-desert-video-documentary-on-tohono-oodham-and-disruption-of-cultural-unity-by-international-borders&catid=37%3Avideos-and-movies&Itemid=77&utm_source=feedburner&utm_medium=email&utm_campaign=Feed%3A+IndigenousPeoplesResources+%28Indigenous+Peoples+Issues+%26+Resources%29

Wikipedia:

en.wikipedia.org/wiki/Hohokam
en.wikipedia.org/wiki/Tohono O'odham
en.wikipedia.org/wiki/Seri_people
es.wikipedia.org/wiki/Pueblo_yaqui

ORGANIZATIONS & STORES:

Arizona-Sonora Desert Museum: www.desertmuseum.org. 2021 N. Kinney Rd., Tucson, AZ 85743. ASDM is a world renowned zoo, natural history museum, and botanical garden whose mission is to inspire people to live in harmony with the natural world by fostering love, appreciation, and understanding of the Sonoran Desert. The museum interprets cultural uses of plants and other desert resources through exhibits, publications, and a variety of public programs and classes.

Desert Botanical Garden: www.dbg.org/. 1201 N. Galvin Parkway Phoenix, AZ 85008. The Desert Botanical Garden teaches and inspires visitors from the local community and around the world, providing research, exhibits and more designed to help us understand, protect and

preserve the desert's natural beauty. They have an ethnobotanical garden and related interpretive materials.

Desert Harvesters <http://www.desertharvesters.org/> Desert Harvesters is a non-profit, volunteer-run, grassroots effort based in Tucson that strives to promote, celebrate, and enhance local food security and production by encouraging the planting of indigenous, food-bearing shade trees in water-harvesting earthworks, and then educating the public on how to harvest and process the bounty. Their website has great information about native foods harvesting, storage, and preparation. They also coordinate mesquite milling events around Tucson and southern Arizona in the fall where you can mill your own mesquite pods into flour.

Desert Rain Café: <http://www.desertraincafe.com/> Located in Sells, AZ, this restaurant serves traditional, healthy Tohono O'odham foods for its customers. It also has a gift shop next door that sells native crafts and foods.

Desert Survivors Plant Nursery: www.desertsurvivors.org/. 1020 West Starr Pass Blvd, Tucson AZ 85713. Desert Survivors Nursery sells over 400 bioregional plants, focusing on species native to southern Arizona.

Food City Grocery Stores: This chain of grocery stores sells a variety of foods aimed at the Hispanic market. They are a good resource for food items such as *nopales* (prickly pear pads,) *tunas* (prickly pear fruit), *mescal* (roasted agave heart) and more. There are several around Tucson.

Native Seeds/SEARCH: <http://www.nativeseeds.org>. 3584 E. River Road, Tucson, AZ 85718. Native Seeds/SEARCH conserves, distributes and documents the adapted and diverse varieties of agricultural seeds, their wild relatives and the role these seeds play in cultures of the American Southwest and northwest Mexico. The **Native Seeds/SEARCH Store**, located at 3061 N. Campbell Ave, Tucson, AZ 85719, 520-622-5561, is a great resource for native foods, seeds, artisan works, books, and more related to regional ethnobotany. It is also possible to order products online.

Pascua Yaqui Tribe: www.pascuayaqui-nsn.gov. This is the official website of the Pascua Yaqui Tribe, with links to government offices, culture, and history of the tribe.

Pima County Natural Resources, Parks and Recreation: <http://www.pima.gov/nrpr/> Pima County NRPR leads community efforts to conserve the Sonoran Desert and enhance the urban environment while providing quality recreational, educational, and leisure activities. Their environmental education programs offer a variety of classes, including ethnobotanical themes.

San Xavier Coop Farm: www.sanxaviercoop.org. 8100 S. Oidak Wog, Tucson, AZ 85746. (520) 295-3774. Located a quarter mile east of the San Xavier Mission on Tohono O'odham land, this farm produces a variety of cultivated and wild crops of cultural significance including tepary beans, wheat, squash, cholla buds, mesquite flour, and more. These crops are made available to local people and also for sale to the public at their store (open 8 a.m. to 5 p.m. Monday – Friday.) They are also available at local farmers markets around town.

Community Food Bank of Southern Arizona: www.communityfoodbank.com/ As part of their mission to increase food security in southern Arizona, the Community Food Bank encourages the production and use of locally grown foods including native wild foods. They provide a range of educational opportunities such as gardening classes and run several farmers' markets at which locally produced foods, including native foods, can be purchased.

Santa Cruz Valley Heritage Alliance: www.santacruzheritage.org/. The Santa Cruz Valley Heritage Alliance is an advocate for our region's valuable heritage. It preserves and advances the region's living heritage so that landscapes, sites, livelihoods, traditions, values, and stories can stimulate our economy and build community. The website is a great source of cultural information for the region, with a calendar of events highlighting cultural activities available throughout the year.

Tohono Chul Park: www.tohonochulpark.org. 7366 North Paseo del Norte Tucson, AZ 85704. Recognized as one of the great botanical gardens of the world, Tohono Chul Park has been connecting nature, arts, and culture for 25 years. The park features an ethnobotanical garden, art exhibits of native artists, classes, and performances related to ethnobotanical themes.

Tohono O'odham Community Action (TOCA): TOCA is a community-based organization dedicated to creating a healthy, sustainable, and culturally vital community on the Tohono O'odham Nation. <http://www.tocaonline.org/Home.html>

Tohono O'odham Cultural Center and Museum: http://www.tonation-nsn.gov/cultural_center_museum.aspx. Located in Topawa, AZ, this museum works with elders to promote and preserve understanding of Tohono O'odham culture through education and public outreach. The facility is open to visitors and also hosts various festivities throughout the year.

Tohono O'odham Nation: www.tonation-nsn.gov/. This is the official website of the Tohono O'odham Nation, with links to government offices, culture, and history of the tribe.

Tucson Botanical Gardens: www.tucsonbotanical.org. 2150 N. Alvernon Way, Tucson, Arizona 85712



VOCABULARY:

artifacts – Any objects made or modified by humans.

botany – The study of plants.

culture – A set of shared values, attitudes, beliefs, and practices that characterizes an organization or group.

ecology – The study of interactions between living things and their environment.

ethnic groups – Group of people who share a common cultural heritage.

ethnobotany – The study of relationships between people and plants.

ethnobotanists – Scientists who study the ways people use plants.

ethnoecology – The study of how cultures such as native groups manage the natural and modified ecosystems they inhabit to meet their needs for survival.

fibers – Any relatively fine, threadlike tissues that compose parts of plants and animals, such as cotton, flax, muscles, and hair.

indigenous – Originating or occurring in particular area or environment, native.

native – Being a member of the original inhabitants of a particular place by birth or origin.

natural resource – Anything from the environment that satisfies a human need or want.

Seris – (SEH-rees) A group of Native American people living in the Central Gulf Coast of the state of Sonora, Mexico. In their language they are known as *Comcáac*.

Sonoran Desert – One of four North American deserts. The Sonoran Desert is located in the U.S. states of Arizona and California and the Mexican states of Sonora, Baja California, and Baja California Sur.

Tohono O’odham – (Toe-HO-no AAH-tum) A group of Native American people living in the Sonoran Desert. Tohono O’odham means “Desert People”

tradition – The passing down of elements of a culture from generation to generation, especially by spoken communication.

Yaquis – (YAW-kees) A group of Native American people living in the Sonoran Desert region. Their language is called *Yoeme* (yo-AY-may) and many Yaquis refer to themselves as Yoeme or Yoemem.

ACTIVITY OVERVIEW:

This packet provides teacher background information and introductory activities to introduce students to the setting, the vocabulary, and context of the Sonoran Supermarket Desert Discovery Class.

Teacher Background Information: Native Knowledge in the Sonoran Desert Region

This reading provides an overview of the story of human settlement in the region, with a particular emphasis on three regional tribes – the Tohono O’odham, Yaqui, and Seri – and their use of natural resources, particularly plants, for their survival. High school teachers may choose to assign this reading as a pre-visit activity for their students.

PRE-VISIT ACTIVITIES

Activity 1: Home in the Sonoran Desert

This is a reading and mapping activity through which students study the geographic location of the Sonoran Desert, the challenges the desert environment poses to living things, and the people who have lived here for thousands of years.

Activity 2: What is Ethnobotany?

This is a background reading and survey to help students understand how native people in the Sonoran Desert region have used plants to meet their basic needs and discover the impact of plant resources in their own lives.

Post-visit Activity 1: Edible Landscapes Survey

Students identify native food plants growing in their schoolyard or the school neighborhood and create a class field guide to edible landscapes in the vicinity.

