



HEAR! HEAR!



BENCHMARK and TASK

SC.A.1.1.1 The student knows that objects can be described, classified, and compared by their composition (e.g., wood or metal) and their physical properties (e.g., color, size, and shape).

- The student uses senses to make observations about the physical properties of objects (e.g., color, shape, mass, capacity, form, texture, size, position, speed, and composition).

KEY QUESTION

How can you tell the difference between sounds?

BACKGROUND INFORMATION

All science is based upon observations. Scientists use their senses and extensions of their senses to see, touch, hear, and otherwise view the world, observing its characteristics and behaviors as objectively as possible. They use the evidence of their senses to obtain the information upon which scientific work is based.

Sensory observation is fundamental to young students as they learn about the world around them. We must teach students to use their five senses – seeing, hearing, smelling, tasting and touching – to explore and describe their surroundings and themselves. Through exploration, students should become aware that different senses provide different information, and that we often use them in conjunction with each other.

The Sense of Hearing: The outer ear flaps catch sound waves and funnel them into the auditory canal, where they strike the eardrum. Vibrations occur and travel to three tiny bones (hammer, anvil, and stirrup) in the middle ear. These bones transmit the vibrations to a membrane that covers the opening of the inner ear. There the cochlea (a fluid-filled tube) responds. Hair-like receptors send nerve signals to the brain, and we hear sound.

MATERIALS

Teacher

tape
24 opaque, 35mm film canisters with lids
objects for canisters (small amount of raw rice,
12 paper clips, 6 pennies, popcorn kernels, water,
6 teddy bear counters)

Class Prediction Chart

object in a box (different object than in previous activity)

The Listening Walk by Paul Showers

Per group

set of prepared film canisters, #1 - #6
Picture Cards (optional)

TEACHING TIPS

1. Prepare 4 identical sets of film canisters. Each set should consist of 6 canisters, labeled #1 - #6.
2. Place the following items in the canisters and tape the lids:

#1 – 2 paper clips	#4 – several grains of raw rice
#2 – a penny	#5 – teddy bear counter
#3 – a little water	#6 – several popcorn kernels

Optional: replace an item with a cotton ball. (If you want to use other items, make a set of picture cards to match the items.)

3. Make a *Class Prediction Chart* on bulletin board paper.
4. Reproduce and cut apart a set of *Picture Cards* for each group.
5. Prepare and put into a box or a paper bag an item for the Engage part of the lesson.

ENGAGE

1. Display the box.
2. Ask:
How can we determine what is in this package without opening it?
What can you tell about this object as I move it back and forth?
What do you hear as it moves back and forth?
What sense are you using to determine what is in the box?
3. Have students brainstorm “sound words” (e.g., yelling, ringing, singing, whistling, fizzing) and record on chart paper or a circle map.

EXPLORE

1. Show students the four sets of canisters with identifying numbers. Optional: Show the set of pictures depicting what is inside these containers, if using the picture cards.
2. Tell students that while in their small groups, they are to use their sense of hearing to determine what is in each of the canisters in their set.
3. Divide the class into four groups and send them to different parts of the room to do this activity.
4. Tell students NOT to open the canisters. After they have explored the canisters, ask them to predict what is in each canister. Optional: Match the canister to the picture, if using the picture cards.

EXPLAIN

1. Have students tell their group what they predict is in their canisters. *
2. Tell students to open canister #1 to see if their prediction was correct. Have them do the same with the rest of the canisters.
3. Ask:
Were some sounds easy to identify? Why?
Were some sounds difficult to identify? Why?
Which objects made similar sounds?

*Optional: Ask a member of each group to tape the picture of the object they think is in the canister next to the picture of the canister on a class prediction chart.

Class Predictions

	Group 1	Group 2	Group 3	Group 4
#1				
#2				
#3				
#4				
#5				
#6				

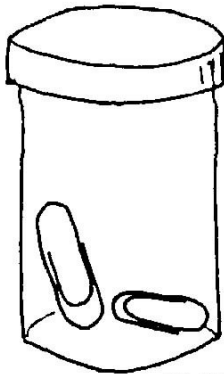
EXTEND/APPLY

1. Read the book *The Listening Walk* by Paul Showers.
2. Listening Walk: Take students outside and have them identify sounds they hear. Next have students stand still, close their eyes, and listen. Have them identify the sounds they hear.
3. Connect hearing to everyday life by discussing the difficulties hearing-impaired people may face. Have students wear earplugs for a few minutes and discuss the experience.
4. Play the *Good Morning* game. Students sit quietly. First student sits apart from the group with his back to them. Teacher points to one student who says “Good Morning, (child’s name)”. The first student tries to identify who said “Good Morning”. (They get three chances.) If the student guesses correctly, the student keeps playing. If incorrect, the second student becomes “it”. Optional: Have students try to disguise their voices.

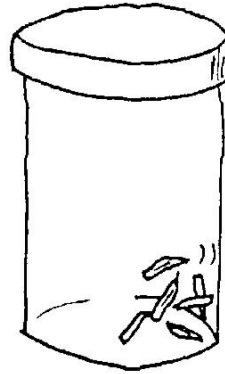
ASSESSMENT

As you observe your students, look for these behaviors:

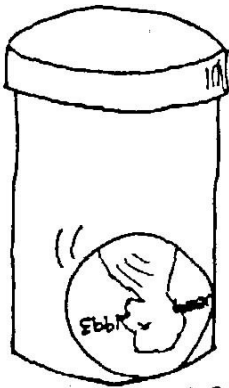
- Are they discriminating sounds?
- Can they put a name to the sounds?
- Are they making realistic predictions?



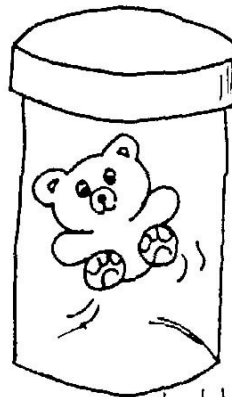
paper clips



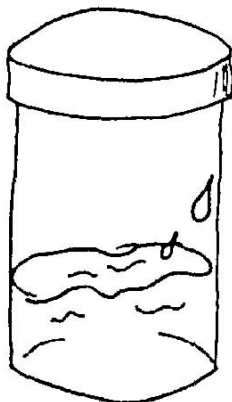
rice



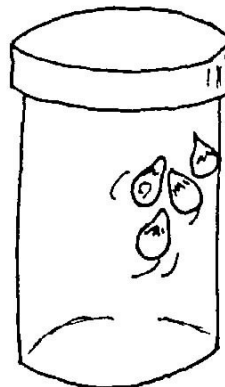
penny



teddy bear counter



water



popcorn kernels