

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, mood, and to keep the beat or rhythm. Try this activity to both hear and see percussive sounds in action!

MATERIALS

- 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 a bowl with plastic wrap. Be sure to stretch it tightly. To keep plastic wrap tight, wrap it far enough that it overlaps on the bottom of the bowl
- Sprinkle a small 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 hard 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?



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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- pat your knees or clap your hands!). Can you make a sound that matches the mood of the song?

WHAT'S HAPPENING?

When a drum is struck, energy is transferred through the impact causing the instrument to vibrate. These vibrations cause the air particles around the drum to vibrate as well, forming sound waves. As sound waves move through the air, they continue to transfer energy. When they reach the plastic wrap, it vibrates, which makes the salt move. The sound waves are also what allow you to hear the sound of the pencil hitting the container.



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K–2 GRADE EXPLORATION

- Volume describes how loud or soft a sound is. How does the amount of pressure you use (in other words, how hard you hit the “drum”) affect the volume? What do you notice happening to the salt when you play the “drum” more loudly? What happens when you play more softly? Write your observations in your science notebook.
- Pitch describes how high or low a sound is. 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? Does changing the pitch affect the movement of the salt? Write your observations in your science notebook.



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