

Soundology

Learning Objectives

- After watching the video students should be able to
 - Understand the different types of sounds (Biophony, geophony, and anthrophony)
 - Understand how sound works
 - Realize the importance of sound in nature
 - Understand the importance of reducing unnecessary anthrophony in and around nature
- After the activity students should be able to
 - Identify different sounds in their environment and label them as biophony, geophony, or anthrophony
 - Listen carefully for sounds they overlooked before

Material List

- Writing utensil
- BANGO activity sheet

Introduction

Did you realize that sounds are constantly surrounding us? Sounds are something that we interact with every day but sound is more complicated than you may think! There are sounds that animals make (biophony), sounds that humans make (anthrophony), and sounds that natural things and processes make (geophony) like wind and rain! All these sounds together in an environment create a “Soundscape.” How these sounds interact and affect each other within the soundscape is called “Soundscape Ecology.”

Today you will be learning about the basics of soundscape ecology and also how to experience the soundscape around you in a new and fun way! Whether you are in the middle of a forest or in your backyard the soundscape is just waiting to be discovered!

Start by showing the Soundscape ecology video provided here <https://www.neoutdoordiscovery.com/soundology> (about 15 minutes). Next handout the BANGO! Activity sheets if you haven’t already and watch the short Activity video to introduce BANGO! to your students.

After watching both videos and ensuring all students have an activity sheet and a writing utensil head outside! Students can work in groups if they like, but it is also fun to compare sounds found with friends at the end.

Activity- BANGO!

BANGO! Is just like the classic Bingo only with a twist and a bang! Students will spend time outside exploring and listening for sounds that are on their BANGO cards in hopes to either get 5 in a row on their card (Bingo), find all the sounds (BANGO!), and/or just find the most sounds out of their friends. Once a student **HEARS** a sound on the card they can mark it off. (If any students have hearing disabilities they can look for the things that cause the sounds.) All sounds in the “B” column are biophony; “A” anthrophony; and “G” geophony.

Throughout the card there are special squares that work a bit differently. They allow the students to get creative with the sounds they mark down. For example: “New Biophony sound”

square gives space for students to listen for a sound made by animals that ISN'T already on the card. "New Random sound" square allows them to find any sound that they haven't marked already. "Beautiful sound" square allows the students to find a sound that is beautiful to them personally, etc. The main rule is they can't use the same sound twice on their card.

The "O -ophony?" column requires the students to test their knowledge and categorize the sounds in the squares before they can correctly mark them off. (They still have to hear the sound to mark them off).

- ANSWERS for "O -ophony?" column:
 - Singing or music = anthrophony
 - Dog bark = biophony
 - Voices = anthrophony
 - Rocks falling/moving = geophony
 - Insects buzzing = biophony

There are brief reminders of the rules on the bottom of the BANGO sheet.

Students should receive a minimum of 15 minutes to explore during the activity. It is encouraged to allow for more time for the activity.

Reflect with students

- Where can you find sounds?
- Why is sound important for us? For animals?
- How can we reduce the anthrophony we make when out in or around nature?

Additional resources (on Soundology page)

- Science of Sound
 - More in-depth videos from National Geographic Kids on how sound works
- Crash Course Ecology
 - More in-depth videos on different facets of ecology
 - Great illustrations
- Center for Global Soundscapes
 - More advanced resource showing research and work that is currently being done in soundscape ecology
- Audubon Guide to North American Birds
 - Resource for learning about birds of North America and learning bird calls
- Contact Bethany for more questions your students may have!
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