

NAME: _____

Aligned to the following standards:
FFA.PL-A; FFA.PL-E; FFA.PL-F; FFA.PG-I; FFA.PG-J; FFA.CS-M;
FFA.CS-N; FFA.CS.O; CCSS.ELA.W.9-10.2; CCSS.ELA.W.9-10.4;
CCSS.RI.9-10.2; CCSS.RI.9-10.4; CCSS.SL.9-10.2; CCSS.SL.9-10.4; CRP.02; CRP.04; CS.05; AG5

Appendix 7: Bulrush in the Bayou

Created: Fall 2020 by the National FFA Organization

DIRECTIONS

Part 1

Read the "Bulrush in the Bayou" article in the Fall 2020 issue of *FFA New Horizons* answer the following questions.

1. The _____ FFA Chapter is helping to _____ Louisiana _____.
2. What is the goal of the students when they step into the swamps?

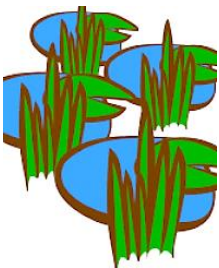
What supplies do the students take with them to the swamp?

3. Where did the chapter receive their grant from? How much was the grant for?
4. What did the students do with the funds received from the grant?



Who did the chapter partner with?

5. During the 2019 field day, the Springfield chapter planted _____ California bulrush weeds?
 - a. 5,000
 - b. 7,000
 - c. 12,000
 - d. 10,000



6. How did COVID-19 affect the 2020 plans, and what do they plan to do to overcome it?

NAME: _____

Part 2

Go to AgExplorer, AgExplorer.ffa.org, to learn about careers related to wetlands. Research **five** careers that are associated with wetlands and/or environmental service systems and complete the information below about each of the careers.

Career:

Recommended High School Courses:

Education/Training Required:

Career:

Recommended High School Courses:

Education/Training Required:

Career:

Recommended High School Courses:

Education/Training Required:

Career:

Recommended High School Courses:

Education/Training Required:

Does one of these
careers interest you?

Explain your answer. If none interest you, what
career field does interest you and why?

Career:

Recommended High School Courses:

Education/Training Required:

NAME: _____

Part 3

Go to this website or one similar,

<https://www.nps.gov/subjects/wetlands/why.htm#:~:text=Wetlands%20are%20highly%20productive%20and,provide%20wildlife%20habitat>, and answer the questions below to learn more about wetlands.

1. Overall, why are wetlands important?

2. What are seven specific reasons why wetlands are important?



3. What type of wildlife habitat do wetlands provide?

4. Explain the habitat for threatened and endangered species.

Do you know of a wetland in your state or area?

If so, where is it located?

Use these sites to help with your answer: <https://www.neefusa.org/nature/land/wetlands-united-states> and <https://www.fws.gov/wetlands/data/Mapper.html>. (Click on wetlands mapper at the bottom of the page, check the wetlands box to the left and click the legend.)

NAME: _____

Part 4

Design your own wetland (for your backyard or an area in your town). Take what you have learned thus far and design your own wetland. Utilize the following website, or one similar, to design your wetland:

<https://www.nwf.org/Magazines/National-Wildlife/1997/How-to-Create-a-Mini-Wetland>.

Read the article on the above website, and apply the steps/guidelines to design your own wetland. Use the space below to sketch out your plan.

What plants did you chose to include in your wetland and why?

How can you take what you have learned about wetlands and use it in your life (future career, home, etc.)?

NAME: _____

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FFA.CS-N; FFA.CS.O; CCSS.ELA.W.9-10.2; CCSS.ELA.W.9-10.4;
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KEY — Appendix 7: Bulrush in the Bayou

Created: Fall 2020 by the National FFA Organization

DIRECTIONS

Part 1

Read the "Bulrush in the Bayou" article in the Fall 2020 issue of *FFA New Horizons* answer the following questions.

1. The Springfield FFA Chapter is helping to restore Louisiana wetlands.
2. What is the goal of the students when they step into the swamps?

Their goal is to plant thousands of native grasses to restore habitat, combat erosion and protect coastal communities from the effects of wind and water.

What supplies do the students take with them to the swamp?
Rubber boots and burlap bags filled with CA bulrush reeds

3. Where did the chapter receive their grant from? How much was the grant for?
They received a grant from the Natural Resources Conservation Service to start the project in 2016. The grant was for \$1,200.
4. What did the students do with the funds received from the grant?

With the grant, students established California bulrush, a native perennial that thrives in wetland marshes, in their school greenhouse and planted the mature grasses in local wetlands.



Who did the chapter partner with?
They partner with local community groups to coordinate annual restoration projects. It started out as a partnership with Louisiana State University.

5. During the 2019 field day, the Springfield chapter planted _____ California bulrush weeds?

e. 5,000
f. 7,000
g. 12,000
h. 10,000



6. How did COVID-19 affect the 2020 plans, and what do they plan to do to overcome it?
The COVID-19 pandemic forced the chapter to cancel its 2020 restoration project. The members plan to be back in the swamps next summer to establish more native grasses and restore wetland habitats.

NAME: _____

Part 2

Go to AgExplorer, AgExplorer.com, to learn about careers related to wetlands. Research **five** careers that are associated with wetlands and/or environmental service systems and complete the information below about each of the careers. **Example answers are below but are not limited to the careers provided.**

Career: **Ecologist**

Recommended High School Courses:

Agricultural education, biology, chemistry, environmental science, mathematics and computer science

Education/Training Required:

Bachelor's degree in biological sciences, botany or ecology

Career: **Environmental Engineer**

Recommended High School Courses:

Agricultural education, a focus on science, earth science, biology, botany, chemistry and biology and mathematics

Education/Training Required:

A bachelor's degree in agricultural, civil, environmental or chemical engineering is required.

Career: **Environmental Compliance Officer**

Recommended High School Courses:

Agricultural education, a focus on science, earth science, biology, botany, chemistry and biology and mathematics

Education/Training Required:

A bachelor's degree in engineering, soil science, biology, environmental or physical science is required. Depending on the scope of work, some positions may require a master's degree.

Career: **Environmental Scientist and Specialist**

Recommended High School Courses:

Agricultural education, a focus on science, earth science, biology, botany, chemistry and biology and mathematics

Education/Training Required:

A bachelor's degree in biology or a related field, such as horticulture, chemistry or environmental science. Positions that are research based may require a master's or doctorate degree.

Does one of these careers interest you?
Answers will vary.

Explain your answer. If none interest you, what career field does interest you and why?
Answers will vary.

Career: **Environmental Science and Protection Technician**

Recommended High School Courses:

Agricultural education, a focus on science, earth science, biology, botany, chemistry and biology and mathematics.

Education/Training Required:

An associate degree in natural resources, soil science, biology or a related science field. Those with a bachelor's degree in similar fields would increase their chances for employment and advancement once on the job.

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Part 3

Go to this website or one similar,

<https://www.nps.gov/subjects/wetlands/why.htm#:~:text=Wetlands%20are%20highly%20productive%20and,provide%20wildlife%20habitat>, and answer the questions below to learn more about wetlands.

1. Overall, why are wetlands important?

Wetlands are highly productive and biologically diverse systems that enhance water quality, control erosion, maintain stream flows, sequester carbon, and provide a home to at least one third of all threatened and endangered species.

2. What are seven specific reasons why wetlands are important?

Improve water quality

Provide wildlife habitat

Maintain ecosystem productivity

Reduce coastal storm damage

Provide recreational opportunities

Improve the water supply

Provide opportunities for education



3. Describe the wildlife habitat wetlands provide:

Wetlands provide habitat for many species of amphibians, reptiles, birds and mammals that are uniquely adapted to aquatic environments. Deer, elk and bears commonly use wetlands for food and shelter. Wetlands are vital to many migratory bird species.

4. Explain the habitat for threatened and endangered species.

About one-third of all plants and animals listed as threatened or endangered species in the United States depend on wetlands for survival, including whooping cranes, American crocodiles, the dwarf lake iris and several orchid species.

Do you know of a wetland in your state or area?
Answers will vary.

If so, where is it located?
Answers will vary.

Use these sites to help with your answer:
<https://www.neefusa.org/nature/land/wetlands-united-states> and
<https://www.fws.gov/wetlands/data/Mapper.html>. (Click on wetlands mapper at the bottom of the page, check the wetlands box to the left and click the legend.)

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Part 4

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Read the article, on the above website, and apply the steps/guidelines to design your own wetland. Use the space below to sketch out your plan.

See these websites for examples of wetlands:

<https://www.buildwithrise.com/stories/sustainable-landscaping-with-a-mini-wetland>

<https://ferncreekdesign.org/wetlandsgarden.html>

What plants did you chose to include in your wetland and why?

Ferns, marsh marigold, forget-me-nots, cardinal flowers, great lobelia, yellow coneflower, bee balm, swamp milkweed, Joe-Pye-weed, lance-leaved goldenrod and New England aster. Some trees and shrubs such as birch, red-osier dogwood, sweet gum, etc.

Ferns add grace and beauty and provide hiding places for small creatures.

Marsh marigold, forget-me-nots, cardinal flowers, great lobelia, yellow coneflower, bee balm, swamp milkweed, Joe-Pye-weed, lance-leaved goldenrod and New England aster can provide nectar, pollen and seeds for insects and birds, beautiful blooms.

Some trees and shrubs such as birch, red-osier dogwood, sweet gum, etc. provide not only food and shelter but add texture and color to the landscape during the bleaker months.

How can you take what you have learned about wetlands and use it in your life (future career, home, etc.)?

Answers will vary.