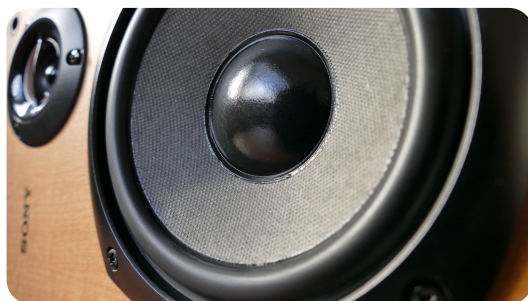


NOISE POLLUTION CHALLENGE | TEACHER GUIDE



Activity Overview:

In this challenge, students will go on a walk as a class to observe the noises around them following their Noise Pollution lesson. Students will consider the impact non-natural noises have on natural noises. Teachers will use a Noise Pollution Walk Guide to help students identify specific noises and to continue thinking about essential questions from the prior lesson.

Prep Time: 5-10 minutes for expectations

Activity Duration: 15-20 minutes for nature walk

STANDARDS ALIGNMENT

NGSS

- *1-PS4-1: Waves and Their Applications in Technologies for Information Transfer: Plan and conduct investigations to provide evidence that vibrating materials can make sound and that sound can make materials vibrate.*
- *K-2-ETS1-1: Engineering Design: Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.*

MA Comprehensive Health

- *PK.4.PF.2: Demonstrate different levels (low, middle and high), a variety of relationships with objects (e.g., over, under, around, through), and ability to vary speed and force while traveling.*

MATERIALS NEEDED

- *Teacher guide*
- *Student guide (enough copies for each student or pairs of students)*
- *Writing tool (per student or pair of students)*
- *Clipboard for each student or pair of students (optional)*





BACKGROUND INFORMATION

Noise is an invisible form of pollution that can cause some major problems. Defined by the EPA as "unwanted or disturbing sounds," noise pollution contributes to negative health outcomes such as high blood pressure, stress-related illness, sleep disturbance, and hearing loss. Examples of noise pollution include construction work, air and road traffic noise, and even noisy pets. Noise pollution can cause problems for animals and their habitats as well. Human-generated noise has been shown to cause caterpillars' "hearts" (called dorsal vessels in insects) to beat faster and lead bluejays to have fewer chicks. In the oceans, animals like whales and dolphins are severely impacted when noises from ships impair their ability to communicate.

INSTRUCTIONS

1. Go over behavior expectations with your students for the nature walk. Be sure to remind students to be respectful of their surroundings and to leave no trace!
2. Explain to students that they will be using their Nature Walk Guide to record the sounds they are hearing. They should put a check mark in the box when they hear one of the listed noises. Because they are listening for sound in nature, they should have their voices off. Let them know they'll have a chance to discuss what they heard once you are back in the classroom.
3. Take your nature walk. You and your class can walk down the sidewalk, through the playground yard, into the woods nearby. Use whichever space is available to you! You'll be able to hear sounds anywhere!
4. After the nature walk, ask students the guiding questions on the teacher guide. They are as follows:
 - a. What natural noises did you hear?
 - b. What human (or human operated) noises did you hear
 - c. What was EASIER to hear: nature or human-made noises
 - d. Why is it harmful to animals when their home is too noisy?
 - e. What other sounds did you hear that aren't on our list?
 - f. How can humans reduce the noise pollution we create?





NOISE POLLUTION CHALLENGE | TEACHER GUIDE

Noises to listen for:

- Car
- Trains
- Buses
- Trucks
- Birds
- Dogs
- Music
- Voices/Yelling
- Planes
- Rain
- Wind
- Trees rustling
- Splashes from cars running through puddles
- Squirrels
- Rustling leaves on the ground



GUIDING QUESTIONS

1. What natural noises did you hear?
2. What human (or human operated) noises did you hear?
3. What was EASIER to hear: nature or human-made noises?
4. Why is it harmful to animals when their home is too noisy?
5. What other sounds did you hear that aren't on our list?
6. How can humans reduce the noise pollution we create?

NOISE POLLUTION CHALLENGE | STUDENT GUIDE

When you hear one of the noises below, put a check mark in the box!



<p>Car <input type="checkbox"/></p> 	<p>Train <input type="checkbox"/></p> 	<p>Bus <input type="checkbox"/></p> 
<p>Truck <input type="checkbox"/></p> 	<p>Birds <input type="checkbox"/></p> 	<p>Dog <input type="checkbox"/></p> 
<p>Music <input type="checkbox"/></p> 	<p>Yelling <input type="checkbox"/></p> 	<p>Airplane <input type="checkbox"/></p> 
<p>Rain <input type="checkbox"/></p> 	<p>Wind <input type="checkbox"/></p> 	<p>Trees <input type="checkbox"/></p> 
<p>Splashes <input type="checkbox"/></p> 	<p>Squirrel <input type="checkbox"/></p> 	<p>Leaves <input type="checkbox"/></p> 

