FLORIDA Wildflower FOUNDATION

Unit 8

Wildflower Identification

Overview

Learning to identify wildflowers connects students directly to the natural world around them. By observing flower shapes, leaf patterns, and other distinctive features, students become plant detectives who can recognize and name the wildflowers in their communities. This unit provides hands-on practice with identification skills that students can use throughout their lives to explore and appreciate Florida's botanical diversity.

After learning about flower parts, life cycles, adaptations and ecological relationships in earlier units, students are now equipped with the vocabulary and observational skills needed for accurate plant identification. This unit transforms previous learning into practical field skills.

Activities

1. Identifying Flower Shapes
2. Identifying Leaf Shapes
3. Which Yellow Flower Are You?
4. Wildflower Hunt

Vocabulary

annual
compound leaf
field guide
flower arrangement
flower shape
growth habit
habitat
identification key
leaf arrangement
leaf margin
leaf shape
life cycle
perennial
petal
simple leaf

Vocabulary words are italicized within the introduction text and activities.

Standards

Grade 3: SC.3.L.14.1, SC.3.N.1.1, SC.3.N.1.2, SC.3.N.1.3, SC.3.N.1.5, SC.3.N.1.6

Grade 4: SC.4.L.16.2, SC.4.L.16.4, SC.4.L.17.4, SC.4.N.1.1, SC.4.N.1.2, SC.4.N.1.3, SC.4.N.1.4, SC.4.N.1.5, SC.4.N.1.6, SC.4.N.1.7

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Unit 8

Wildflower Identification

Introduction

Being able to identify plants and animals in natural areas or gardens is a rewarding hobby — and also an important scientific skill. Learning wildflower names and life cycles helps you understand how everything is connected in a living web of life. You can identify plants in the field or take photos to study later.

The flower of a wildflower can help you identify it:

- Flower color and ***petals*** – Note the flower color(s) and count its petals.
- ***Flower shape*** – Is it round and flat, cup- or funnel-shaped, tubular or ray-like?
- ***Flower arrangement*** – Is there one flower per stem, or are there clusters along a stem?

Leaves are also important for identification. Consider:

- ***Leaf shape*** – Linear, elliptic, oval, lance-shaped, heart-shaped, needle-like
- ***Leaf margins*** – Entire, toothed or lobed
- ***Leaf arrangement*** – Opposite, alternating or whorled. Leaves may also be basal (at the bottom of the stem), spaced along the stem, or clustered at the top.

Growth habit describes the plant's overall form: upright, branching, stemless, thorny, climbing, twining or aquatic.

Life cycles vary. ***Annual*** wildflowers live for one growing season. ***Perennials*** live for several years. Some may seem to disappear after flowering, but their roots survive underground and send up new growth in spring.

Habitat is where the plant naturally occurs, such as woodlands, flatwoods, prairies, marshes, swamps, scrub, coastal dunes or sandhills.

Wildflower Identification Resources

Florida wildflower ***identification keys***, or ***field guides***, can help you identify wildflowers by comparing a blooming plant with color photographs. Guides usually include a plant's Latin name and common name. They may also include its bloom season and where you are most likely to find it in nature.

Field guides may list other interesting facts, such as how the plant got its name or its place in Florida history.

Identification keys are used to identify plants by choosing between statements that describe plant parts, like flowers or leaves. Botanists use keys to accurately describe wildflowers and place them in scientific families by genus and species.

Some computer websites and apps are devoted to identifying Florida wildflowers or wildflower photography. They can be accessed at home or while you travel. Submit a photo on your computer or phone of a plant you find and search for its name. Try the iNaturalist or SEEK apps – they can also help you identify insects, reptiles and birds!

The Florida Wildflower Foundation also has a gallery of information on wildflowers at Flawildflowers.org/plant-profiles.

One of the best ways to learn about wildflowers is to go on a nature hike at a Florida park with a ranger or naturalist who can point out plants and tell you about them.

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Unit 8 Activity 1

Identifying Flower Shapes

Objective

Students will be able to identify common ***flower shapes*** and explain how these shapes may affect pollination, growth, and survival.

Materials

- "Identifying Flower Shapes" worksheets (one per student/pair)

Standards

Grade 3: SC.3.L.14.1, SC.3.N.1.1, SC.3.N.1.6

Grade 4: SC.4.L.16.2, SC.4.L.17.4, SC.4.N.1.1

Directions

Students may work individually or in pairs.

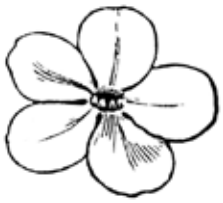
1. Review with students how to recognize different flower shapes (round, tubular, funnel-shaped, etc.).
2. Give each student an "Identifying Flower Shapes" worksheet and have students complete it.
3. Check student work, clarifying any misidentified shapes.
4. Lead a class discussion using the worksheet's inference question and the prompts below. Encourage students to connect flower shape to pollination and survival.

Discussion

- How might the flower shape influence which insects, birds or other wildlife visit the flower? Which shapes might be easiest for bees, butterflies, hummingbirds or beetles to use?
- How might environmental factors (such as wind, rainfall, sun exposure or available pollinators) influence flower shape over time?
- Why might having a variety of flower shapes in an ecosystem be beneficial?

Identifying Flower Shapes

Draw a line to connect each flower with its appropriate shape description.



BELL-SHAPED

TUBULAR

RAY-LIKE PETALS

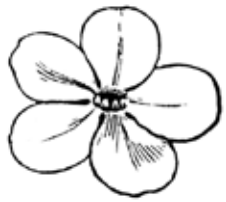
FUNNEL-SHAPED

ROUND and FLAT

Look at the shape of each flower. Why do you think flowers adapted to have these different shapes? How might this help the flowers with their survival?

Identifying Flower Shapes

Draw a line to connect each flower with its appropriate shape description.



BELL-SHAPED

TUBULAR

RAY-LIKE PETALS

FUNNEL-SHAPED

ROUND and FLAT

Look at the shape of each flower. Why do you think flowers adapted to have these different shapes? How might this help the flowers with their survival?

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Unit 8 Activity 2

Identifying Leaf Shapes

Objective

Students will be able to identify common leaf shapes and explain how these shapes may affect wildflower growth, photosynthesis and survival.

Materials

- "Identifying Leaf Shapes" worksheets (one per student/pair)

Standards

Grade 3: SC.3.L.14.1, SC.3.N.1.1, SC.3.N.1.6

Grade 4: SC.4.L.16.2, SC.4.L.17.4, SC.4.N.1.1

Directions

Students may work individually or in pairs.

1. Review with students how to recognize different leaf shapes (linear, oval, lance-shaped, heart-shaped, etc.).
2. Distribute the "Identifying Leaf Shapes" worksheet and have students complete it individually or in pairs.
3. Check student work, clarifying any misidentified shapes.
4. Lead a class discussion using the worksheet's inference question and the prompts below. Encourage students to connect leaf shape to both plant survival and ecological interactions.

Discussion

- How might the shape of leaves affect the way insects or other animals use the plant (for food, shelter or camouflage)?
- How can the environment (such as sunlight, water, wind or soil conditions) influence the shape of leaves?
- How does leaf shape impact photosynthesis and a plant's ability to capture sunlight?
- Why might it be beneficial for different wildflowers to have different leaf shapes in the same habitat?

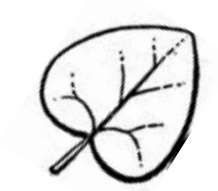
Identifying Leaf Shapes

Draw a line to connect each leaf with its appropriate shape description.

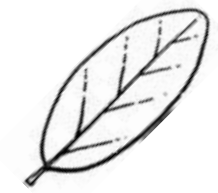
ELLIPTIC

LANCE-SHAPED

OVAL



LINEAR

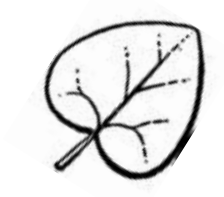


HEART-SHAPED

Make an inference: How might different leaf shapes help plants survive and grow?

Identifying Leaf Shapes

Draw a line to connect each leaf with its appropriate shape description.



ELLIPTIC

LANCE-SHAPED

OVAL

LINEAR

HEART-SHAPED

Make an inference: How might different leaf shapes help plants survive and grow?

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Unit 8 Activity 3

Which Yellow Flower Are You?

Objective

Students will be able to work collaboratively to observe, describe and record characteristics of wildflowers, then use those observations to identify wildflowers accurately.

Materials

- "Which Yellow Flower Are You?" worksheets (one per pair)
- "Which Yellow Flower Are You?" visual presentation (click to download)

Standards

Grade 3: SC.3.L.14.1, SC.3.N.1.2, SC.3.N.1.3, SC.3.N.1.5, SC.3.N.1.6

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

Directions

Students should work in pairs.

1. Review wildflower identifiers students have learned in this unit (flower shape, leaf shape, leaf margin, growth habit, etc.).
2. Divide students into pairs. Assign one student as the Observer and the other as the Identifier.
3. Explain the roles:
   - Observers will look at flower pictures shown by the teacher and record detailed descriptions.
   - Identifiers will face away while pictures are shown and later use their partner's observations to match descriptions to the correct flower.
4. Give each Observer a "Which Yellow Flower Are You?" worksheet.
5. Open the "Which Yellow Flower Are You" visual presentation. Show slides 2–5 one at a time, displaying each for about 2 minutes. Observers write down as many details as they can (petal number, shape, color patterns, leaf type, etc.).
6. After all flowers have been shown, display slides 1–4 together (or cycle through them) so Identifiers can now see all the numbered flowers at once.
7. Observers share their notes one description at a time. Identifiers use these clues to match each description with the correct picture. Observers record their partner's guesses on the worksheet.
8. Once all guesses are recorded, advance to slides 6-9 to reveal the plant names so pairs can check their answers.

Discussion

- Identifiers: Which types of descriptions were most useful in helping you identify the flowers? Which were more difficult to use?
- Observers: What strategies helped you record good observations? Did your approach change as you saw more flowers?
- How were different pairs' observations alike or different? What does that tell you about how people observe?
- What wildflower features might you focus on more closely next time?

Note: Student recordings can highlight which plant features may need further review before moving on.

Which Yellow Flower Are You?

#1 Observer Notes **Identifier guess:**	**#2 Observer Notes** **Identifier guess:**
#3 Observer Notes **Identifier guess:**	**#4 Observer Notes** **Identifier guess:**

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Unit 8 Activity 4

Wildflower Hunt

Objective

Students will be able to use observation and reference materials to identify and classify wildflower species.

Directions

1. Give each student a "Wildflower Hunt" worksheet and a "Wildflower and Leaf Forms" handout.
2. Discuss new vocabulary words and have students share ways to determine the meaning of challenging words. Use word parts and motions to help remember the word meanings before beginning the activity. For example, spin hands around to illustrate *whorled*, tap the ground to illustrate *basal*.
3. Take students outside to an area where wildflowers are growing. (Survey the campus to find a suitable area prior to taking students outside.)
4. Have students locate individual wildflowers and use the worksheet to record their observations. Students should use their knowledge of wildflower parts to help them document what they see.
5. Return to the classroom and have students use online resources and ***field guides*** to identify the wildflowers they observed.

Materials

- "Wildflower Hunt" worksheets (one per student)
- "Wildflower and Leaf Forms" handout (one per student)
- clipboards
- online resources or field guides

Standards

Grade 3: SC.3.L.14.1, SC.3.N.1.1, SC.3.N.1.3, SC.3.N.1.6

Grade 4: SC.4.L.16.4, SC.4.N.1.1, SC.4.N.1.3, SC.4.N.1.4, SC.4.N.1.6, SC.4.N.1.7

Wildflower Hunt

Visit an area on campus where wildflowers are in bloom. Use the Wildflower Identification chart on the next page to describe the wildflowers you see**.**

Flower color: _____

Number of petals: _____

Flower shape: _____

Flower arrangement: _____

Leaf shape: _____

Leaf margin: _____

Leaf arrangement: _____

Draw your wildflower below.

Use your observations and resources to find the name of your wildflower.

_____

Flower color: _____

Number of petals: _____

Flower shape: _____

Flower arrangement: _____

Leaf shape: _____

Leaf margin: _____

Leaf arrangement: _____

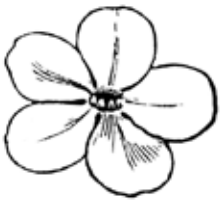
Draw your wildflower below.

Use your observations and resources to find the name of your wildflower.

_____

Wildflower and Leaf Forms

FLOWER SHAPE



simple

composite

funnel-shaped

tubular

bell-shaped

FLOWER ARRANGEMENT

1 per stem (solitary)

many per stem

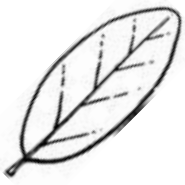
LEAF TYPE

simple

compound

LEAF SHAPE

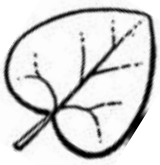
linear



elliptic

oval

lance-shaped



heart-shaped

needle-like

LEAF MARGIN

entire (smooth)

toothed

lobed

LEAF ARRANGEMENT

opposite

alternate

whorled

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Glossary

annual: a plant that lives for one growing season

compound leaf: a leaf made up of two or more smaller leaflets attached to a single leaf stem; looks like several leaves but is actually one leaf

field guide: a book or resource with pictures and descriptions that helps people identify plants, animals or other things found in nature

flower arrangement: the pattern of how flowers are attached to a stem; flowers can be single (one flower per stem), clustered (many flowers grouped together), or arranged in other patterns like spikes or umbels

flower shape: the form of a flower (for example, round, tubular or funnel-shaped)

growth habit: the way a plant grows, such as upright, climbing or branching

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

identification key: a tool that helps identify plants by asking a series of yes/no questions about observable features like leaf shape, flower color or stem type

leaf arrangement: the pattern of how leaves grow on a stem; can be opposite (paired), alternate (staggered), whorled (in a circle around the stem) or basal in a ring at the base of the stem)

leaf margin: the edge of a leaf; can be smooth, toothed (like a saw), lobed or wavy

leaf shape: the outline or form of a leaf blade; common shapes include oval, heart-shaped, lance-shaped (long and narrow), round, triangular or lobed (with rounded sections)

life cycle: the series of steps or processes in which a wildflower grows from seed to young plant (seedling) to mature plant that then produces seeds

perennial: a plant that lives for many years

petal: the colorful parts of the flower that often attract pollinators

simple leaf: a leaf with one blade attached to the stem; the blade might be lobed or divided, but it's still one piece

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.

Wildflower Identification Definition Match

Match the vocabulary words in the Word Bank to their definitions.

Word Bank

annual	growth habit	leaf shape
compound leaf	habitat	life cycle
field guide	identification key	perennial
flower arrangement	leaf arrangement	petal
flower shape	leaf margin	simple leaf

_____ the series of steps or processes in which a wildflower grows from seed to young plant (seedling) to mature plant that then produces seeds

_____ the way a plant grows, such as upright, climbing or branching

_____ the form of a flower; (for example, round, tubular or funnel-shaped)

_____ the pattern of how leaves grow on a stem; can be oopposite (paired), alternate (staggered), whorled (in a circle around the stem) or basal in a ring at the base of the stem)

_____ a plant that lives for one growing season

_____ the outline or form of a leaf blade; common shapes include oval, heart-shaped, lance-shaped (long and narrow), round, triangular or lobed (with rounded sections)

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

_____ the colorful parts of the flower that often attract pollinators

_____ the edge of a leaf; can be smooth, toothed (like a saw), lobed or wavy

_____ a leaf made up of two or more smaller leaflets attached to a single leaf stem; looks like several leaves but is actually one leaf

_____ a tool that helps identify plants by asking a series of yes/no questions about observable features like leaf shape, flower color or stem type

_____ a plant that lives for many years

_____ a book or resource with pictures and descriptions that helps people identify plants, animals or other things found in nature

_____ a leaf with one blade attached to the stem; the blade might be lobed or divided, but it's still one piece

_____ the pattern of how flowers are attached to a stem

Wildflower Identification Definition Match

Match the vocabulary words in the Word Bank to their definitions.

Word Bank

annual	growth habit	leaf shape
compound leaf	habitat	life cycle
field guide	identification key	perennial
flower arrangement	leaf arrangement	petal
flower shape	leaf margin	simple leaf

life cycle	the series of steps or processes in which a wildflower grows from seed to young plant (seedling) to mature plant that then produces seeds
growth habit	the way a plant grows, such as upright, climbing or branching
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leaf arrangement	the pattern of how leaves grow on a stem; can be oopposite (paired), alternate (staggered), whorled (in a circle around the stem) or basal in a ring at the base of the stem)
annual	a plant that lives for one growing season
leaf shape	the outline or form of a leaf blade; common shapes include oval, heart-shaped, lance-shaped (long and narrow), round, triangular or lobed (with rounded sections)
habitat	the natural home or environment in which an organism (plant or animal) lives
petal	the colorful parts of the flower that often attract pollinators
leaf margin	the edge of a leaf; can be smooth, toothed (like a saw), lobed or wavy
compound leaf	a leaf made up of two or more smaller leaflets attached to a single leaf stem; looks like several leaves but is actually one leaf
identification key	a tool that helps identify plants by asking a series of yes/no questions about observable features like leaf shape, flower color or stem type
perennial	a plant that lives for many years
field guide	a book or resource with pictures and descriptions that helps people identify plants, animals or other things found in nature
simple leaf	a leaf with one blade attached to the stem; the blade might be lobed or divided, but it's still one piece
flower arrangement	the pattern of how flowers are attached to a stem

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Unit 8

Resources

Literary connections

A Little Guide to Wildflowers by Charlotte Voake

Mrs. Peanuckle's Flower Alphabet by Mrs. Peanuckle

Poppy, Buttercup, Bluebell and Dandy by Fiona Woodock

The Wild Flower Book for Young People by Alice Lounsberry

Reference books

Complete Guide to Florida Wildflowers by Roger Hammer

Florida Wildflowers in Their Natural Communities by Walter Kingsley Taylor

National Audubon Society First Field Guide Series, Scholastic

Surviving the Wilds of Florida by Reid Tillery

Websites and other web resources

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