Environmental Education Activity

FrogWatch

NWT SCIENCE FOCUS

Topics

- NatureWatch
- Ecology and Animals

Objective

- Learn how to identify some common frog species of the NWT.
- Learn about indicator species.
- Show students what citizen science is all about.

Age/Grade Range

- Grade 5-12

Group Size

- Large group activity (15-30 students)

Time

- Set-up: 20 minutes-1 hour
- Activity: ½-1 hr (this works best as a weekly or daily activity)

Materials

- Notepaper or recording sheets, and pencils
- Frog field guides, or printed info sheets
- Thermometer (optional)
- Camera (optional)
- Devices with access to internet

Additional Considerations

- This is an outdoor activity for the spring or summer, where students will gather frog abundance data and contribute to a real citizen science database.
- It is best to have a few adult supervisors out with the youth if you have a large group. Try for 5 youth to 1 adult. It's also a bonus if these adults are knowledgeable about frogs.

Set-Up

1. Become familiar with the FrogWatch website. naturewatch.ca/frogwatch
2. Create a nature watch account, and explore the "submit observation" page so you can see how it works and what information your class will need to collect.
3. Pick a location where you and your class will collect the data; a nearby wetland, lake, or pond can work great. Shallow water with aquatic vegetation, reeds, and lots of organic material is a great place to look for frogs.
   In areas north of Great Slave Lake and outside the Mackenzie Valley, there is only one known species of frog, the wood frog. This species may be found quite far from water.
4. You may want to create a short slideshow of pictures of NWT frogs or provide print-outs with pictures to give students an idea of what they are looking for before they go out.

ECOLOGY NORTH

Activity Directions

1. Explain the activity:
    a. Go through the different frogs that you will be searching for. The more information you can give them beforehand, the better. Show them pictures and play the sound clips on the website for the class. Each species has a unique call, and if you can't spot a frog, this is one way to identify it.
    b. When submitting an observation, the website will ask you how many frogs you observed (the abundance) and how you identified them.
        No frogs seen or heard. A valid observation, they can still record temperature and habitat notes.
        Frogs or toads seen, but not heard. See a frog, but it's not making any noise.
        Individuals can be counted, calls not overlapping. Hear each frog and can tell them apart.
        Individuals can be counted, other calls overlapping.
        Full chorus, calls continuous and overlapping.
    c. Frogs and toads can be more active (noisy) at certain times of the year and at different times of the day. In June and July, in the late afternoon, it can be easy to find frogs active and calling to each other. Frogs and toads are called 'indicator species' because of their sensitivity to environmental change; their presence suggests a healthy ecosystem. By keeping track of frog abundance through their calls, we can begin to understand how these species are affected by changing temperatures, and how climate change is affecting the ecosystems in which we live. Citizen science is one of the best ways to keep track of these changes.
2. Divide the class into small groups. Each group will need, at the very least, a reference for identifying the frogs, and paper and pencil to record their findings. You may also want to provide a thermometer for recording air temperature, and a camera to photograph the frogs they find if they can.
3. Get out outside and find those frogs! Give students a finite area and time limit to search. This part of the activity will run smoothly and safely with several adult supervisors who can help supervise students near water, as well as help with identification. In their groups, the youth will search the area, and listen for frogs and toads, recording the species and abundance of any frogs or toads they observe/hear. They can either sketch a picture of the frog or toad or take a picture of it.
4. Return to the classroom to share findings. Pictures taken in the field can be uploaded onto a slide show to share with the class. Students can create their accounts and submit their observations to the FrogWatch database. If they don't all have their computers, you can also do this as a class. After students sign in to NatureWatch, they will be able to explore the site more. You may want to have them find the observations map to see if there are any other FrogWatch observations in your area.
5. Trying many different locations regularly for a few weeks in the spring and summer is a good way to observe and listen for frogs and toads.