

# MUSICAL BOTTLES

## FOCUS

**Music:** pitch, composition  
**Thinking Skills:** experimentation  
**Science:** sound, pitch

## SOFTWARE CONNECTION

**New Orleans Flea Circus Piano**

## GROUPING

student pairs

## SUPPLIES

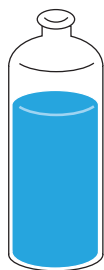
copies of the Musical Bottles Activity Sheet  
(1 per student)  
6 single-serving glass juice bottles  
pitcher of water  
food coloring  
crayons  
unsharpened pencils

## ACTIVITY

1. Discuss the fact that sounds are caused by vibrations. Have students put their fingers on their neck to feel the vibrations as they hum or talk.
2. Gather the students around a table and show them how to make a set of Musical Bottles.
  - Arrange the six bottles in a row. Fill the first bottle almost to the top with water. Tap it with an unsharpened pencil to make a note.
  - Fill the next bottle with slightly less water. Tap it. Ask if the note is higher or lower in pitch (higher). Explain that the water slows the vibrations. The more water, the slower the vibrations and the lower the pitch. (To remember, think *slower is lower*.)
  - Fill the remaining bottles, adjusting the amount of water as necessary so that you have the first six notes of the musical scale.
  - Finally, use food coloring to make the water in each bottle a different color:



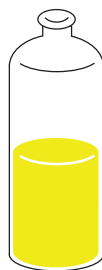
green



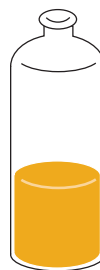
blue



red



yellow



orange



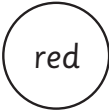



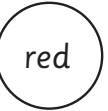
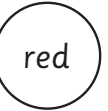




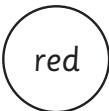


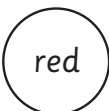



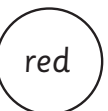
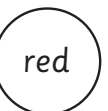

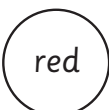


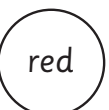


purple

3. Let students work at the table in pairs throughout the day. Provide activity sheets and crayons so that they can color the dots as indicated and play the familiar tune at the top of the page ("Mary Had a Little Lamb"). At the bottom of the activity sheets, students can "write music" for other familiar or invented songs.

# MUSICAL BOTTLES

## Activity Sheet

Color these dots.

1.       
2.   
3.   
4.       
5.      

Now tap the Musical Bottles in the order of the colored dots, one line at a time.  
Do you recognize the tune?

Try creating another tune—a familiar tune or one of your own.  
Write the colored-dot music for it.