

Hearing What Simon Says

Description:

Students will experience the impact loud sounds have on their hearing through an interactive class activity. Students will then reflect on the impacts of loud sounds on their success with the activity.

Objectives:

- Raise awareness of the impacts of sound and noise on the ear
- Discuss the differences between sound and noise as measured through decibels and individual perception

Vocabulary:

Ambient, decibel, noise, perception, noise pollution

Materials:

- [DEP Loudness Chart](#)
- “Reflection: Hearing What Simon Says” worksheet

Background Information:

Noise pollution is a noise that is distracting, annoying, or unpleasant in the environment. Noise pollution can be harmful for the natural world. For example, excessive noise can disrupt whale whistles and birdcalls. These negative repercussions also extend to human life. For humans, exposure to noise levels over 85 decibels can cause harmful health effects on the body. This includes increased stress, decreased concentration levels, and disrupted sleep patterns.

Method:

- Hand out the [DEP Loudness Chart](#).
- Explain that a decibel is a measure of sound. A higher number means a louder sound. Classes can further explore and measure decibels using later lessons in [DEP’s Sound and Noise module](#).
- Review some of the sounds on the chart. Perhaps have students volunteer to imitate some of the sounds.
- Students should brainstorm other familiar sounds and estimate the loudness in relation to provided sounds.
- Afterwards, go outside in your schoolyard or find space to spread out in your school gymnasium or cafeteria for a game of Simon Says.
- Have the class circle up silently, making no sounds. Explain that students must follow the teacher’s provided directions. This is a version of “Simon Says” appropriately renamed, “Can You Hear What Simon Says?” Examples of instructions include:
 - Simon says: Raise your hands
 - Simon says: Run in place
 - Clap your hands (students shouldn’t follow)
 - Simon says: Switch spots in the circle with a classmate
 - Hands on your head (students shouldn’t follow)
 - Simon says: Spin around
 - Simon says: Make a funny face
 - Act like a robot (students shouldn’t follow)
 - Simon says: Dance
 - Simon says: Freeze!
- After the first round, half of the class will become the sound environment while the other half remain listeners. Students who are part of the sound environment must choose a sound from the DEP “Loudness Scale” or one they brainstormed earlier. They will mimic these noises, and their

appropriate loudness, in the upcoming round. The number of students being part of the sound environment will increase with each round.

- In the consecutive rounds, students must follow the “Simon Says” directions while encountering external sounds made from the ambient noise in their environment.
- It should become progressively more difficult for students to hear and therefore follow the directions.
- Return to the classroom and hand out the reflection worksheet for students to complete.

Discussion:

- Do students have an opinion on which sounds can be defined as noise?
- What is ambient noise?
- How did the listeners feel as the rounds proceeded? How was the student’s ability to hear and listen to directions influenced by the presence of increasing ambient sounds?
- Were some sounds more disturbing than others? Why might that be?
- How might the constant presence of loud sound and noise impact human health?
- How do loud noises make you feel? How do you think it would make you feel listening to loud noises frequently over long periods of time?
- Can noise impact animal behavior? If so, how?

Extension:

- Use DEP’s [Understanding Noise Impacts on Concentration](#) lesson to study how noise affects student learning.
- Brainstorm ways for students to reduce noise in their lives. Challenge students to create a campaign to raise awareness for noise reduction in their community.

- Discuss how loud noises can cause long-term impacts on human health and well-being. Using computer resources, such as this article from the [Department of Labor OSHA](#), have students research these impacts.

NYC Department of Environmental Protection

educationoffice@dep.nyc.gov

For more information visit www.nyc.gov/dep

Name: _____ Date: _____

Reflection: Hearing What Simon Says

1. What are some differences between sound and noise?

2. What are decibels?

3. Identify four sounds you heard during the activity. Which of these sounds do you consider noise? Why?

4. How did noise impact your ability to follow directions during Simon Says?

5. Discuss the impacts noise may have on a New Yorker's life. Consider students, the elderly, teenagers, babies, and different members of your community.

6. In what ways can you help reduce the negative impacts of noise?

Name: _____ Date: _____

1. Draw three sounds you heard.

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2. Draw three noises you heard.

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3. Use adjectives (descriptive words) or pictures to define noise:

Noise is _____

Noise is _____

Noise is _____

