

RESOURCE LIBRARY
ACTIVITY : 1 HR

Yellow Corn and Green Frogs

Students locate the habitat of the northern leopard frog. Then they explore the connection between an herbicide used to kill weeds and the health of some populations of the frogs.

GRADES

6 - 8

SUBJECTS

Biology, Geography, Human Geography

CONTENTS

1 PDF, 1 Link, 1 Video

OVERVIEW

Students locate the habitat of the northern leopard frog. Then they explore the connection between an herbicide used to kill weeds and the health of some populations of the frogs.

For the complete activity with media resources, visit:

<http://www.nationalgeographic.org/activity/yellow-corn-green-frogs/>

Program

NATIONAL GEOGRAPHIC'S
STRANGEDAYS
ON PLANET EARTH

DIRECTIONS

1. Have students identify the habitat of the northern leopard frog.

Distribute a copy of the worksheet The Habitat of the Northern Leopard Frog to each student. Have students use the National Geographic Animals website to locate and color in

the habitat of the northern leopard frog.

2. Build background on abnormalities in the frog populations.

Explain to students that recent findings link atrazine, an herbicide used to kill crop weeds, with reproductive abnormalities in some populations of northern leopard frogs. Ask: *How do you think the herbicide and the abnormalities might be connected?* Explain to students that wind, rain, and running water can transport atrazine from cornfields into the marsh habitats of the northern leopard frog.

3. Ask students to make connections.

Challenge students to think about ways to determine if there is a link between the use of atrazine and abnormalities found in the northern leopard frog. For example, students might say they would travel to the frog habitat and observe frogs for abnormalities. If it seems like atrazine is the suspected cause, they could conduct an experiment in which some frogs are exposed to atrazine and others are not in order to determine its impact.

4. Watch a video clip from "Strange Days on Planet Earth."

Show students Act 1 of "Troubled Waters" from *Strange Days*. Ask students to share their reactions.

5. Hold a class debate.

Tell students you will hold a class debate. Ask students to think about the following question: *Under what circumstances, if any, should government intervene to address the reproductive abnormalities found in the northern leopard frog?* You may want to assign students the following roles: a scientist such as Tyrone Hayes; a farmer who produces corn; a homeowner living in the northern leopard frog habitat; a representative from the U.S. Environmental Protection Agency; an environmental engineer; an owner of a farm implement business; a groundwater specialist; and a representative of a chemical company that produces atrazine.

Modification

If time allows, have groups swap positions after the debate. Having students debate both sides of an issue builds their critical thinking and problem-solving skills.

OBJECTIVES

Subjects & Disciplines

Biology

Geography

- Human Geography

Learning Objectives

Students will:

- locate the habitat of the northern leopard frog on a map
- describe the relationship between atrazine and reproductive abnormalities in northern leopard frogs
- explain their opinions about whether or not the government should intervene

Teaching Approach

- Learning-for-use

Teaching Methods

- Discussions
- Hands-on learning
- Visual instruction

Skills Summary

This activity targets the following skills:

- Critical Thinking Skills
 - Understanding

National Standards, Principles, and Practices

- **Standard 14:**

How human actions modify the physical environment

NATIONAL SCIENCE EDUCATION STANDARDS

- **(5-8) Standard F-2:**

Populations, resources, and environments

Preparation

What You'll Need

MATERIALS YOU PROVIDE

- Colored pencils
- Pencils
- Pens

REQUIRED TECHNOLOGY

- Internet Access: Required
- Tech Setup: 1 computer per classroom, Projector, Speakers
- Plug-Ins: Flash

PHYSICAL SPACE

- Classroom

GROUPING

- Large-group instruction

BACKGROUND & VOCABULARY

Background Information

The northern leopard frog was once the most abundant and widespread frog species in North America. It is now considered a threatened species.

Prior Knowledge

Recommended Prior Activities

- None

Vocabulary

Term	Part of Speech	Definition
abnormality	noun	deformity or condition different from the normal or expected state of being.
habitat	noun	environment where an organism lives throughout the year or for shorter periods of time.
herbicide	noun	natural or manufactured substance used to kill plants.

For Further Exploration

Websites

- [PBS: Strange Days on Planet Earth](#)

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