



## The Sounds of Nature

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### Summary:

Students will use their sense of hearing to listen to nature. We will discuss what they hear now as well as other natural sounds they encounter throughout the day and night. I will introduce them to the most common sound heard in Puerto Rico – the Coqui frog call.

### Background Information:

We often hear the sounds of nature: birds singing, frogs calling, leaves rustling, due to wind or a squirrel running through its branches. We often take these sounds for granted or even become annoyed with them. This lesson is designed to bring these sounds alive by having students think about what is making them and why.

### Coqui frogs:

Coquis are a native species of tree frogs in Puerto Rico. There are 16 different coqui species that exist there. Most species of coqui call at night, but a few call during the day. Two species actually say “co-qui” as their call. Some believe the first part, the “co,” is to keep other males away, while the “qui” is to attract females. Tree frogs call to defend their territories, which consist of shelter, feeding, and mating.

Coqui frogs can be gray, brown, green, and yellow. They are from 15mm to 80mm in length, about the size of a silver dollar.

Some coquis live in trees, others on the ground. In either case, they are very hard to find no matter how well you can hear them calling.

Coqui populations are declining in many places in Puerto Rico due to the loss of habitat. Many Puerto Ricans are upset by this and awareness of the threat to the coqui is increasing through: billboards, advertisements, and household goods with coquis printed on them.

In other areas of the world the coqui population is rising and proving to be quite a nuisance to the locals. Coquis arrived in Hawaii through introduced plant species. Coquis are successfully reproducing in large numbers causing problems. They make a lot of noise that some find disturbing. Also, they are out-competing

### Grade Level: 2<sup>nd</sup>

**Goal:** Students will become more aware of what is making the natural sounds around them.

**Key Concepts:** the sounds of a coqui frog, how to identify species by listening

**Objectives:** Upon completion of this lesson, students will:

- 1) be able to identify 3 new sounds
- 2) share at least 2 natural sounds they encounter throughout the day or night.
- 3) give one reason for why the sound is being made.

**Teaching Location:** Outdoors, preferably in a park, school forest, or arboretum

### Lesson Time:

Overall: 60 minutes  
Travel Time: 20 minutes  
Activity 1: 10 minutes  
Activity 2: 20 minutes  
Activity 3: 10 minutes

### Subject Areas for Infusion:

Language Arts, Science,  
Environmental Education

### Standards:

Wisconsin State Standards:  
Environmental Education: A.4.2,  
A.4.3

Language Arts:  
C.4.1, C.4.3

Science:  
C.4.5, C.4.7

other native species for food and shelter. In response, predator numbers of rats and mongoose are on the rise.

**Materials:**

- Nature Journal
- Pencil
- Stuffed Coqui frog that makes the call sound when squeezed or coqui recording that can be played on a portable/battery operated player.

**Vocabulary**

**Coqui:** the name for 16 native species of tree frogs in Puerto Rico

**Set-Up:**

Get permission from your supervisor to go to an outdoor spot on or close to school grounds. Make sure students dress appropriately for the weather.

**Procedure:**

**Introduction.**

Ask students what our five senses are (sight, hearing, touch, taste, smell). Tell them that we are going to use our sense of hearing for an outdoor activity today. They will need to take along their Nature Journal and a pencil.

**Activity 1.**

Once students are in the outdoor setting of your choice, have them find a spot nearby to sit and get as comfortable as possible. Tell them this will work best if they are as quiet and as still as they can be. Once they are settled, have them set their journals in their laps, close their eyes, and listen very carefully to the natural sounds around them – what do they think is making that sound, how far from it are they, how large or small is it, etc. Students are to only think about the answers to these questions, not answer them out loud. After three to five minutes of listening, have students open their eyes and remain quiet. Instruct them to write down in their journal what types of sounds they heard and what they think made those sounds.

**Activity 2.**

After students have finished writing in their journals, ask for volunteers to tell what sounds they heard and what they think it was. Discuss with students the sounds, what is making the sounds, and different reasons for why the sounds are being made. For example: birds chirping to communicate with other birds, squirrels cracking open nuts or running up tree trunks, bugs eating away at a log, leaves rustling in the wind, etc. Ask students what sounds they hear at home or other places that come from nature – roosters calling in the morning, wolves, coyotes, and owls at night, spring peepers in the swamps, etc. Ask what their feelings are when they hear these sounds (happy, scared, annoyed, excited, etc.). Is there any sound they can think of that they don't really pay much attention to because they are too common?

### **Activity 3.**

If you have the stuffed frog, squeeze it to make the coqui call – if you have the CD or tape player, play the coqui call. If you can do neither of these, in the classroom go to the following website for pictures and sounds of the coqui:

<http://lmtnele.tripod.com/elyunque/id7.html> . Tell students that this is a very common sound heard in Puerto Rico. It is made by the Common Coqui, one of 16 species of coqui that live in Puerto Rico. Give students a brief lesson about the coqui and discuss the mixed feelings about its calling – most residents like it because they know the species is doing well when they hear it and it symbolizes their island. In some places where the coqui has been introduced on purpose or by accident, it is causing some problems. One example where the coqui is causing some problems is Hawaii. The coqui has reproduced very successfully. It is very loud and some feel it is a nuisance. Additionally, it is competing with other animal species for food and shelter.

### **Conclusion.**

There are many sounds in nature and those sounds can tell us much more about what is happening in their world than we can see with our own eyes. It is important to listen to what is going on. Sometimes we are too busy to stop and listen to what nature is telling us.

### **Assessment.**

Student journals will be looked through to see that students recorded what they heard/thought they heard. A checklist of students will be used during the discussion in Activity 2 to mark off students that shared natural sounds they hear throughout their day and gave reasons for those sounds being made.

### **Adaptations:**

Students with special needs can be asked to draw a picture of what they heard, rather than write down a name or sound. They can also be required to name fewer sounds they hear elsewhere.

### **References:**

El Yunque photo exhibit online: coqui: <http://lmtnele.tripod.com/elyunque/id7.html>,

Planet Save Website – Search “coqui” - There are three articles: [www.planetsave.com](http://www.planetsave.com)

GORP – About the coqui: [http://gorp.away.com/gorp/resource/US\\_National\\_Forest/pr/frog\\_car.htm](http://gorp.away.com/gorp/resource/US_National_Forest/pr/frog_car.htm)