

CURIOSITY AT HOME

DANCING SALT



Percussion instruments make sounds by being struck, shaken, or scraped. The percussion family is the largest and oldest instrument family, following the human voice. In music, percussion instruments are used for special effects and mood and to keep the rhythm, or beat. Try this activity to both hear and see percussive sounds in action!



MATERIALS

- Large bowl
- Plastic wrap
- Salt
- Tupperware containers with lid (at least two different sizes)
- Pencil or chopstick
- Science notebook or paper
- Something to write with

PROCEDURE

- Cover bowl with plastic wrap. Be sure to stretch it tightly.
- Sprinkle a pinch of salt in the center of the plastic wrap.
- Position the Tupperware container, with lid in place, next to the bowl without touching it. Hit the lid of the container with the pencil or chopstick.
- Observe the salt. What do you notice happens to the salt when you hit the lid of the container?
- Repeat with a different sized Tupperware container. How does the sound of the other container compare to the first? What do you notice about the movement of the salt?
- What are some different types of sounds you can make using your “drum?” What kinds of sounds make the salt move more or less? What else affects the movement of the salt?

Experiment continued on next page...



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EXPLORE MORE

- Try using a different material instead of salt, such as rice, lentils, or paper confetti. Does it move the same way when you hit the container? In what ways does it move differently?
- Try making your own drum using materials you find around your home. All you need is an empty container or can. Cover the opening of the container with tightly stretched plastic wrap or a balloon (cut off the mouthpiece first). Secure the flexible membrane with tape. Try playing your drum with your hands or by using pencils as mallets. What kinds of sounds can you make? Try using different sized containers. How does the size of the container affect the pitch of the sound? Does covering the flexible membrane with other materials, such as paper, affect the sound?
- Listen to your favorite song. Can you hear the beat? Try playing a percussion instrument of your choice to the beat (remember your body can also be used as a percussive instrument!). Can you make a sound that matches the mood of the song?

DID YOU KNOW?

When a drum or other percussion instrument is struck, it vibrates air molecules around it, forming sound waves. These sound waves travel through the air. When they reach the plastic wrap, it vibrates causing the salt to move. The sound waves are also what allow you to hear the sound of the pencil hitting the container.

The amount of air inside of a drum or hollow instrument affects its pitch. The larger the drum, the lower the pitch. A drum's pitch also depends on how tight its stretched membrane or drum skin is. If the drum skin is tight, the drum makes a high note; if it is slack, it makes a low note.

Experiment continued on next page...



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3–5 GRADE EXPLORATION

- Volume describes how loud or soft a sound is. Pitch describes how high or low a sound is. Make observations about the different sounds you can make when you hit the lids of the containers and how these sounds affect the movement of the salt. Record your observations in the chart below, or in your science notebook.

ACTION	OBSERVATION
Hit the lid of larger container hard	
Hit the lid of larger container softly	
Hit the lid of smaller container hard	
Hit the lid of smaller container softly	

- Listen carefully to the sound each container makes when you hit the lid. Which container makes a higher pitched sound when hit? Which container makes a lower pitched sound when hit? How does the size of the container affect its pitch? What other experiments could you do to test if your idea is correct?



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