FLORIDA Wildflower FOUNDATION

Unit 7

Wildflowers are Important

Overview

Wildflowers have played an important role in human life for thousands of years. Long before modern medicine, grocery stores, and manufactured materials, people relied on native plants for food, medicine, tools, dyes, and shelter. Even today, wildflowers continue to support human communities in ways that are not always obvious.

Beyond their beauty and cultural significance, wildflowers provide essential services to ecosystems and the people who depend on them. They support pollinators, prevent soil erosion, filter water, and help maintain balanced, resilient ecosystems. When wildflower habitat is lost, it affects entire communities of plants and animals—and ultimately impacts human well-being too.

In this unit, students explore how Florida's native wildflowers have been used by people past and present, including their ethnobotanical uses—how plants are used for practical, cultural, and medicinal purposes. Students will also learn how wildflowers contribute to human well-being by supporting pollinators, protecting soil and water, and helping maintain healthy ecosystems that people depend on.

This unit synthesizes concepts from earlier units—showing how flower parts, life cycles, pollination, and adaptations all contribute to wildflowers' essential roles in both natural ecosystems and human communities. Students will connect their scientific knowledge to real-world conservation and stewardship.

By understanding the many ways wildflowers support human life, students will see these plants not just as part of the landscape, but as essential partners in Florida's natural and cultural history.

Activities

1. Pass the Wildflowers, Please!
2. Dr. Wildflower's Remedies
3. Why Wildflowers are Important to Me
4. Get to Know a Wildflower
5. Wildflower Walkabout

Vocabulary

benefit
biodiversity
consume
ecosystem services
edible
environment
erosion
ethnobotany
forage
habitat
indigenous
medicinal plant
Muscogee (Creek)
native plant
pollutant
Seminole
textile
Timucua

Vocabulary words are italicized within the introduction text and activities.

Standards

Grade 3: ELA.3.C.1.4, ELA.3.C.2.1, ELA.3.C.3.1, ELA.3.C.4.1, ELA.3.C.5.2, SC.3.N.1.1, SC.3.N.1.2, SC.3.N.1.3

Grade 4: ELA.4.C.1.4, ELA.4.C.2.1, ELA.4.C.3.1, ELA.4.C.4.1, ELA.4.C.5.2, SC.4.E.6.3, SC.4.L.17.4, SC.4.N.1.1, SC.4.N.1.2, SC.4.N.1.4, SC.4.N.1.5, SC.4.N.1.6

Note: This unit references edible native plants. **Students should be warned never to eat any wild plants without an expert's/adult's authorization,** as many edible plants closely resemble poisonous plants.

FLORIDA Wildflower FOUNDATION

Unit 7

Wildflowers are Important

Introduction

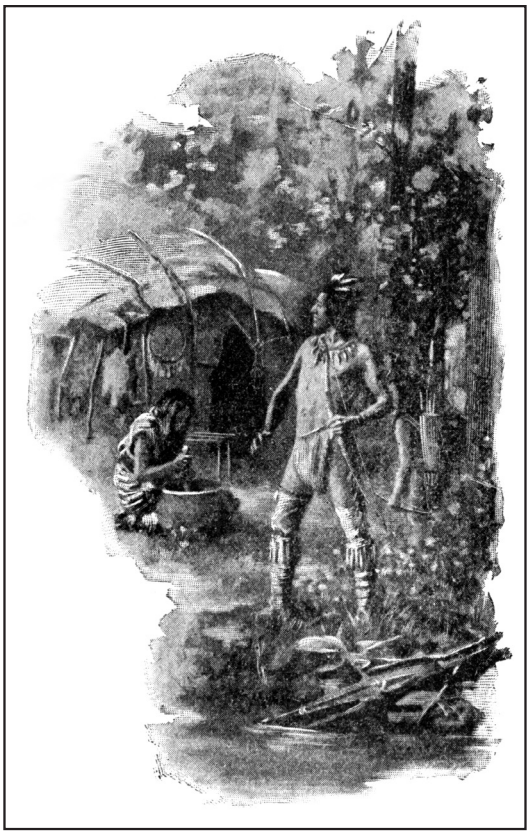
What would our world look like if there were no wildflowers? It is hard to imagine, isn't it? Everywhere we look, from the country roadsides to cracks in city sidewalks to pine forest meadows, Florida has an abundance of wildflowers. After all, it was named *La Florida*, which means "Land of Flowers," by Spanish explorer Ponce de Leon when he arrived in 1513.

It is awesome that there is such a variety of wildflowers that dazzle us with their beauty all across our state. But wildflowers aren't just for looking at. They do much more than look pretty! Besides providing beauty, they also sustain populations of wildlife and provide homes for critters you may not have thought about. Wildflowers prevent soil from washing away, filter pollution from water, and even give us ***medicines*** and foods. When wildflowers disappear, the animals that depend on them disappear too.

Humans also rely on wildflowers for many different purposes. Think about all the things you've learned about wildflowers so far — their parts, how they grow, how they're pollinated, and how they've adapted to survive. All of these amazing features work together to make wildflowers essential to healthy ecosystems and to us!

In this unit, we will be looking at some of the less obvious ***benefits*** of wildflowers, including their ***ethnobotanical*** uses and their roles in the ***environment***. You'll discover why wildflowers are so important to wildlife, to agriculture and to people!

The Importance of Wildflowers



Ethnobotany is the scientific study of the relationship between people and plants, specifically those used by primitive societies for food, medicine and products such as ***textiles***, tools and construction materials for shelter.

Edible* wildflowers**: For centuries, people have been eating native wildflowers and plants. Throughout history, many people have ***foraged for wildflowers, roots, berries, leaves and other plant parts for a large portion of their food. Many of the plants and wildflowers that Ponce de Leon encountered in 1513 provided an important source of food for the ***Indigenous*** people who lived here. Among the edibles were Cocoplum (*Chrysobalanus icaco*) fruit, Saw palmetto (*Serenoa repens*) berries, Cabbage palm (*Sabal palmetto*) hearts and Coontie (*Zamia integrifolia*) roots.

The ***Timucua*** *consumed* a wide variety of ***native plant*** foods. They collected fruits such as Persimmon (*Diospyros virginiana*), Blackberry (*Rubus* spp.), Blueberry (*Vaccinium* spp.) and Pricklypear cactus (*Opuntia* spp.); vegetables such as Wild onions (*Allium canadense*) and Cabbage palm hearts; acorns (*Quercus* spp.) and Hickory (*Carya* spp.) nuts; and grains, including Wild rice (*Zizania aquatica*) and Pigweed (*Amaranthus* spp.). They even made gum from the sap of the Sweetgum (*Liquidambar styraciflua*) tree.

Other Native Americans in Florida ***consumed*** native plants and wildflowers. The diet of the ***Muscogee (Creek)*** in North Florida included nuts from Hickory and Black walnuts (*Juglans nigra*), as well as Crabapples (*Malus angustifolia*) and Groundnuts (*Apios americana*). ***Seminoles*** ate Red mulberries (*Morus rubra*), wild plums (*Prunus* spp.) and grapes (*Vitis* spp.).

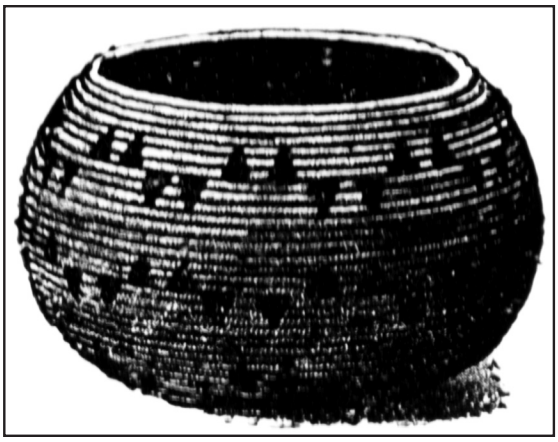
Today, although we in the United States buy most of our food from grocery stores and markets, some people still forage for food in the wild.

Wildflowers used as *medicine*: In the past, almost from the beginning of recorded history, certain plants have been used as medicine. Before there were doctors and pharmacies, people knew the healing powers of wildflowers and other plants for many injuries and illnesses.

Members of the Muscogee tribe treated fever with Partridgeberry (*Mitchella repens*), tonsillitis with Grapevine (*Vitis* spp.), and tuberculosis with Mistletoe (*Phoradendron leucarpum*). The Timucua treated coughs with the inner bark of the Black cherry tree (*Prunus serotina*). They made teas out of Passionflower (*Passiflora* spp.) leaves for relaxation, and from Elderberries (*Sambucus nigra*) to treat what we now know as the common cold. Seminoles used Beautyberry (*Callicarpa americana*) to treat skin conditions, Buttonbush (*Cephalanthus occidentalis*) for stomach and digestive ailments, and Milkwort (*Senega* spp.) to help with breathing issues.

A brief scan of the Internet or a trip to a health food store will reveal many plant-based medicines still available today.

The Importance of Wildflowers



Other uses for wildflowers: Native Americans in Florida used the native vegetation for many everyday items, including construction materials, tools and ***textiles***. Many leaves, grasses, stems and vines were woven into a variety of products: palm fronds into thatching; grasses such as Wiregrass (*Aristida stricta*), Bluestem (*Andropogon* spp.) and Sugarcane (*Saccharum* spp.), and vines such as grape (*Vitis* spp.) into baskets; Cattail (*Typha* spp.) leaves into mats; and other fibrous plants such as Indianhemp into fabric.

Dyes made from plants such as Bloodroot (*Sanguinaria canadensis*), Pokeberry (*Phytolacca american*) and Sumac (*Rhus* spp.) provided color for textiles, crafts, pottery and even hair and skin. Different parts of plants were used to make dye: Beach sunflower (*Helianthus debilis*), Tickseed (*Coreopsis* spp.) and St. John's wort (*Hypericum* spp.) flowers; Elderberry (*Sambucus nigra*), Red mulberry (*Morus rubra*) and Rougeplant (*Rivina humilis*) berries; Red maple (*Acer rubrum*), oak (*Quercus* spp.) and Wax myrtle (*Morella cerifera*) leaves, just to name a few.

Did you know that native wildflowers and plants are still used in many commercial products today? From scented shampoos to fibers in clothing, plant materials are big components in everyday items. Look around your house at tags and labels, and see what types of materials you use that are made from wildflowers. You may be surprised! Next time you go grocery shopping, look for products that use natural components like flowers and plants. Or go "shopping" around your home and see what kind of products you already have that were made from wildflowers.

Other ways in which wildflowers are important: Wildflowers provide ***ecosystem services*** — benefits that nature gives to people and the environment — in many ways.

- **Air quality**: Wildflowers, like all plants, produce oxygen and absorb carbon dioxide.
- **Ecosystem stability**: Different kinds of plants and animals are important to the health of an ecosystem. Wildflowers play an important role in maintaining ***biodiversity***.
- ***Erosion* control**: Soils are held in place by the root systems of wildflowers and other plants. Without them, wind and water would carry the soil away.
- **Water quality**: Wildflowers in wetlands help filter ***pollutants*** from water and hold soil in place, which helps regulate water flow.
- **Wildlife *habitat***: Plants, including wildflowers, provide food and shelter for wildlife.
- **Pollinator support**: Pollinators that play a critical role in plant reproduction rely on wildflowers for nectar and pollen. Wildflowers also serve as "host plants" for butterflies and moths to complete their life cycles.

- **Agriculture**: Wildflowers are key in attracting pollinators and other insects to commercial food crops. This increases the amount of crops successfully yielded in commercial farming, while also attracting insects that aid in pest control. Using native wildflowers can also help improve the quality of the soil and environment where commercial crops are grown.
- **Connectivity of wildlife habitat:** Naturally occurring or planted wildflowers help build pathways for Florida insects and animals. Plants, including wildflowers, provides food and shelter for wildlife.
- **Food webs**: An abundance of wildflowers in an area contributes to the food web and directly influences the lifecycles and migrations of insects, birds, small animals and reptiles.
- **Sense of place**: Wildflowers are the ground floor of the unique ecosystems of Florida that makes our state like no other!

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Pass the Wildflowers, Please!

Objective

Students will be able to demonstrate an understanding of ***edible*** parts and uses of wildflowers using creative writing skills to create a restaurant "menu."

Directions

Students should work in pairs.

1. Tell students they will be designing a meal featuring wildflowers.
2. Give each pair a "Pass the Wildflowers, Please!" worksheet set.
3. Review the informational list that identifies the edible parts of a wildflower (leaves and stems, roots and tubers, fruit and nuts, and flowers).
4. Have student pairs create a menu using items from the list. Instruct them to include a minimum of one item from each "part" of a wildflower.
5. Once they've selected their menu items, have students be creative and add descriptive words to make each menu item sound very appealing. Encourage them to approach it as if they manage a very exclusive restaurant that serves meals featuring wildflowers.
6. Have them write out their menu and descriptions on the worksheet.
7. If time permits, allow students to decorate their menus with illustrations of the flowers used in their creations.
8. Have students present their menus to the class. Students should explain what they have selected and why.

Extension

1. Direct student pairs to use the Internet or the libary to research other edible Florida native wildflowers to add to their menus.
2. Have them present information on the additional species to the class, including what parts are edible.

Materials

- "Pass the Wildflowers, Please!" worksheets (one set per pair)

Standards

Grade 3: ELA.3.C.4.1, ELA.3.C.5.2, SC.3.N.1.1

Grade 4: ELA.4.C.4.1, ELA.4.C.5.2, SC.4.N.1.1

Note: The wildflowers included in this activity are only a few of the Florida wildflowers that are used for food now or have been used in the past.

If possible, you may wish to provide students with field guides or other books that explore Florida's edible wildflowers. Suggestions may be found in the Resource Guide at the end of this section.

Pass the Wildflowers, Please!

Work with a partner to design a meal featuring wildflowers. Include at least one item from each "part" of a wildflower. Choose from the list below or find others from books or the Internet.

Leaves and Stems

- Wild onion (seasoning in cooked vegetables or salads)
- Smilax (cooked greens)
- Pine needles (tea)
- Fern fiddleheads (sautéed)
- Cattails (young shoots eaten raw or in salads)
- Creeping water mint (tea, raw in salads or as garnish)

NEVER eat *any* wild plants without an adult's permission.

Many edible plants closely resemble poisonous plants.

Roots, Bulbs and Tubers

- Cattails (boiled as a vegetable)
- Jack-in-the-pulpit (ground into flour)
- Arrowhead (boiled as a starch or vegetable)
- Sassafras (tea, candy flavoring)
- Wild onion (seasoning in cooked vegetables)

Fruit and Nuts

- Red mulberry (eaten fresh, made into jelly, pie, or sauce)
- Blackberry (eaten fresh, made into jelly or pie)
- Pawpaws (eaten fresh, made into jelly or pie)
- Blueberry (eaten fresh, made into jelly or pie)
- Muscadine or Scuppernong grapes (eaten fresh or made into jelly)
- Elderberry (eaten fresh, made into jelly or syrup)

Flowers

- Yucca (boiled, battered and fried)
- Elderberry (battered and fried, cooked into pancake or biscuit batter)
- Spanish needle (salads, as a garnish)
- Violets (tea, salad)
- Spiderwort (candied, as a garnish)
- Cattails (pollen used as flour for bread, cakes or pancakes; flower stalks boiled and eaten like corn-on-the-cob)

The entries above are only a few of the Florida wildflowers that can be gathered and used for food. You are encouraged to find others to add to your menu. You might do an Internet or library search for Florida edible plants, edible wildflowers of Florida, Florida edible wildflowers, and similar topics. If you do not add "Florida" to your search, you may find plants that do not live in Florida!

Now that you have selected your menu items, it is time to be creative! Pretend that you manage a very exclusive restaurant that serves meals featuring wildflowers. Add descriptive words to make each menu item sound very appealing, such as, "freshly picked," "crisp and juicy," or "dew-misted petals." Each team will add a unique page to the menu. Use the template on the following page as your sample menu page.

Wildflower Menu Selection

by

_____

(Team member names)

Appetizer

Entreé

Sides

Dessert

Beverage

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Unit 7 Activity 2

Dr. Wildflower's Natural Remedies

Objective

Students will be able to identify traditional ***medicinal*** uses of wildflowers using historical context and clues within the worksheet.

Discussion

- Explain to students that, had they lived in the United States in the 1600s, 1700s, or 1800s, they would probably be very familiar with many wildflowers that were used to treat injuries and illnesses.
- For this activity, students will imagine that they are an early settler in the New World. There is no doctor, pharmacy or hospital available for their settlement. Tell them that, upon arriving in the New World, they learned from a Timucuan medicine man that many of the native plants have healing properties that can help sick or injured people.

Directions

1. Provide each student with a set of "Dr. Wildflower's Natural Remedies" worksheets.
2. Discuss the information on page 1 of the worksheet that they will be using for the activity and answer any questions they might have about the plants or illnesses.
3. Have them read the scenarios on page 2 of the worksheet, and instruct them to use the table on page 1 to help them find "cures" for the scenarios.
4. After the worksheets have been completed (and scored, if desired), discuss the answers and then let students create new injuries or illnesses to treat. This could be presented as a group activity in which one student creates a scenario and the rest of the students race to look for a cure.

Materials

- "Dr. Wildflower's Natural Remedies" worksheets (one set per student)

Standards

Grade 4: SC.4.E.6.3, SC.4.N.1.4

Dr. Wildflower's Natural Remedies

If you had lived in the United States in the 1600s, 1700s or 1800s, you would probably be very familiar with many wildflowers that were used to treat injuries and illnesses. For this activity, you will imagine that you are an early settler in the New World. There is no doctor, pharmacy, or hospital available for your settlement.

Upon arriving in the New World, you learn from a Timucuan medicine man that many of the native plants have healing properties that can help sick or injured people.

Here is a list of native wildflowers. (Remember that vines, small bushes, and other plants that have flowers can all be considered wildflowers).

Wildflower	**Disease, illness or injury**
Pink sundew (*Drosera capillaris*)	Skin disorders, warts
Black-eyed Susan (*Rudbeckia hirta*)	Colds, worms, snakebite, swelling, earache
Colicroot (*Aletris* spp.)	Stomach ache, colic, dysentery
Butterflyweed (*Asclepias tuberosa*)	Pleurisy (lung condition), bruises, sore muscles
Witchhazel (*Hamamelis virginiana*)	Bruises sprains, coughs, asthma, insect bites, teething infants, backaches
Wax myrtle (*Morella cerifera*)	Fever, stomach pain, intestinal worms, inflamed tonsils, sore gums
Partridgepea (*Chamaecrista fasciculata*)	Fainting, fatigue, nausea
Skullcap (*Scutellaria* spp.)	Headache
Boneset (*Eupatorium* spp.)	Flu, fever, malaria
Maypop (Passionflower) (*Passiflora* spp.)	Bruises and sores, insomnia, muscle spasm, anti-anxiety
Wild persimmon (*Diospyros virginiana*)	Sore throat, mouth or lip sores, heartburn, toothache
Button snakeroot (*Eryngium yuccifolium*)	Blood disorders, fever, snakebite
Pricklypear cactus (*Opuntia* spp.)	Headache, eye trouble, insomnia
Greenbrier (Smilax vine) (*Smilax* spp.)	Health tonic, poultice for sore legs, skin ulcers
Beautyberry (*Callicarpa americana*)	Colic, dizziness
Devil's walkingstick (*Aralia spinosa*)	Rattlesnake bite

Dr. Wildflower's Natural Remedies

After you read through some of the many uses for Florida wildflowers as medicine to treat illnesses, continue on to the text below to "treat" patients that have come to you for help!

Read each scenario below and "prescribe" medicine made from wildflowers that you think will help.

1. A young mother brings her baby to you; the baby has been crying for hours. You diagnose the baby with colic (stomach pains). What two wildflowers could you prescribe for the mother to give to her baby?

   _____ and _____

2. A young boy comes to you to ask you to get rid of a large wart growing on his finger. You decide to apply a remedy used by Native Americans, a wildflower named.

   _____

3. Flu and high fevers seem to be spreading throughout your settlement. You need to stock up on medicinal plants to help treat your patients. The two wildflowers you need to gather are

   _____ and _____

4. You have just prescribed a poultice (dressing) of Devil's walkingstick for a man that was brought to you. What was most likely wrong with him?

   _____

5. Many people come in complaining of headaches. You keep a good supply of

   _____ and _____

6. Describe below an illness or injury that you could treat, and list the Florida wildflower that you would use to treat it.

   _____

   _____

   _____

   _____

Dr. Wildflower's Natural Remedies

After you read through some of the many uses for Florida wildflowers as medicine to treat illnesses, continue on to the text below to "treat" patients that have come to you for help!

Read each scenario below and "prescribe" medicine made from wildflowers that you think will help.

1. A young mother brings her baby to you; the baby has been crying for hours. You diagnose the baby with colic (stomach pains). What two wildflowers could you prescribe for the mother to give to her baby?

   colicroot and American beautyberry

2. A young boy comes to you to ask you to get rid of a large wart growing on his finger. You decide to apply a remedy used by Native Americans, a wildflower named.

   pink sundew

3. Flu and high fevers seem to be spreading throughout your settlement. You need to stock up on medicinal plants to help treat your patients. The two wildflowers you need to gather are

   wax myrtle and boneset

4. You have just prescribed a poultice (dressing) of devil's walkingstick for a man that was brought to you. What was most likely wrong with him?

   He was bitten by a snake.

5. Many people come in complaining of headaches. You keep a good supply of

   skullcap and pricklypear cactus

6. Describe below an illness or injury that you could treat, and list the Florida wildflower that you would use to treat it.

   Answers will vary.

Wildflowers are Important to Me

Objective

Through group and class discussions, students will be able to demonstrate an understanding of the general benefits of wildflowers. Students will then use exploratory creative writing to reflect personal opinions on the importance of wildflowers.

Materials

- "Why Wildflowers are Important to Me" worksheet (one per student)

Standards

Grade 3: ELA.3.C.3.1

Grade 4: ELA.4.C.3.1, SC.4.L.17.4

Directions

Students should work in groups.

1. Ask students to list all of the benefits of wildflowers. (Define "benefit" if necessary.) Since the class has just studied wildflowers used as medicine and as food, these two will almost certainly be on the list. Encourage the students to dig deeper into their thoughts to find other good things about wildflowers. Use the discussion questions below to help.
2. Add the following to the class list if not suggested by students:
   - Wildflowers help reduce stress.
   - Wildflowers help clean the air.
   - Wildflowers help lower background noise.
   - Wildflowers help stabilize the ecosystem.
   - Wildflowers contribute to a healthy lifestyle.
   - Wildflowers inspire our creativity.
3. Provide each student with a "Why Wildflowers are Important to Me" worksheet set. Have them be creative and express how or why wildflowers are important to them. They may write a song, poem, narrative or other descriptive expression. Have them come up with a creative title for their paper. They may also draw a picture to illustrate their writing.
4. Leave the list and responses up to help students remember all of the benefits that we get from wildflowers.

Discussion

Discuss each of the benefits and chart student responses to the following questions:

- How do you think wildflowers can help reduce stress?

  Let the students add their ideas to the discussion. If necessary, lead their responses with suggestions such as:

  - Being close to nature makes people feel more relaxed and at ease.
  - Most people have an instinctive need to be in natural settings.
  - Fields or small patches of wildflowers make us happy because of their beauty."

  Add any other reasons that come from you or the students.

(*Continued on following page.*)

- How do wildflowers help clear the air?

  Solicit ideas from the students. Be sure to include:

  - Wildflowers absorb some toxins into their roots and convert them into food.
  - They remove carbon dioxide from the air and convert it into oxygen.
  - They increase humidity.
  - Wildflowers reduce airborne dust levels.
  - They keep air temperatures down.

- How do wildflowers help lower background noise?

  Begin a class discussion with students expressing their ideas. Your summary should include that leaves and flowers can absorb or reflect background noise so that nearby road or city noises are softened.

- How do wildflowers help stabilize the ecosystem?

  Again, lead a class discussion that allows students to express their ideas. Be sure that your conclusion includes that the wildflower community is an important part of the natural food web, and other plants and animals might perish without the wildflowers.

- How do wildflowers help contribute to a healthy lifestyle?

  Lead a discussion and try to encourage students to include walking to enjoy the beauty of wildflowers, or tending a wildflower garden, and refer back to some of the other things listed above like cleaner air, reduction of stress (and thereby fewer stress-related diseases), and food/medicinal uses.

- How do wildflowers inspire creativity?

  Allow students to express their ideas on what creativity is and how it might be influenced by wildflowers. Be sure that the following ideas come out:

  - Artists often choose to paint wildflowers.
  - Songwriters write about flowers.
  - Poets feature wildflowers in many lyrical or poetic descriptions.
  - Children often pick bouquets of wildflowers for their mothers.
  - Many people have picked wildflowers to bring into their house to beautify an area.

Why Wildflowers are Important to Me

Use your creativity to write a song, poem or description or draw a picture of how wildflowers are important to you. You can use our class discussion notes to help you remember all of the benefits we get from wildflowers. Include a title on your paper that is appropriate for your topic.

Title _____

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Unit 7 Activity 4 Web Quest

Get to Know a Wildflower

Objective

Students will be able to research a particular wildflower and its cultural uses using the Internet or library resources.

Discussion

Tell students they will be selecting a Florida native wildflower to research.

Directions

1. Direct students to use the Internet or other reference and resource materials to research a Florida native wildflower that has historic and cultural uses. Have them take notes on the plant's natural habitat and features. Tell them to also look for information on how the wildflower may be used today. Have them keep track of the sources they use.
2. Have students write a detailed and organized report on the wildflower.
3. Have them design a presentation in which they introduce their wildflower to the class. Presentations can be done on the computer or as poster sessions.

Standards

Grade 3: ELA.3.C.1.4, ELA.3.C.2.1, ELA.3.C.3.1, ELA.3.C.4.1, ELA.3.C.5.2, SC.3.N.1.1

Grade 4: ELA.4.C.1.4, ELA.4.C.2.1, ELA.4.C.3.1, ELA.4.C.4.1, ELA.4.C.5.2, SC.4.N.1.1

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Unit 7 Activity 5

Wildflower Walkabout

Objective

Students will be able to locate, observe and identify wildflowers growing on campus using observation skills.

Discussion

- Tell students that they are going to do a Wildflower Walkabout to try to identify the wildflowers that are growing right here on the school grounds.
- Ask if anyone remembers seeing flowers growing anywhere? Invite them to discuss where they've seen wildflowers
- Tell them they will use their best scientific observation skills to find lots of wildflowers that they haven't seen before.

Directions

Students should work in pairs or teams.

1. Give each student a set of "Wildflower Walkabout" worksheets.
2. Lead the students to pre-selected areas on the campus. Let them spread out to search for wildflowers, but remind them that they must stay in your sight at all times.
3. Instruct them to try and find one that they've not seen before, and to record the information about that wildflower on their worksheet. This can include drawing or making notes about what they see. If students have and are permitted to use cameras, they may prefer to take photos of the wildflowers.
4. Remind them that some wildflowers are very tiny, so they will need to look carefully.
5. If feasible, rotate the groups around the area so they each have access to the different species that are present.
6. After the students have had sufficient time to explore the area, take them back to the classroom.

Materials

- "Wildflower Walkabout" worksheets (one per student)
- measuring tape (one per pair or team)

Standards

Grade 3: SC.3.N.1.1, SC.3.N.1.2, SC.3.N.1.3

Grade 4: SC.4.N.1.1, SC.4.N.1.2, SC.4.N.1.4, SC.4.N.1.5, SC.4.N.1.6

Note: You should walk the campus before the activity to find areas where you can locate wildflowers (fence line, near buildings, in a field or playground, near the parking lot, along ditches beside the school grounds, behind the cafeteria, etc.).

Areas on your school grounds that are not tended or landscaped would be the best places to take the students.

Some wildflowers are very tiny, so the students will have to look carefully.

Discussion

Lead a class discussion and chart the results for the students. You can ask such questions as:

- What colors were the wildflowers you found?
- What sizes were the wildflowers you found?
- In which microhabitats did you find the most wildflowers?
- What kinds of wildflowers were found most often?
- Remind students that wildflowers often go unnoticed because of their size and location and ask how that could be important for their survival.

Wildflower Walkabout

Your task today is to find as many kinds of wildflowers growing on our school grounds as possible. As you find a wildflower you haven't seen before, describe its color and shape, its location on campus, and the microhabitat in which it is growing.

Tips for observing wildflowers

Microhabitat Climate Descriptions

Sunny all day
Sunny part of the day
Shady all day
Sometimes underwater
Other:

Location

Near a fence
Near a building
On a field or playground
In a mowed, grassy area
In an unmowed area
Near a parking lot
Near or in a ditch
Other:

Size and Shape of the Wildflower/Plant

Small, close to ground
Small, spreading across the ground
Medium-sized, 4 to 12 inches tall
Large, over 12 inches tall
Other:

Wildflower Walkabout Observation Sheet

For each type of flower located, describe the flower's color, shape, location and microhabitat.

Flower #	Flower Description				
	Flower name (Take a guess)	**Color**	**Size/Shape**	**Location**	**Microhabitat**
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

Glossary

benefit: a service provided; something that promotes or enhances well-being; an advantage

biodiversity: the variety of different plants, animals, and other living things in an area; greater biodiversity makes ecosystems healthier and more stable

consume: to eat, drink or ingest food or drink

ecosystem services: the many benefits that nature provides to people, such as clean air and water, pollination of crops, and prevention of soil erosion

edible: something that can be eaten, especially by humans

environment: the surroundings or conditions in which a person, animal, or plant lives; the natural world

erosion: the process of wearing away by wind, water, or other natural agent

ethnobotany: the scientific study of the relationship between people and plants

forage: to search for food

habitat: the natural home or environment in which an organism (plant or animal) lives

Indigenous: originating or occurring naturally in a particular place

medicinal plant: a plant that contains substances used to prevent or treat illness; many modern medicines originally came from plants

Muscogee (Creek): Native American people who lived in the Southeastern United States, including parts of North Florida. The name "Creek" was given to them by English settlers; the name they use for themselves is Muscogee.

Note: The Muscogee were a confederation of as many as 100 separate tribes.

native plant: any plant that is indigenous to an area

Note: In Florida, a native plant is any plant that naturally occurred there at the time of Columbus' arrival in the New World.

pollutant: something that contaminates, dirties or harms air, water or a natural environment

Seminole: Native American people (namely Muscogee and Miccosukee) who migrated into the Florida peninsula and established their own identity; many still live in Florida today

textile: a type of cloth or woven fabric

Timucua: Native American people who lived in Northeast and North Central Florida

Tip

Turn the vocabulary words into a Jeopardy-style game for a fun, interactive way to review with your students. Free online templates are available at JeopardyLabs.com, or you can download templates for PowerPoint or Google Slides.

The Importance of Wildflowers Crossword Puzzle

Use the clues and the Word Bank to fill in the puzzle on the next page.

Word Bank

benefit	environment	habitat	pollutant
biodiversity	erosion	indigenous	Seminole
consume	ethnobotany	Muscogee	textile
edible	forage	native plant	Timucua

Across

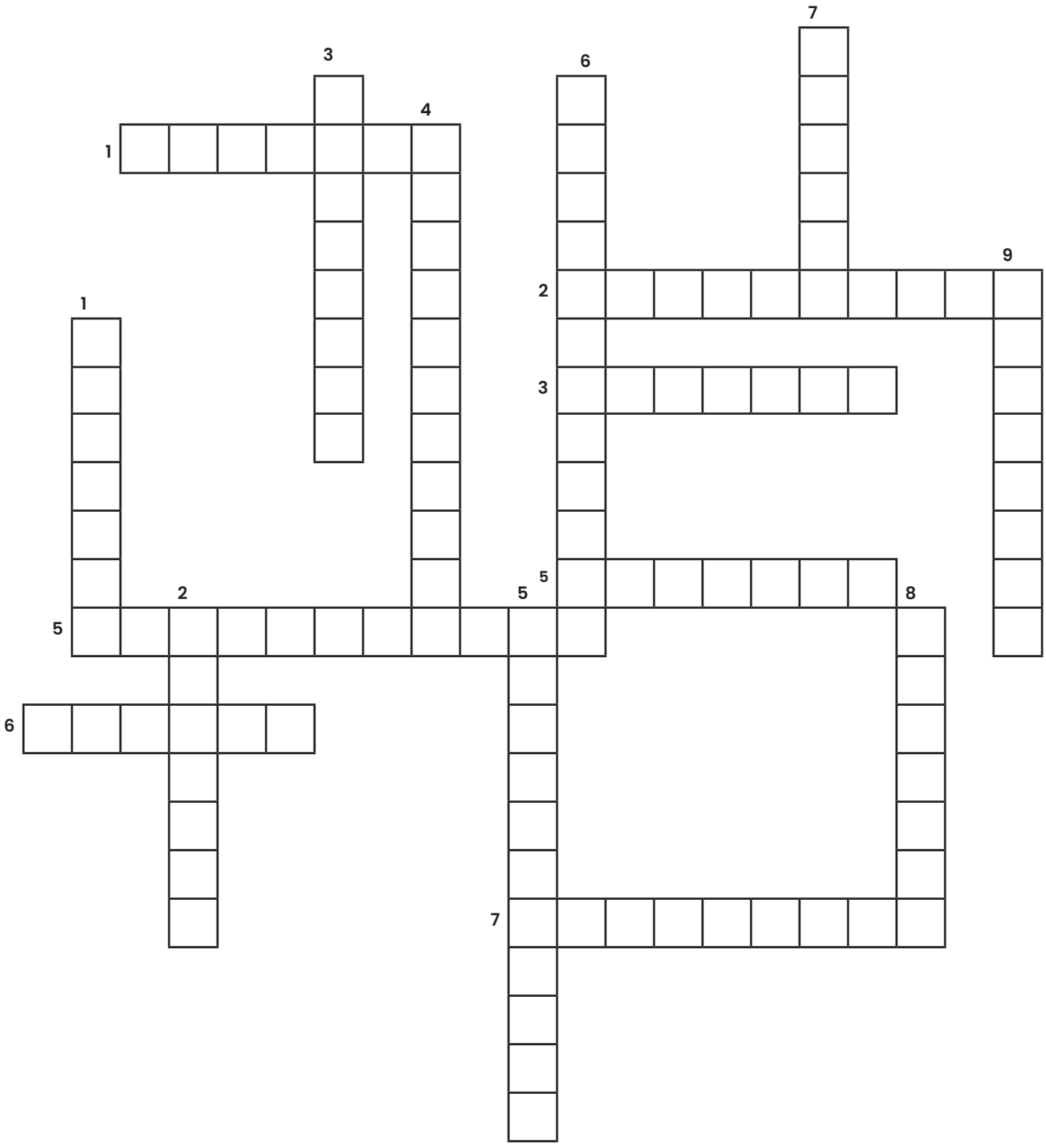
1. To eat, drink or ingest food or drink.
2. Originating or occurring naturally in a particular place.
3. The process of wearing away by wind, water, or other natural agent.
4. Native American people who lived in Northeast and North Central Florida. Their presence dates back to between 1100 and 1300 AD.
5. The scientific study of the relationship between people and plants.
6. Something that can be eaten, especially by humans.
7. Something that contaminates, dirties or harms air, water or a natural environment.

Down

1. A type of cloth or woven fabric.
2. The natural home or environment in which an organism (plant or animal) lives.
3. Native American people who lived in the Southeastern United States, including parts of North Florida.
4. The natural world, or the surroundings or conditions in which a person, animal, or plant lives.
5. Any plant that is indigenous to an area. In Florida, a native plant is any plant that naturally occurred there at the time of Columbus' arrival in the New World.
6. A range or variety of plant and animal species.
7. To search for food.
8. A service provided or something that promotes or enhances well-being; an advantage.
9. Native American people (namely Muscogee and Miccosukee) who migrated into the Florida peninsula and established their own identity. Many still live in Florida today.

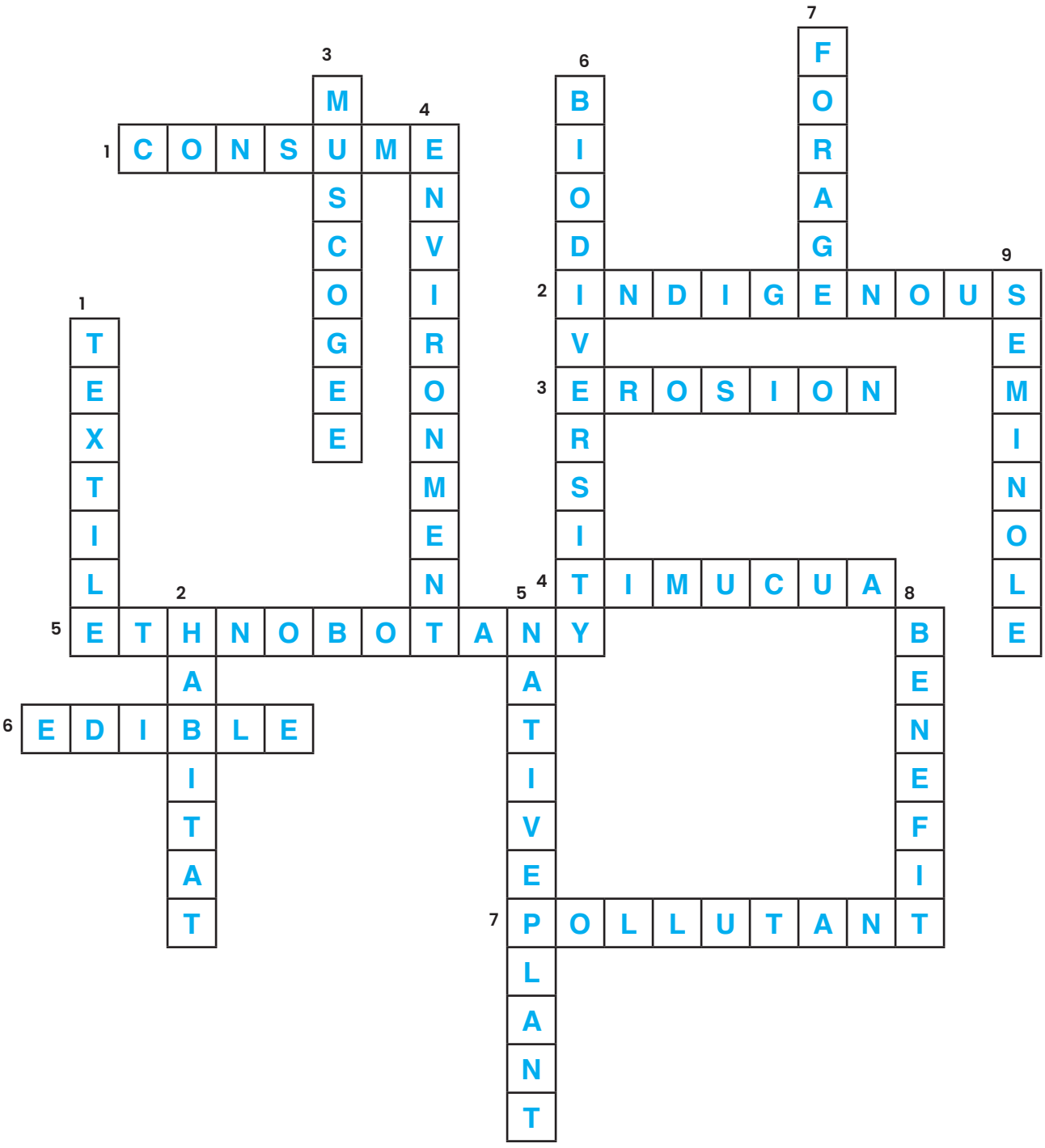
The Importance of Wildflowers Crossword Puzzle

Use the clues and the Word Bank on the previous page to fill in the puzzle.



The Importance of Wildflowers Crossword Puzzle

Use the clues and the Word Bank to fill in the puzzle on the next page.



Resources

Literary connections

Acorn Pancakes, Dandelion Salad, and Other Wild Dishes by Jean Craighead George

Big Yellow Sunflower by Frances Barry

Citizen Scientists: Be a Part of a Scientific Discovery from Your Own Backyard by Loree Griffin Burns and Ellen Harasimowicz

Claire Goes Foraging by Margaret Aycock

The Curious Garden by Peter Brown

The Garden Next Door by Collin Pine

Hare and the Big Green Lawn by K.C. Robey and L MacDougall

Jack's Garden by Henry Cole

Lily's Pesky Plant by Kirsten Larsen

Miss Lady Bird's Wildflowers: How a First Lady Changed America by Kathi Appelt

Miss Rumphius by Barbara Cooney

Mother Earth and Her Children by Sybil Van Offers and S. Shoen-Smith

Mrs. Peanuckle's Flower Alphabet by Mrs. Peanuckle

My Wild Garden: An introduction to edible and non-edible wild plants by Ruth Johnson

Native American Gardening: Stories, Projects and Recipes for Families by Micahel J. Caduto

Nature's Pharmacy: Potent Medicines from Plants by Renee A. Kidd and J.S. Kidd

On Meadowview Street by Henry Cole

Pharmacy in the Forest: How Medicines Are Found in the Natural World by Fred Powledge

Restoring Wetlands (Let's Explore Science) by Jeanne Sturm

The Secret Garden of George Washington Carver by Gene Barretta

We are the Gardeners by Joanna Gaines

Wetlands by Lynn M. Stone

Wetlands by Peter Benoit

What Does the Bunny See? by Linda Sue Park

The Wild Flower Book for Young People by Alice Lounsberry

Reference books

The A to Z Book of Weeds and Other Useful Plants by Michael P. Earney

The Calusa and Their Legacy: South Florida People and Their Environments by Darcie A. Macmahon and William H. Marquardt

Complete Guide to Florida Wildflowers by Roger Hammer

(Continued on following page.)

The Crafts of Florida's First People by Robin C. Brown

The Creek (First Books — Indians of the Americas) by Shirlee Petkin Newman

Field Guide to Edible Wild Plants of Eastern and Central North America by Lee Allen Peterson

Florida Wildflowers in Their Natural Communities by Walter Kingsley Taylor

Florida's Edible Wild Plants: A Guide to Collecting and Cooking by Peggy Sias Lantz

Florida's Ethnobotany by Daniel F. Austin

The Flower Hunter: William Bartram, America's First Naturalist by Deborah Kogan Ray

Greening School Grounds — Creating Habitats for Learning by Tim Grant and Gail Littlejohn

Healing Plants: Medicine of the Florida Seminole Indians by Alice Micco Snow and Susan Enns Stans

Homes for Wildlife: A Planning Guide for Habitat Enhancement on School Grounds by Marilyn C. Wyzga

The Seminole by Liz Sonneborn

Southeast Foraging: 120 Wild and Flavorful Edibles from Angelica to Wild Plums by Chris Bennett

Surviving the Wilds of Florida by Reid Tillery

The Timucua by Emily J. Dolbear and Peter Benoit

Websites and other web resources

50 Common Native Plants Important In Florida's Ethnobotanical History by Ginger M. Allen, Michael D. Bond, and Martin B. Main
www.growables.org/informationVeg/documents/50NativePlamtsEthno.pdf

Eat the Weeds by Green Dean
www.eattheweeds.com

Florida Wildflower Foundation (plant profiles, photos and other resources on Florida natives)
www.FlaWildflowers.org

Florida's Wildflowers and Butterflies (Florida Museum of Natural History)
www.FloridaMuseum.ufl.edu/wildflowers/wildflower-search

iNaturalist SEEK (image recognition app for identifying plants and animals)
www.iNaturalist.org/pages/seek_app

Lady Bird Johnson Wildflower Center (national database; search by state, family or habitat)
www.Wildflower.org/plants-main

Native American Ethnobotany
naeb.brit.org

Wildflowers — A Growing Part of Florida History
www.FlaWildflowers.org/wildflower-ethnobotany