



Caller ID: The Frog - and Toad! - Mating Game

Audience/ Group Setting

This activity works best in a classroom or camp setting for grade 2-5, but can be broken up into 3 shorter activities that could be used during an event.

Goal

To increase participants' understanding about frog and toad calls, and how scientists use these calls to study populations.

Objectives

By the end of the program, participants will be able to:

- Simulate a variety of frog and toad calls
- Simulate a frog/toad chorus
- Find "mates" based on calls used

Big Idea/ Main Message

Frogs and toads find each other by using calls and scientists can identify frogs and toads by their calls.

Conservation Action/ Behavior Addressed

Look, listen, and learn: educate yourself and your family about amphibians.

With more than 6,000 frogs, toads, newts, salamanders, and caecilians worldwide, there's a lot to learn. Pick up a book, hop around the Internet, or watch your favorite animal television show to educate yourself and your family about amphibians.

Background Information

This is a sensory experience that recreates the sounds of a pond at night. It can serve first as an introduction to frog and toad communication and second, as a demonstration of the calling system used by frogs and toads during breeding season. Each species of frog and toad has a distinctive mating call that allows similar frogs and toads to find each other.

Birds use songs to find mates. So do frogs and toads. They find mates by listening for the right sound. Each kind of frog and toad has its own unique song. While most birds sing during the day, most frogs and toads call at night. During the night, frogs and toads are protected from the sun and can hide from danger. Because of these conditions, they must be very good at finding each other by sound.

Scientists listen to frog and toad calls, too. By listening to frog and toad calls, they know how frog and toad populations are doing. How many frogs and toads can you hear in a diverse chorus of calls? Scientists get worried when a diverse chorus becomes one lonely, calling frog or toad. An important part of a scientist's work is determining how many frogs and toads are calling now compared to previous years.

Materials Needed

- Various frog and toad calls
- CD player
- Blindfold (optional)

Staff

This activity requires a minimum of 1 staff or volunteer to supervise.

Length of Activity

This activity can take up to 45 minutes, but can be broken up into 3 shorter activities of approximately 15 minutes each.

Set Up

Minimal set up is needed for this activity. Simply have space large enough for the group, and a device to play the frog and toad calls.

Procedures

1. Ask participants if they have ever heard the frogs and toads calling on a warm spring night. You may wish to play some sample calls. Explain that you are going to recreate this experience in the classroom.
2. Divide participants into four teams. Each team represents a different species of frog or toad. Have each team practice their call.
 - a. Team 1 – Spring Peepers: “peep”
 - b. Team 2 – Wood Frog: “quack”
 - c. Team 3 – Bull Frog: “jug-o-rum”
 - d. Team 4 – American Toad: “trilllllllllll”
3. Have the teams start their calls one at a time. Add additional teams until all four are singing. Wow! What a loud pond!
4. Ask participants “How would you be able to find an individual frog or toad based on all those calls?” Explain that each species has a distinctive call, to help males and females find each other. During the spring mating season, male frogs and toads call to attract females.
5. Have participants pair up for the next activity. Ask each pair to create their own unique sound pattern, for example “snap, snap, clap.” Encourage them to use other parts of their bodies besides their mouths.
6. After each pair has demonstrated its sound pattern, explain that each pair represents a different species of frog or toad, and they need to use their sound pattern to find each other.
7. Move participants to a large, unobstructed space. Depending on the size of the group, have 6-8 pairs put on blindfolds or close their eyes to become the “frog” or “toad.” The remaining participants will serve as the monitors to make sure the “frogs” and “toads” don’t run into walls or each other. The monitors should take the “frogs” and “toads” by the elbow to guide them away from hazards.
8. Ask all participants to be quiet. The monitors should move their frogs and toads away from each other and spin them once or twice. At the signal, the frogs and toads should start making their sound patterns and walking around the room. Continue playing until all the pairs have found each other. The players need to be quiet until the end of the game. Now, switch pairs so the monitors become the “frogs” and “toads.” Play the game until all participants have been participated as calling “frogs” or “toads”.
9. Discuss participants’ impressions of the activity. Was it difficult to identify the calls and to find each partner? Why or why not?

10. Listen to some real frog and toad calls. Can any of these frogs and toads be found in your area? Do any of the calls seem familiar? Have participants try to imitate the calls.
11. Have 2 participants leave the room. These will be the “scientists” monitoring the frog and toad population. Have the group decide how many “frogs” and “toads” of each species will be calling. Have the blindfolded “scientists” return to the room. Ask them to estimate how many “frogs” and “toads” of each species are calling. Change the roles and number of “frogs” and “toads” calling and conduct several trials. Discuss the challenge of the task. What methods did the “scientists” use to estimate populations?

Activity Extensions/Modifications

This activity can be done as it is written or it can be separated into 3 shorter activities (steps 1-4, steps 5-9, steps 10-11), so that it can then possibly be used during an event type setting.

National Science Education Standards

This activity is aligned to the K-8 Life Science Content Standards.

- Regulations & Behavior
- Diversity & Adaptations of organisms
- Science as Inquiry
- Science & Technology in society
- Science as a Human Endeavor
- Nature of Science

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