

# JR-SCIENTISTS

# DANCING SPRINKLES

**Can sound make sprinkles dance? This festive little experiment is tasty and fun!**

## INSTRUCTIONS

**STEP 1:** Cover a bowl with plastic wrap and pull tight.

**STEP 2:** Wrap a rubber band around the bowl.

**STEP 3:** Place a handful of sprinkles on top of the plastic wrap.

**STEP 4:** Place a speaker next to your bowl, touching the edge. A phone speaker works as well. Turn the volume up loud.

**STEP 5:** Play music through your speaker and watch your sprinkles! (If possible, place your speaker or phone inside your bowl, under the plastic wrap for a more dramatic effect!)

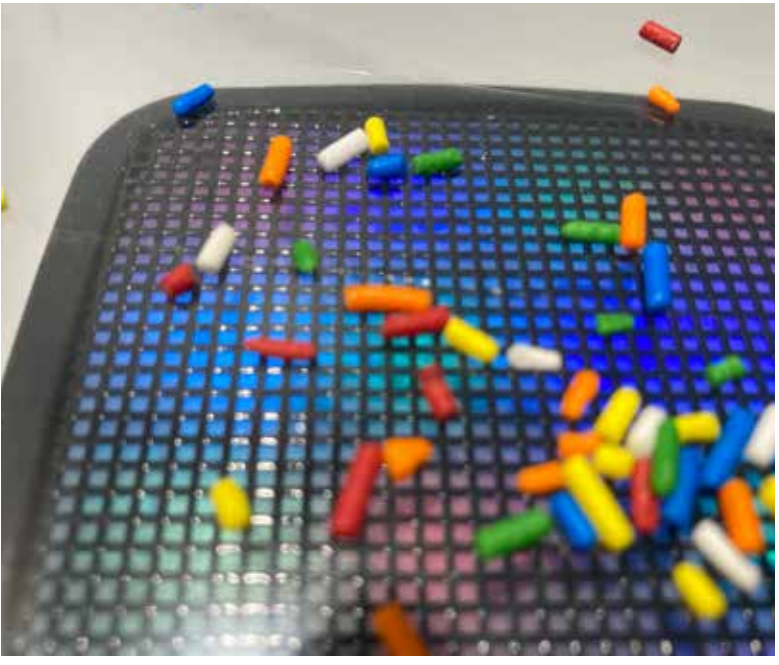
## SUPPLIES:

**Plastic wrap**  
**Rubber band**  
**Bowl**  
**Sprinkles**  
**Speaker**

## THE SCIENCE

Did you make the sprinkles dance? When you played the music loudly enough and at the right pitch, the sound waves generated by the sound should have made the plastic wrap vibrate.

Depending on the size and shape of the container you used, you might have had to adjust the volume and placement of the speaker to get the sprinkles to dance. If the pitch of the music was too high or too low, the sprinkles might not have moved at all. If the pitch was "just right," they may have bounced around like crazy or even fallen off the plastic. The way an object responds to sounds of different pitches is called its frequency response.



# Dancing Sprinkles Observations

Use this worksheet to process and evaluate your work.



What happens to the sprinkles when you play music?

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Play the music softly. What happens? Now loudly. What happens?

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What happens when you turn the music off?

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What did you learn about frequency?

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