CURIOSITY AT HOME

MAKE YOUR OWN KAZOO

Hum your favorite tune and amplify it with your own kazoo!
Using simple materials, create an instrument with a chamber
that resonates your humming tunes.

MATERIALS

· Cardboard tube (paper towel, bath tissue, and/or wrapping paper tubes will all work)
· Wax paper
· Rubber band
· Scissors
· Science notebook or paper
· Something to write with

PROCEDURE

To make your kazoo:

· Cut a piece of wax paper big enough to cover one end of the tube.
· Place the wax paper over the end of the tube and secure it to the tube
  with the rubber band.
· Using scissors, cut a small hole in the side of the tube, just below the rubber band.
· To play the kazoo, hum into the open end of the tube.

DID YOU KNOW?

The tube and wax paper create a chamber that allows the sound you're making
to persist, or reverberate. Creating an environment that allows for reverberation
is important for people who study acoustics to not only create musical instruments,
but also for designing concert halls, noise-control systems, and more.

@pacsci

Show us how you're being curious! Share your results with us.

PACIFIC
SCIENCE
CENTER

6-8 GRADE EXPLORATION

Explore the following questions and write your observations in your science notebook.

· What do you think might happen if you use a shorter or longer tube for your kazoo?

· What does the small hole you cut into the side of the tube do? Try covering it with your hand while playing your kazoo to see what happens. What might happen if you cut more holes?

· Can you tell where the sound is coming from? What parts of your kazoo are vibrating?

· What is it about the shape of the kazoo that amplifies the sounds? If you made another instrument using a different shape of cardboard, would it still work?

· Draw a design for another instrument in your science notebook that uses similar materials to your kazoo. How is your design similar or different from the kazoo?

· Would there be a way in which you could modify your kazoo to make it louder or quieter?

@pacsci

Show us how you're being curious! Share your results with us.

PACIFIC SCIENCE CENTER