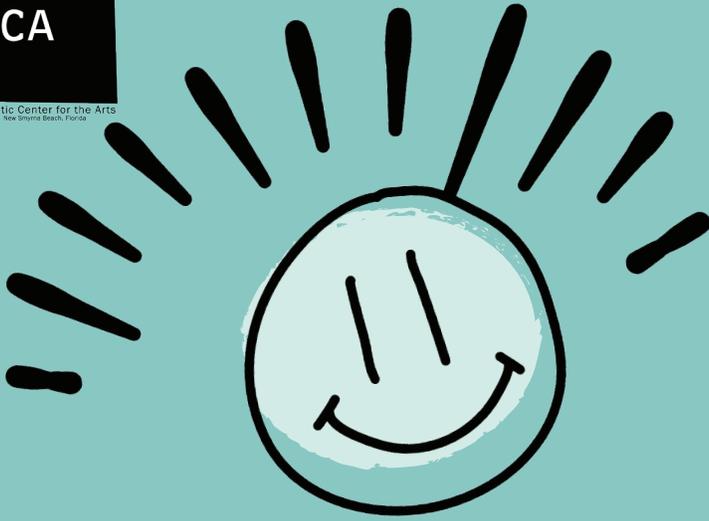


ACA

Atlantic Center for the Arts  
New Smyrna Beach, Florida



Y O U N G  
(((SOUND)))  
S E E K E R S

*Good Vibes*



## Objective:

Participants will be introduced to qualities of sound that affect the health of all living beings, such as the stressors of noise pollution, and the benefits of a balanced soundscape.

Ages: 10+

Group Size: 10-20

Setting: Outdoors

Subject: Science, Special Skills,  
Social Science



Duration: 20-30 minutes

## Overview:

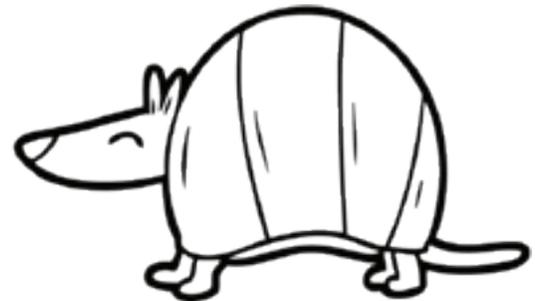
This activity focuses on the health effects of various sounds. For this discussion, participants should visit any site within a park where both natural and man-made sounds are present. Beginning with an overview of the location, the facilitator will segue into a group discussion of the variety of sounds that are present at the location. Participants will be asked about their own perception of sound and learn to identify sounds that can benefit the health of humans. Then investigate how noise pollution hinders communication and discuss ways to improve or preserve the natural soundscape. This activity is based around group discussion and requires a facilitator.



## Fun Fact

The sound of birdsong is considered a salubrious (beneficial) sound. In research studies, melodic birdsong has been shown to improve mood and mental alertness. Wind, water, and the voice of loved ones are also considered salubrious sounds.

source: Florence Williams





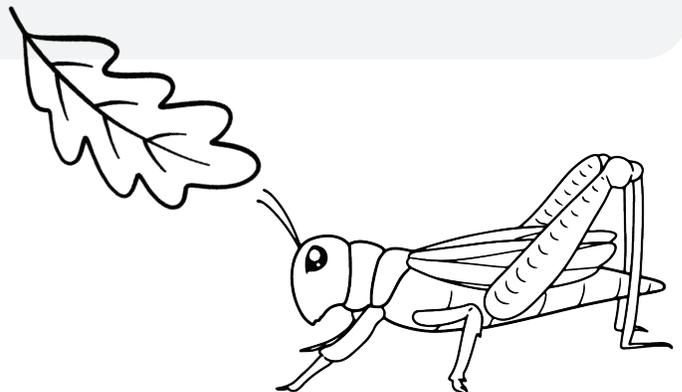
## Important Vocabulary:

- Habitat** – The natural home or environment of an animal, plant, or other organism.  
A person's usual or preferred surroundings.
- Soundscape** – The sounds heard in a particular location, considered as a whole.
- Noise pollution** – Unwanted or disturbing sound in the environment that affects the health and well-being of humans and other living organisms.
- Interference** –  
1. the act of hindering something else  
2. the phenomenon of superimposing two sound waves in a disruptive manner, as it travels along a communication channel between its source and receiver.
- Biodiversity** – All the different kinds of life you'll find in one area—the variety of animals, plants, fungi, and even microorganisms like bacteria that make up our natural world. Each of these species and organisms work together in ecosystems, like an intricate web, to maintain balance and support life.
- Environmental health** – Public health that focuses on the relationships between people and their environment; promotes human health and well-being; and fosters healthy and safe communities.
- Vibration** – (physics) an oscillation of the parts of a fluid or an elastic solid whose equilibrium has been disturbed, or of an electromagnetic wave. (Informal) a person's emotional state, the atmosphere of a place, or the associations of an object, as communicated to and felt by others.
- Acoustics** –  
1. the properties or qualities of a space or building that determine how sound is transmitted in it.  
2. the branch of physics concerned with the properties of sound.
- Anthropophony** – All sound produced by humans (anthropogenic sound). Consists of the Greek anthropos, meaning human, and the Greek phoni, meaning voice.



## Fun Fact

Sound is a bit like food. Feed your body and soul the right nutrients, and you'll feel energized, amazed how that will transform and enhance your sense of well-being.  
source: Bernie Krause





## Logistics:

Chose a comfortable place to gather and sit, either in seating protected from the weather or on the ground. For the discussions, a circle formation will offer an equal opportunity for all to share.



## Procedures:

### Step A) Sound and Well-being

The facilitator will ask participants to stay silent for 60 seconds and listen to their current location. Then, gather the group into a circle to facilitate a discussion about sound and well-being.

Ask:

- What sounds are you noticing? Let's go around our circle and share one or two sounds that you can identify in this location.

Say:

All sounds travel as waves moving through a medium like air, water, or stone. How these sounds interact with objects is called acoustics – such as the way sound waves reflect off buildings or are absorbed by trees. Sound vibrations not only hit our ears, but also our bodies. Some sounds may be unwanted and called noise, but other sounds may help us feel calm and tranquil. It's important to remember that everyone has different sensitivities to sound. All our feelings are valid and it's alright not to agree how we label sounds. However, there are some sounds that most of us consider calming.

Ask:

- Which sounds here help you to feel good?
- Do any of these sounds bring you positive memories?
- When you visit a park or the wilderness, what sounds do you expect to experience?
- Should we have spaces that offer us peace and tranquility?
- How can you make time in your daily life to experience sounds that help you to feel good?

### Step B) Sound and Stress

The facilitator will ask participants to stay silent for 60 seconds and listen to their current location. They may move outside the circle for this listening exercise. Then, return the group to a circle formation to facilitate a discussion about sound and stress. Recall and reference any noisy man-made sounds (anthropophony) that were mentioned by participants during Step A.

Say:

We just identified several sounds that are pleasing to us, let's talk about the sounds we did not enjoy in the soundscape. Layers of sound are happening all the time in the outdoors. Individual sounds are easier to hear when they are not covered by other sounds. The unwanted sounds we may label as noise are usually intense, loud, and last long periods of time. They can cover up other softer sounds such as birdsong, the human voice, and sounds from the Earth like wind and water. Noise can cause stress, which affects the health of both humans and animals.

Ask:

- Which sounds at this location do you find annoying?
- How do noisy sounds make you feel? Follow up question: Why?
- When you are communicating, which sounds do you use? Examples are speech, singing, tapping, clapping, whistling, etc.
- How does noise interfere with your ability to communicate? An example is a car driving by as you are trying to speak with someone nearby.
- What sounds do animals use to communicate? Examples are tweets, rumbles, squeaks, chirps, growls, howls, barks, etc.
- Do you think noise affects animals like it affects humans? Answer is Yes. One example is that some animals leave an area because they can no longer adequately communicate to hunt, mark territory, find a mate, or create a suitable habitat.
- What are some ways that a park ranger or visitor could reduce noise pollution to encourage wild natural sounds to be heard in this space?

Say:

We've just discussed an important part of environmental health, which is allowing space for all the creatures of Earth to be able to communicate. The more time we have without noise pollution, the greater number of animals will be able to thrive. When we allow biodiversity to increase, species and organisms work together to maintain balance and support all life, like an intricate spider web. Humans are a part of this web and we have a responsibility to help our animal friends prosper.



## Resources:

Richard Harris, "Eavesdropping on Nature Gives Clues to Biodiversity," National Public Radio, <https://www.npr.org/2013/07/16/202435424/eavesdropping-on-nature-gives-clues-to-biodiversity>  
<https://www.npr.org/2015/08/13/429496320/listening-to-whale-migration-reveals-a-sea-of-noise-pollution-too>

Bernie Krause, *The Power of Tranquility in a Very Noisy World*, Paperback (New York, New York: Little, Brown and Company, 2021)

Deanna Ochs et al., eds., "The Power of Sound: The Natural Sounds and Night Skies Division Interpretive Handbook" (National Park Service Natural Sounds and Night Skies Division, 2018), [https://www.nps.gov/subjects/sound/upload/PowerofSound\\_May2018updated-508.pdf](https://www.nps.gov/subjects/sound/upload/PowerofSound_May2018updated-508.pdf).

Florence Williams, *The Nature Fix*, Paperback (New York, New York, W. W. Norton & Company, 2017)

World Health Organization, *Environmental Noise Guidelines for the European Region* (WHO Regional Office for Europe, 2018), [https://www.euro.who.int/\\_\\_data/assets/pdf\\_file/0008/383921/noise-guidelines-eng.pdf](https://www.euro.who.int/__data/assets/pdf_file/0008/383921/noise-guidelines-eng.pdf).

## Next Generation Florida Sunshine State Standards / Common Core

SC.4.N.1.1 -	Raise questions about the natural world, use appropriate reference materials that support understanding to obtain information, conduct both individual and team investigations through free exploration and systematic investigations, and generate appropriate explanations based on those explorations.
SC.5.P.10.1-	Investigate and describe some basic forms of energy, including light, heat, sound, electrical, chemical, and mechanical.
SC.6.N.2.3 -	Recognize that scientists who make contributions to scientific knowledge come from all kinds of backgrounds and possess varied talents, interests, and goals.
SP.PK12.VI.1.2 -	Apply listening and auditory skills, such as discriminating sounds and associating concepts, actions, and ideas with expressive language.
SP.PK12.VI.2.3 -	Participate effectively in group activities, such as cooperative learning and extracurricular activities
SP.PK12.VI.4.2 -	Locate school and community resources for recreation and leisure that facilitate participation by individuals who are blind or visually impaired.
SP.PK12.VI.4.3 -	Identify and implement adaptive strategies for recreational and leisure activities to ensure active participation.
SP.PK12.TP.5.3b -	Follow rules for conversations, including staying on topic, taking turns, and initiating and ending conversations appropriately.
SP.PK12.VI.5.5 -	Distinguish between permanent and transitory items in the environment.
SP.PK12.VI.6.1 -	Apply listening and auditory skills, such as discriminating sounds and associating concepts, actions, and ideas with expressive language.
SP.PK12.VI.7.4 -	Explain possible coping strategies for managing stressors.
SP.PK12.US.9.1 -	Participate in individual and group recreation/leisure activities.
SP.PK12.US.22.1 -	Use appropriate social and interpersonal skills and strategies to interact with peers and adults for various purposes across settings.
SP.PK12.US.13.3, SP.PK12.VI.5.6 -	Identify common auditory environmental stimuli and locations, such as the sound of a water fountain in the hallway and traffic sounds in the roads.
SP.PK12.US.13.5 -	Use environmental orienting techniques, such as using landmarks and tactual markers, for familiarizing areas in urban and rural settings.
SS.912.P.15.6 -	Explain how other environmental factors influence emotional interpretation and expression.
CC-SL.1.	Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively.
CC-SL.2.	Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally.
CC-SL.3.	Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric.
CC-SL.4.	Present information, findings, and supporting evidence such that listeners can follow the line of reasoning and the organization, development, and style are appropriate to task, purpose, and audience.



## Field Notes:

### Step A) Sound and Well-being

Ask participants to stay silent for 60 seconds and listen.  
Gather the group into a circle to facilitate the discussion.

Ask:

- What sounds are you noticing? Let's go around our circle and share one or two sounds that you can identify in this location.
- Which sounds here help you to feel good?
- Do any of these sounds bring you positive memories?
- When you visit a park or the wilderness, what sounds do you expect to experience?
- Should we have spaces that offer us peace and tranquility?
- How can you make time in your daily life to experience sounds that help you to feel good?

### Step B) Sound and Noise

Ask participants to stay silent for 60 seconds and listen.  
Gather the group into a circle to facilitate the discussion.  
Reference any noisy sounds mentioned in Step A.

Ask:

- Which sounds at this location do you find annoying?
- How do noisy sounds make you feel? Follow up question: Why?
- When you are communicating, which sounds do you use? Examples are speech, singing, tapping, clapping, whistling, etc.
- How does noise interfere with your ability to communicate? An example is a car driving by as you are trying to speak with someone nearby.
- What sounds do animals use to communicate? Examples are tweets, rumbles, squeaks, chirps, growls, howls, barks, etc.
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- What are some ways that a park ranger or visitor could reduce noise pollution to encourage wild natural sounds to be heard in this space?

