

Sound and Noise Mapping in your Neighborhood

Description:

Students will practice spatial visualization through mapping sounds and noises heard in their neighborhood or school.

Objectives:

- To practice mapping skills
- To understand the difference between sound and noise
- To introduce NYC noise regulations
- To relate noise, sound, and noise codes to their own classroom and community

Vocabulary:

Noise, onomatopoeia

Recommended for:

3rd- 10th grade students

Materials:

- Colored pencils or crayons
- Blank paper
- A map of the neighborhood or school for reference
- NYC Noise Code Category worksheet (attached)
- Example Sound Map(s) (attached)

Background Information:

A sound is something that can be heard. A noise is a sound that is unwanted or unpleasant. New York City classifies noises into seven categories, listed on Worksheet 1.

- Now that you have a list of sounds, how do we define sound? Brainstorm verbally or with an idea web on the board.

- Explain that the class will be doing a hearing exercise in the classroom/in school/around the school.

Method:

- Inquire about sounds in the students' daily lives: what types of sounds do you hear in the classroom? In school? On the playground? In your neighborhood? On your school commute? Collect answers on the board or have students brainstorm in small groups.
- Each student will find their own "sit spot" within view of the teacher. They will have 7-10 minutes to listen carefully and attentively to their surroundings and to draw out a "Sound Map."
- There are many ways to draw a sound map, but all start with marking the "sit spot."
 - The sound map should have both words and drawings. The words can be the source of the sound, the onomatopoeia, or both.
 - The student (or the teacher) can decide how to visualize the sounds:
 - With arrows pointing to the direction the sound came from and the size of the arrow representing the volume of the sound.
 - With abstract shapes representing the sound in the area where the sound was heard (this is good for depicting noises in motion).
 - With drawings of the source of the sound such as a car honking (the students can first just map words and then add drawings after).
 - If preferred, the students can start with a simple map of their school or block

and fill in sounds on the map (draw up beforehand or print from Google Maps).

- After the listening time is up, regroup in the classroom and have students share what kinds of sounds they heard.
- After you have discussed sound, talk about noise. What is the difference between sound and noise? *A noise is an unwanted or offensive sound.*
- Pick out sounds from your earlier brainstorm that could be considered noise.
- Pick out sounds from your map that could be considered noise.
- Introduce the NYC Noise Code Category worksheet. NYC Department of Environmental Protection (DEP) uses these sound categories to regulate noise.
- Would any of the sounds heard during the mapping activity fall into one of these categories?
- Instruct students to color-code the noises on their sound maps. Don't forget a key!
- Title sound maps and (if students want) add details to ground the map to an actual place by labeling the street names or the school buildings on their map, for example.

Discussion:

- Why is it important to understand sound and noise in your neighborhood?
- Did you hear anything new or unexpected while you were sound mapping?
- Were there certain sounds that were hard to recognize? What did you decide that those sounds were?
- How easy was it to visualize the sounds that you heard?
- Were there more pleasant sounds or unpleasant noises on your sound map?
- How do you think that these sounds and noises affect your neighborhood or school?

- Are there sounds that you consider noise that are not regulated within the noise code categories?

Extension:

- **Part 1:** Have the students do a sound map both inside the classroom and outside the classroom.
 - Are there sounds that you can hear in both places?
 - Which place has more noise?
 - Have students write a comparison of their two maps.
- **Part 2:** Teachers and students can also look into a sound mapping project in NYC called [Citygram](#). Learn more about this project developed in collaboration with New York University Steinhardt, NYU Center for Urban Science & Progress (CUSP), and CalArts [here](#).
- **Part 3:** Explore [The Roaring Twenties Project](#), an interactive soundscape exploring the historical sounds of NYC. More information can also be found [here](#).

For more information contact:

New York City
Department of Environmental Protection
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Flushing, NY 11373
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Also visit DEP's website at: www.nyc.gov/dep

NYC Noise Code Categories

Construction



Animals



Food Vendors



Air
Conditioners



Bars &
Restaurants



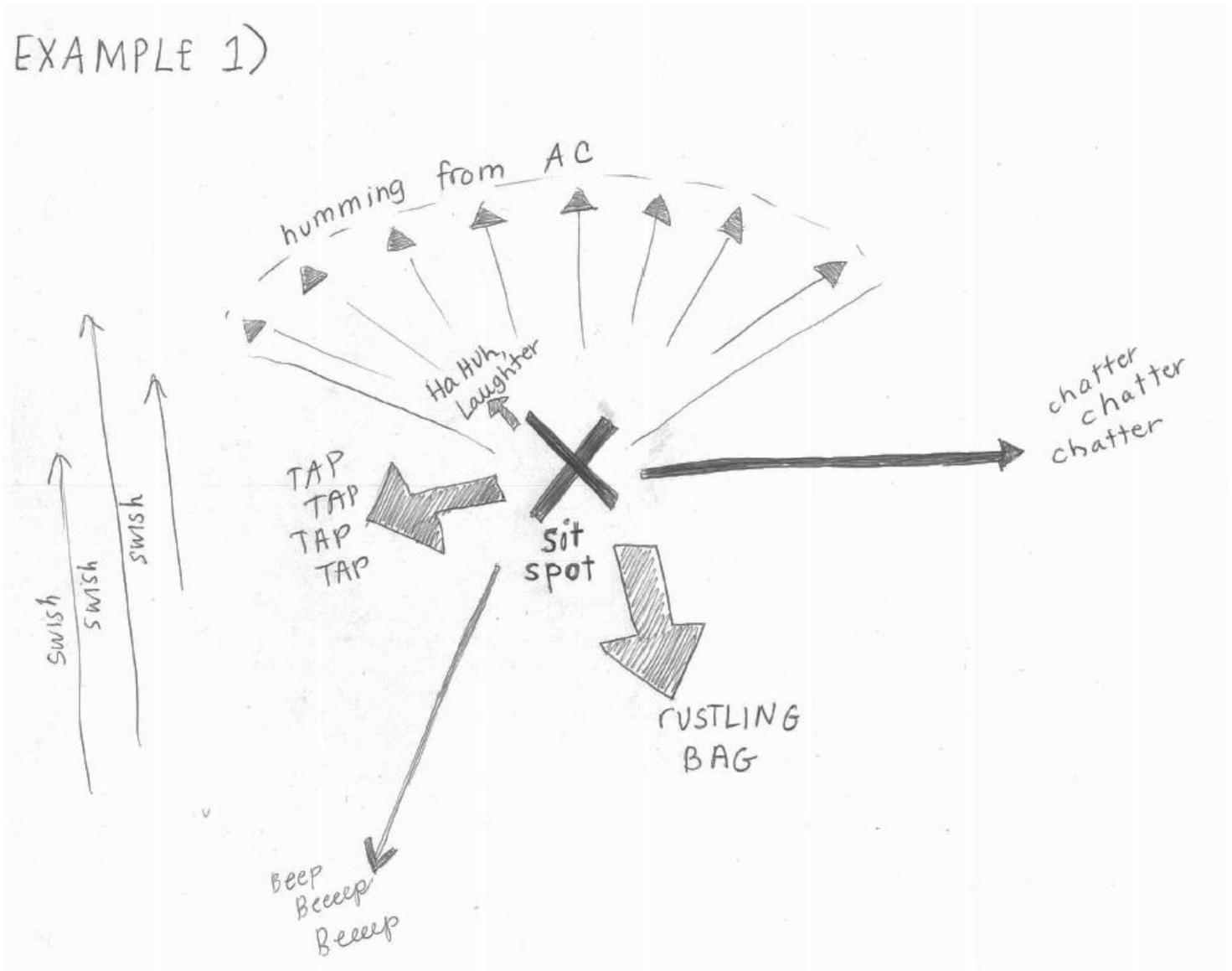
Garbage
Trucks



Motor Vehicles
and Motorcycles



EXAMPLE 1)



Sound Map example

EXAMPLE 2)

AMBULANCE
SIRENS
wee-oo
wee-ooo

car door
slam

HONK
HONK

HONK
HONK

BIKERS WHOOSH

LAUGHTER
HE HE HE

Tweet
tweet

X SIT
SPOT

SIDEWALK

SCHOOL BUILDING



TALKING

Sound Map example

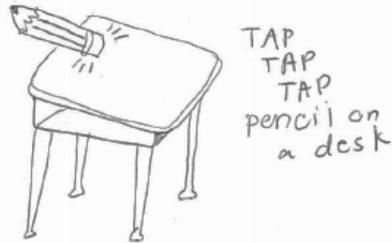
EXAMPLE 3)



HUMMING

FROM THE LIGHTS

SIT SPOT



Sound Map example