

LESSON PLAN TO ACCOMPANY CITIZEN SCIENCE KIT

RATIONALE: Students should learn more about the natural world in Oklahoma and issues associated with conservation of Oklahoma and global amphibians.

OBJECTIVES: Students should be able to:

- Understand what an amphibian is.
- Understand the concept of amphibian decline.
- Understand the concept of infectious disease in amphibians.
- Identify common frogs of Oklahoma.
- Research the presence of chytrid fungus in Oklahoma species and counties, through the website <http://cameronsiler.com/citizen-science>.

MATERIALS:

- Citizen Science kit, instruction sheet, datasheet [provided]
- Citizen Science student worksheet [provided]
- Cell phone or GPS unit
- Camera (or cell phone with camera)
- Optional: aquatic nets, plastic containers for frogs

PRIOR TO THE START OF THE ACTIVITY:

- Select a location to sample for frogs. Be sure to visit the site during the same time of day and year, to determine if frogs are likely to be present and/or easy to catch. Modify your site accordingly.
- Choose whether you plan to do Option A or B below:
 - A. Take students to a local pond, lake, or stream and complete citizen science activity at the water's edge. [Must allow sufficient time to capture and swab animals.]
 - B. Catch live frogs yourself at a local pond, lake, or stream and bring them into the classroom to complete the citizen science activity. You will have increased success if you attempt to catch frogs just after dusk and into the early night.
- If choosing Option B, please be aware that each frog can only be swabbed a single time. If this is an activity that you would like to repeat with several classrooms worth of students, you will need additional frogs and a larger sampling kit.
- Thoroughly read the background information and familiarize yourself with the sampling instructions.

PROCEDURE:

- **Option A:**
 1. Provide background information on herpetology, amphibians, and amphibian decline.
 2. Go over the Citizen Science instructions with your class.
 3. Allow students to catch amphibians for approximately 1/3 of the allotted time.
 4. Identify frogs, fill out datasheet, and take photos for remaining 2/3 of allotted time.
 5. Release frogs and return Citizen Science kit to the Sam Noble Museum (see Instructions).
 6. Optional: Have students complete provided worksheet at the water's edge, back in the classroom, or as homework.
 7. Note: Anyone touching frogs must wash their hands before and after handling. See Instructions sheet for recommendations.

- **Option B:**
 1. Previous to the start of class, catch frogs and bring them to the classroom. I do not recommend keeping frogs in captivity for longer than 48 hrs. total.
 2. Store frogs individually in small plastic containers, containing a little water and air holes. [Ziploc style plastic containers are a cheap and easy way to store frogs.]
 3. Provide background information on herpetology, amphibians, and amphibian decline.
 4. Go over the Citizen Science instructions with your class.
 5. Have students work in groups to identify, swab, photograph their frogs, and fill out datasheets.
 6. Optional: Have students complete provided worksheet in the classroom or as homework.
 7. Note: Anyone touching frogs must wash their hands before and after handling. See Instructions sheet for recommendations.
 8. Release frogs exactly back where you found them, after the class is over (preferably within 24 hrs.), and return Citizen Science kit to the Sam Noble Museum (see Instructions).

**SCIENCE STANDARDS FOR OKLAHOMA
LIST OF CORE IDEAS RELATED TO CITIZEN SCIENCE KIT**

ELEMENTARY SCHOOL		MIDDLE SCHOOL		HIGH SCHOOL	
GRADE	CORE IDEAS	GRADE	CORE IDEAS	COURSE	CORE IDEAS
Kindergarten	K-ESS3-1	6 th grade	MS-LS2-2	Biology I	HS-LS1-3
1 st grade	1-LS1-1		MS-LS2-4		HS-LS2-2
2 nd grade	2-LS4-1		MS-ESS3-3	Environmental	HS-LS2-1
3 rd grade	3-LS4-4	7 th grade	MS-LS1-5	Science	HS-ESS3-3
4 th grade	4-LS1-1	8 th grade	MS-ESS3-4		
5 th grade	5-LS2-1				
	5-LS2-2				