



Identifying Matter by Sound and Feel

Teacher Information

Investigating Physical Properties of Matter

This series of activities should be spread over several days. Some can be done in learning centers, while others are for the class to do together. The activities are designed to have students develop the use of their senses while investigating the physical properties of various types of matter. These will include using the senses of smell, taste, sound, touch, and sight.

Overview: *Students will investigate the physical properties of sound that matter can make.*

Materials

- opaque, empty film canister for each student, available free at most places where film is developed
- trays (one per group)
- parent letter (page 9)
- Sound and Feel Containers List (page 10)
- What's Inside the Container? Data Sheet (page 11)
- transparency of the Sound and Feel Containers List (page 10) and Sound and Feel Answers (page 12)

Lesson Preparation

- Send home the parent letter and a film canister for each student a few days in advance of when you conduct the activities.
- Put a number on each container, both on the lid and on the canister as they are returned. Record each student's name and container number on the Sound and Feel Containers List.
- Select 10 canisters to use and save the rest for later. Make a random list of their contents as an answer sheet.
- Students will then match the characteristics they sense when shaking the containers and copy the name of the item from the answer list beside the container's number.

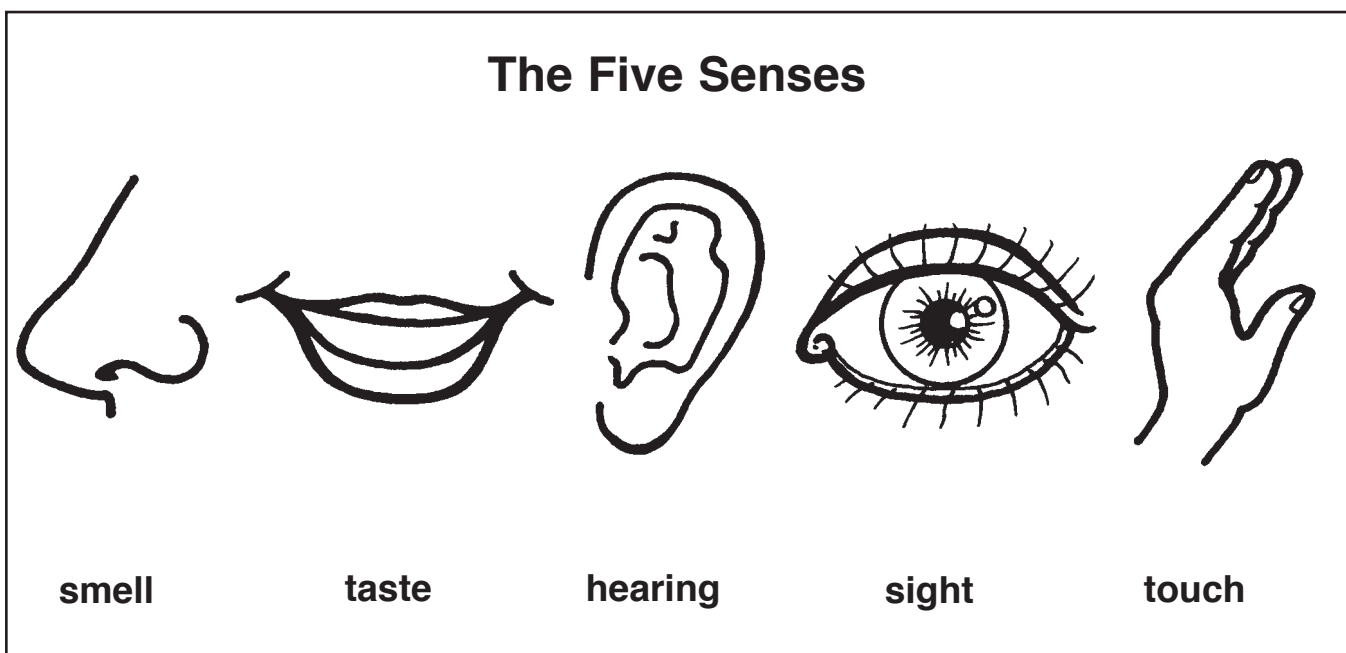
Identifying Matter by Sound and Feel *(cont.)*

Activity

1. Divide the students into small groups and then distribute a copy of the What's Inside the Container? Data Sheet to each group. Divide the containers into sets for each group and distribute them on a tray.
2. Have the students carefully shake the containers to see if they can guess the contents. The members of the group should come to agreement and then record their guess.
3. Rotate the containers on the trays to another group until all containers have been tested by each group. It is important to allow enough time for each group to discuss the possibilities before recording their guess.
4. Monitor the students to be sure the lids are not removed. Be certain that each member of the group is contributing to the test and discussion.

Closure

- Have each group tell what they thought was in each container. Record their guesses on the Sound and Feel Guess List transparency.
- Show the containers transparency (page 10) of the list of items in the containers along with the items themselves.
- Have the students check to see how many they could guess correctly just by hearing the sound and feeling the contents move.
- Discuss what helped them guess these items correctly.



Identifying Matter by Sound and Feel *(cont.)*

Parent Letter for Sound and Feel Containers

Date _____

Dear Parents,

We are learning about the properties of matter and will be doing an activity that uses the senses of hearing and touch to identify various types of matter. Each student has been given a film canister to put some type of matter inside. Please help them find something that is appropriate to place inside the canister. Put something which makes a sound when shaken inside the canister. Be sure there is only one type of matter in each container. The canister should not be filled so full that the contents cannot make a sound when shaken gently.



Suggestions for matter which might be included in the container:

- sand
- pebble(s)
- water
- paper clip(s)
- rubber eraser
- coin(s)
- marble(s)
- cork

Students are encouraged to put something unusual in their containers.

Thank you for helping to make our activity exciting. You are welcome to join our class when we do this activity on _____.

Sincerely,



Identifying Matter by Sound and Feel *(cont.)*

Sound and Feel Containers List

Student Names	Contents
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	
11.	
12.	
13.	
14.	
15.	
16.	
17.	
18.	
19.	
20.	
21.	
22.	
23.	
24.	
25.	
26.	
27.	
28.	
29.	
30.	



Identifying Matter by Sound and Feel *(cont.)*

What's Inside the Container? Data Sheet

Name: _____ Date: _____

To the Student: DO NOT OPEN THE LID. Shake the container and listen to the sound it makes. How does it feel when you shake it? Can you guess what is inside? Look at the answer list. Choose the name of the thing you think is inside the container and write it next to the container's number.

1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	



Identifying Matter by Sound and Feel *(cont.)*

Sound and Feel Answers

To the Teacher: List the items in the canisters in random order below. This will be the answer list for students to use.

1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	