

# The Vanishing *Frog*



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|------------------|--|
| Title            | Save My Species  |
| Grade Level      | 9 <sup>th</sup> -12 <sup>th</sup>                        |
| Lesson Duration  | 23 class sessions. Time outside of class                 |
| Curriculum Focus | Science, Social Studies, Language Arts, Service Learning |

## STUDENT OBJECTIVES

- Debate critical issues about the current global plight of the amphibians.
- Identify specific strategies that could help save the amphibians.
- Create an action plan for applying service to their own community.

## MATERIALS

- Computer with access to the Internet
- *Plight of the Amphibians: How Much Do You Know?* student activity sheet (one for each student)
- *Leap to Serve: Making a Difference in My Community* planning sheet (one for each student)
- Local newspapers
- List of local organizations that welcome student volunteers

## PROCEDURES

1. Write the following headline on the board, “*Breaking News: World’s Frog Population Extinct.*”
2. Ask students to react to this headline. Do they think it’s true? Do they think it could be true? Justify answers.
3. Explain that scientists around the globe are fearful that this headline could one day be true. Have students share what they know, if anything, about the current situation that faces the world’s amphibians.
4. Distribute the *Plight of the Amphibians: How Much Do You Know?* student activity sheet. Individually or in groups, challenge students to answer the questions to the best of their ability.
5. Then direct them to [www.amphibianark.org](http://www.amphibianark.org) where they can research the answers to these questions and learn more about the current situation and what is being done to help.
6. Review the correct answers (see below).
7. As a class or in small groups, discuss the following with students:
  - a. Who is responsible for saving the amphibians? What would happen if no one felt responsible?
  - b. In what ways do humans positively and negatively impact the amphibians?
  - c. Should students care about the plight of the amphibians? Why or why not?
  - d. In what way(s) can students help save the amphibians?
8. Challenge students to create a list of ideas for how they could actually help the world’s amphibians (donate money, raise money, raise awareness, change their lifestyle, etc.) and survey students to see which they would actually do.

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9. Ask students what they think their role or responsibility is in helping to impact or solve problems globally, nationally and in their own community? Do students think they have the power to make a difference in their own communities? Do students currently do anything to positively impact the community? If so, what?
10. Share with students the results of a recent survey that more than 10 million students between the ages of 12-18 participate in community service through their schools. What do students think the benefits are to students of doing community service? What about benefits to the community? The nation as a whole? In what ways might students like to serve their community?
11. Ask students to review several issues of their local newspaper to learn more about current problems or challenges in the community. Create a class list of these issues. Have students use prior knowledge and interviews with parents, community leaders and other citizens to add to their list.
12. Based on this list, have students develop a list of categories where they could serve their local community. Service categories could include:
  - a. Animals
  - b. Community development/beautification
  - c. The Environment
  - d. Health Issues
  - e. Children
  - f. Seniors
  - g. Special Needs (disabilities, homeless, illiteracy)
  - h. Politics
13. Have students check off the categories that most interest them. Then encourage students to form groups based on areas of common interest.
14. Distribute the *Leap to Serve: Making a Difference in My Community* student planning sheet.
15. Have each group review the list of community problems they've created along with their areas of interest. Challenge each group to identify one problem/area of interest on which to focus, a solution or way they can serve their community and positively impact that issue, and an action plan. Students may need time outside of class to learn more about local service opportunities and realistic solutions. Links to volunteer opportunities are below.
16. Have students present their completed planning sheets to the class. They should be able to share what community problem they want to impact, their idea for impacting it, how their idea will impact it and how they plan to implement their idea.
17. If time and logistics allow, have students implement their plans.
18. Finally, have students reflect on the following:
  - a. What should be the role of young people in serving the community?
  - b. What did you learn about your community and yourself through this activity?
  - c. How does community service benefit you, your family, your community and your world?
  - d. What would you tell other people your age about community service?

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## ADAPTATION/EXTENSION

- Have students implement their service action plans.
- Have students organize a community service day at your school where all students can learn about and sign up for service opportunities.
- Have the class work together to implement one or more strategies that can help save wildlife or positively impact the local environment.

## ASSESSMENT

You can evaluate your students using the following three-point rubric:

**Three points:** Students accurately research answers to the worksheet questions; actively participate in the class discussion; identify a problem or challenge in the local community; devise a logical, realistic solution to how they can impact that problem; thoughtfully reflect on their role and responsibility in the community.

**Two points:** Students somewhat accurately research answers to the worksheet questions; participate in the class discussion; identify a problem or challenge in the local community; devise a somewhat logical, realistic solution to how they can impact that problem; reflect on their role and responsibility in the community.

**One point:** Students need help researching answers to the worksheet questions; do not participate in the class discussion; have difficulty identifying a problem or challenge in the local community; devise a solution to how they can impact that problem; have difficulty reflecting on their role and responsibility in the community.

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## VOCABULARY

### **Community**

Definition: A social group of any size whose members reside in a specific locality, share government and often have a common cultural and historical heritage.

Context: There are many opportunities within every community for people to serve and volunteer.

### **Endangered**

Definition: Threatened with danger or extinction.

Context: The bald eagle is classified as an endangered species.

### **Extinct**

Definition: No longer in existence; died out.

Context: When a species is extinct, that means there are no longer any animals of that kind on the Earth.

### **Plight**

Definition: A dangerous situation

Context: Scientists are working around the clock to uncover clues on the frogs' deadly plight.

### **Service**

Definition: An act of helpful activity; help; aid

Context: Students across the country make community service a part of their lives.

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## ACADEMIC STANDARDS

This lesson plan may be used to address the academic standards listed below. The standards listed are drawn from the National Education Science Standards and the National Civics Education Standards

Grade Level: 9-12

Subject: Science

Content Standard: Life Science: The interdependence of organisms

Benchmark: Human beings live within the world's ecosystems. Increasingly, humans modify ecosystems as a result of population growth, technology, and consumption. Human destruction of habitats through direct harvesting, pollution, atmospheric changes, and other factors is threatening current global stability, and if not addressed, ecosystems will be irreversibly affected.

Grade Level: 9-12

Subject: Science

Content Standard: Life Science: The behavior of organisms

Benchmark: Organisms have behavioral responses to internal changes and to external stimuli.

Responses to external stimuli can result from interactions with the organism's own species and others, as well as environmental changes; these responses either can be innate or learned. The broad patterns of behavior exhibited by animals have evolved to ensure reproductive success. Animals often live in unpredictable environments, and so their behavior must be flexible enough to deal with uncertainty and change. Plants also respond to stimuli.

Grade Level: 9-12

Subject: Civics

Content Standard: What are the basic values and principals of American Democracy?

Benchmarks: Understands roles of voluntarism and organized groups in American social and political life

Grade Level: 9-12

Subject: Civics

Content Standard: What are the Roles of the Citizen in American Democracy?

Benchmarks: Understands how participation in civic and political life can help citizens attain individual and public goals; understands the importance of political leadership, public service, and a knowledgeable citizenry in American constitutional democracy.

**Web sites:** [www.amphibianark.org](http://www.amphibianark.org)

**Information about Youth/Community Service**

<http://servicelearning.org/youthsite>

[www.learningtogive.org](http://www.learningtogive.org)

**Service/Volunteer Opportunities**

[www.volunteermatch.com](http://www.volunteermatch.com)

<http://www.nationalserviceresources.org/topics/service-activities>

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## The Plight of Amphibians: How Much Do You Know?

1. How long have amphibians lived on the Earth?
  - a. 360 years
  - b. 360,000 years
  - c. 360 million years
  - d. 360 billion years
2. Which of the following statements is NOT true?
  - a. Frogs and amphibians may become extinct in our lifetime.
  - b. The plight of the frogs may be a sign of a larger environmental problem.
  - c. Amphibians are vital components of their ecosystems.
  - d. Amphibians' thick skin protects them from most environmental changes.
3. What percentage of amphibian species could go extinct in our lifetime?
  - a. 10%
  - b. 25%
  - c. 30%
  - d. 50%
4. How many amphibian species have become extinct in recent years?
  - a. 30
  - b. 60
  - c. 130
  - d. 240
5. Amphibians help us by providing compounds that help treat which disease:
  - a. HIV
  - b. Cancer
  - c. Alzheimer's
  - d. All of the above
6. What does it mean that amphibians are like "canaries in the coal mine?"
  - a. They make loud noises.
  - b. They serve as warning signs of dangers in the environment.
  - c. They can live in any habitat.
  - d. They come in many different colors.
7. Which is NOT considered a reason why amphibians are disappearing?
  - a. Climate Change
  - b. Disease
  - c. Habitat Destruction
  - d. Zoo closings
8. What is chytrid fungus?
  - a. A disease that amphibians help to treat.
  - b. A disease that is killing amphibians.
  - c. A disease that is killing plants that amphibians eat.
9. True or false: Chytrid fungus is currently unstoppable and untreatable.

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(Answers in bold)

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## Leap to Serve: Making a Difference in My Community

Team Member(s):

Service Category of Interest:

Existing community problem we'd like to positively impact:

What do you and your group members already know about the issue you've selected?

What would you like to learn (and who can help?)

What are some ways that you can help to impact the problem you've identified?

Our goal to impact this issue, need or problem is:

This will benefit our community by:

To help us reach our goal, we will do the following: (you may want to chart this out on a calendar)

| Task | Who Will Do | By When |
|------|-------------|---------|
|      |             |         |
|      |             |         |
|      |             |         |
|      |             |         |

Resources and Materials we will need:

