

Grade 4th

Title: Common Spring Wildflowers

Tiffany Mouton

Student Learning Objective(s):

The students will be able to identify the following wildflowers found in the Louisiana wetlands: Yellow Top, Lyre-Leaved sage, Spider Lily and the Wild Geranium.

The students will be able to identify various properties based on the wildflowers above.

The students will be able to know how to use the Scope on a Rope.

LA GLE's

Grade: 4 # 1: Ask questions about objects and events in the environment (e.g., plants, rocks, storms) (SI-E-A1)

Grade: 4 # 7: Predict Use the five senses to describe observations (SI-E-A3)

Grade: 4 # 12: Use a variety of appropriate formats to describe procedures and to express ideas about demonstrations or experiments (e.g., drawings, journals, reports, presentations, exhibitions, portfolios) (SI-E-A6)

Grade: 4 # 52: Describe how some plants and animals have adapted to their habitats (LS-E-C2)

Grade: 4 # 53: Identify the habitat in which selected organisms would most likely live and explain how specific structures help organisms to survive (LS-E-C2)

Materials needed:

Sample of the following wildflowers: Yellow Top, Lyre-leaved Sage, Spider Lily, Wild Geranium

Wild Flower Fact Sheet (1 fact sheet per group)

Wild Flower information packet (1 for each group)

Small Poster Board (1 per group)

Markers, Crayons, etc. (1 pack of each per group)

Glue (1 per group)

Scope on a Rope (1 for whole class discussion)

Computer/Smart Board/Elmo/TV (for connection to the SOAR)

Science Journals (1 per student)

Detailed Procedure. Describe what the students will do in each stage. Include guiding questions you might ask to help students.

1. Engage:

Science Process Skills Indicate which science process skills students will develop in this part of the lesson.

- Observation Classification Communication Measurement Estimation Prediction Inference
 Identifying Variables Controlling Variables Defining Operationally Forming Hypotheses
 Experimenting Graphing Modeling

- a. **The teacher will ask the following question to the class: "What do the Yellow Top, Lyre-leaved Sage, Spider Lily and the Wild Geranium all have in common?" Answer: They are all Common Spring Wildflowers in the Louisiana Wetlands.**
- b. **The teacher will then show the students an example of each kind of flower mentioned above.**
- c. **The teacher will tell the class that today we will be splitting up in groups and each group will be assigned one of these wildflowers to research. Your group will be given a wildflower information packet to research your information from and will notate your findings on your Wildflower Fact Sheet (provided by the teacher).**

2. Explore:

Science Process Skills Indicate which science process skills students will develop in this part of the lesson.

- Observation Classification Communication Measurement Estimation Prediction Inference
 Identifying Variables Controlling Variables Defining Operationally Forming Hypotheses
 Experimenting Graphing Modeling

- a. **The students will research the following topics about their assigned Wildflower:**
 1. **What is the scientific name of your wildflower?**
 2. **How tall does your wildflower grow?**
 3. **When does your wildflower bloom?**
 4. **Where does your wildflower grow?**
 5. **Special characteristics and or information?**
 6. **Describe your wildflower.**
 7. **Draw a picture of your wildflower.**
- b. **The students will then take the information they collected on their wildflower and make a small poster with all of their important information on it. The poster must include at least one drawing of their wildflower.**
- c. **While the students are researching their information the teacher will visit each group and ask questions to see if they understand the information given. The teacher will also be checking for participation.**

3. Explain:

- a. **The groups will present their posters to the class.**
- b. **During each presentation the students that are not presenting will have to fill out a chart with the information provided by the group presenting.**
- c. **After each presentation, the teacher will go over all the new findings that each group presented.**
- d. **After all groups are finished with their presentations, the teacher will then ask the students the following question: "Why are plants, flowers and trees important to the preservation of the Wetlands? The teacher will then record the answers to this question on the board.**

4. Expand:

Science Process Skills Indicate which science process skills students will develop in this part of the lesson.

- | | | | | | | |
|--|--|--|---|--|-------------------------------------|------------------------------------|
| <input checked="" type="checkbox"/> Observation | <input type="checkbox"/> Classification | <input checked="" type="checkbox"/> Communication | <input type="checkbox"/> Measurement | <input type="checkbox"/> Estimation | <input type="checkbox"/> Prediction | <input type="checkbox"/> Inference |
| <input type="checkbox"/> Identifying Variables | <input type="checkbox"/> Controlling Variables | <input type="checkbox"/> Defining Operationally | <input type="checkbox"/> Forming Hypotheses | <input type="checkbox"/> Experimenting | <input type="checkbox"/> Graphing | <input type="checkbox"/> Modeling |

- a. **The teacher will use a Scope on a Rope (SOAR) to view each wildflower's properties close up.**
- b. **The class will then discuss their observations and compare and contrast between the different species.**
- c. **The students will draw their observations in their science journals.**

5. Evaluate:

What exactly will you do, or what evidence/data will you collect, to ascertain whether the students can achieve the objectives you listed at the top of this lesson?

- a. **The teacher will assess prior knowledge by asking them if they know what the mentioned wildflowers have in common.**
- b. **The teacher will walk around during the group work to ask questions to assess their understanding of the information they are finding about their wildflower.**
- c. **The teacher will evaluate each student's group work during the presentations.**
- d. **The teacher will pick up the Wildflower Worksheet from each student after their presentations.**
- e. **The teacher will ask the students and record the answers given from the question, "Why are plants, flowers and trees important to the preservation of the Wetlands?"**

Brain Compatible Learning Strategies Used in This Lesson:

- | | | | | |
|---|---|--|--|--|
| <input checked="" type="checkbox"/> Brainstorming/Discussion | <input checked="" type="checkbox"/> Drawing and Artwork | <input type="checkbox"/> Field Trips | <input type="checkbox"/> Games | <input type="checkbox"/> Graphic Organizers |
| <input type="checkbox"/> Humor | <input type="checkbox"/> Manipulatives, Experiments, Labs, Models | <input type="checkbox"/> Metaphors, Analogies, and Similes | <input type="checkbox"/> Music, Rhythm, Rhyme, and Rap | <input type="checkbox"/> Project/Problem-Based Instruction |
| <input type="checkbox"/> Mnemonic Devices | <input type="checkbox"/> Movement | <input type="checkbox"/> Role Plays, Drama, Pantomimes | <input type="checkbox"/> Storytelling | |
| <input type="checkbox"/> Reciprocal Teaching, Cooperative Learning | <input type="checkbox"/> Visualization/Guided Imagery | <input checked="" type="checkbox"/> Visuals | <input type="checkbox"/> Writing/Journals | |

Lesson Source:

Jean Lafitte Handout. "Common Spring Wildflowers" National Historic Park. 2000

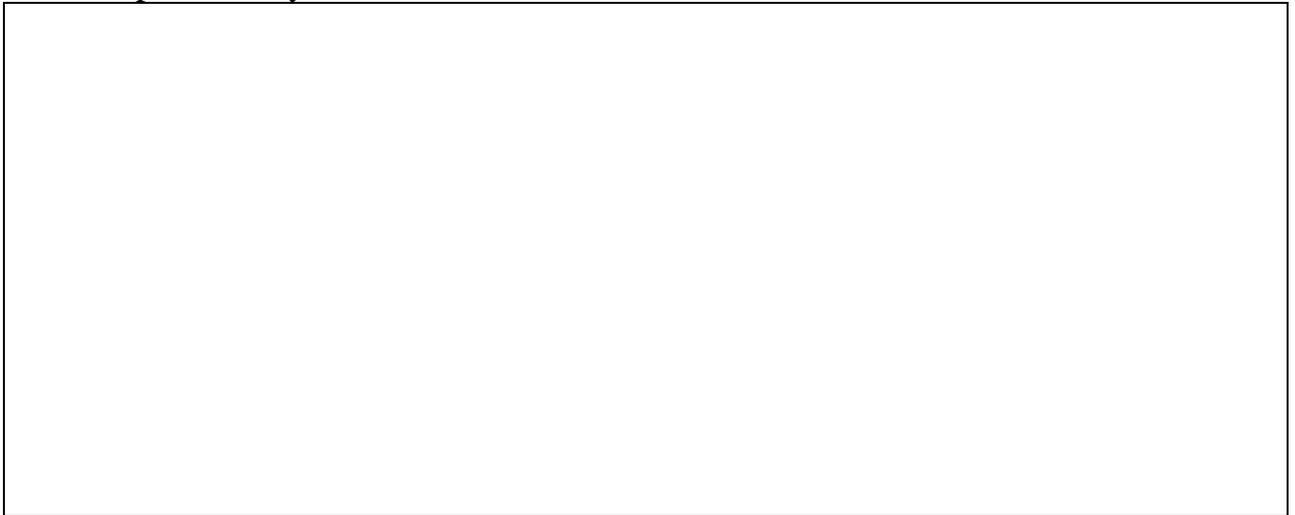
Group Wildflower Name: _____
 Scientific Name: _____

1. How tall does your wildflower grow? _____
2. When does your wildflower grow/bloom? _____
3. Where does your wildflower grow? _____

4. Other special characteristics:

5. Describe your wildflower:

6. Draw a picture of your wildflower:



Name of Wildflower	Scientific Name	How tall?	When does it bloom?	Where does it grow?

Photos of Wildflowers along with their URLs:

1. Lyre-leaved Sage (*Salvia lyrata*)



<http://www.friendslaarb.org/flower.html>

2. Spider Lily (*Hymenocallis occidentalis*)



<http://hamakko.info/photo/p031003.jpg>

3. Wild Geranium (*Geranium carolinianum*)



http://www.freefoto.com/images/15/05/15_05_13---Wild-Geranium_web.jpg

4. Yellow Top (*Senecio glabellums*)



Lyre-leaved Sage
Salvia lyrata

<http://www.ct-botanical-society.org/galleries/salvialyra.html>

- Family: Mint (Lamiaceae)
- Habitat: dry, open woods and dry thickets
- Height: 1-2 feet
- Flower size: 1 inch long
- Flower color: pale blue-purple
- Flowering time: May to June
- Origin: native

Description: A perennial herb with quadrangular flowering stems extending upright from a basal rosette of leaves. The basal leaves are elongated, elliptic, dark green to slightly purplish, and are often lobed or dissected. The light blue to violet flowers are clustered at the top of the stem. Flowering occurs from April to May or June. The seeds are round, dark brown, and held loosely in a cup-like structure.

Uses: This plant is used mainly for landscape beautification. It has potential for use in cultivated, garden situations, in naturalized prairie or meadow plantings, and along roadsides.

Site adaptation: Lyre-leaf sage can grow in full sun and light to medium shade. Native stands are found on roadsides, and in fields and open woodlands. It will grow on many types of soil.

Spider Lily *Hymenocallis occidentalis*

http://www.bonniesplants.com/bogs_marginals/spider_lily.htm

At dusk, fragrant, exotic pure-white flowers appear and bloom all night through the following morning. Native to low-lying wet areas in the Deep South, this is a lovely plant for the sunny bog or poorly drained areas. Graceful 2-3' stems pop up through strappy foliage. Spider Lilies love rich soils but also tolerate clay soils. One of our favorites. Native American plant.

The Spider Lily grows 3' tall and flowers during the summer months.

The bulb winters easily indoors as a houseplant.

Just place water filled saucer under the pot in a sunny window.

The flowers are extremely fragrant and the leaves are strap-like.

Hardy zone 7 or higher. Full sun part shade

Wild Geranium

http://www.illinoiswildflowers.info/woodland/plants/wild_geranium.htm

Description: This native perennial plant is 1-2½' tall, consisting of a loose cluster of basal leaves and flowering stems that develop directly from the creeping rootstock. On the lower portion of each flowering stem, there is a pair of opposite leaves. Both the basal leaves and the lower opposite leaves of the flowering stems have a similar appearance. They are up to 5" long and across, and palmately cleft with 5 deep lobes. Each of these lobes is wedge-shaped at the base. The leaf margins have a few secondary lobes and coarse teeth. Each leaf has long petioles with coarse white hairs, while its upper surface has fine white hairs. The flowering stems are covered with coarse white hairs and more or less erect. The upper pairs of leaves on the flowering stems are like the lower leaves, except they are smaller in size and usually have only 3 primary lobes.

Butterweed (*Packera glabella*)

<http://www.2bnthewild.com/plants/H311.htm>

From early to late spring, the delta country is alive with fields of yellow. As one of the earliest bloomers, yellow-top, or butterweed, (*Senecio glabellus*) often seems to be the only wildflower along the countryside. Yellow-top seeds germinate in late fall and winter. By late winter, their habitat contains roseates of broad, dark green leaves with purple undersurfaces. By February, flower stalks begin to rise and blossoming soon follows.

Since yellow-top flowering coincides with pollen production of oaks and pines, people frequently associate the showy flowers with hay fever. Actually, yellow-top have relatively large, sticky pollen grains that are moved about by bees and other insects. Oaks and pines, however, have wind blown pollen that, when inhaled, may cause illness.

The sheer beauty of acres of yellow-top is neat in itself, but the story doesn't stop there. We often forget that plants compete with one another, just as animals do, and they must also develop survival and reproductive strategies. Yellow-top is very successful because it is one of the first bloomers, so when it is at its maximum growth and requires the largest amount of resources, there is little vegetative competition. Also, since it is the first major bloomer after winter, it gets the bulk of attention from bee colonies that are beginning activity. Judging from the density of stands of yellow-top, their niche seems to work.

But other than painting a yellow swath across the delta, does this glorius plant offer anything else? It may well be the most economically important wildflower in Louisiana! Yellow-top tends to grow in low, rather moist areas such as ditches, swamps, and back-water places along bayous and rivers. Take, for example, the Atchafalaya River basin. Each spring, yellow-top covers the exposed floor of the basin. Before the river begins its annual rise, the bees visit and yellow-top completes its reproduction, sending its seeds flying into the breeze. As the plants are covered by water, they die and decompose. Enter the crawfish. One of the most important functions of crawfish (off the platter, that is) is that they are detritivores, feeding mostly on non-living organic material. Crawfish while away their days chewing up their food source, changing big leaves and stalks into either small pieces that float away into the water or into edible tissue. Yellow-top is the main entre on the menu, and without it our state would have a much smaller fishery of of our Cajun's "ecrevisse".

The next time you take notice of any of our natural resources, ask "I wonder how it fits into the overall scheme of things?"

Butterweed is also known as Yellowtop, Cressleaf and simply Ragwort. Formerly as *Senecio glabellus* and *Senecio lobatus*.

Plant Type: This is a herbaceous plant, it is a [annual](#) which can reach 90cm in height (35inches). Usually shorter.

Leaves: The leaves are alternate. Each leaf is [pinnately](#) divided with each segment having a few large teeth toward the outside and the end segment being larger.

Flowers: The flowers have numerous parts and are up to 2.5cm wide (1 inches). They are yellow. Blooms first appear in mid spring and continue into mid summer. There are from twelve to twenty-one rays.

Habitat: Moist areas, shaded or open.

Range: All of southeastern U. S. Less common north of our area.