

Making Musical Instruments

WHAT YOU NEED



cardboard tube



waxed paper



hole punch



paper cup



rubber band



sharpened pencil



scissors



wet paper towel



paper clip



string



coffee can



beans

Find Out

Do this activity to see how different instruments sound.

Process Skills

Observing

Communicating

Time

- 1 hour to make musical instruments
- 40 minutes to play instruments and record sound

WHAT TO DO

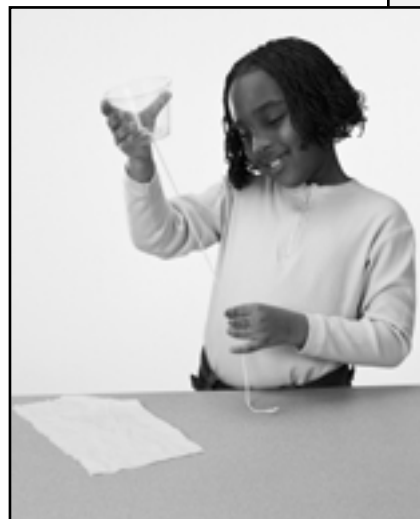
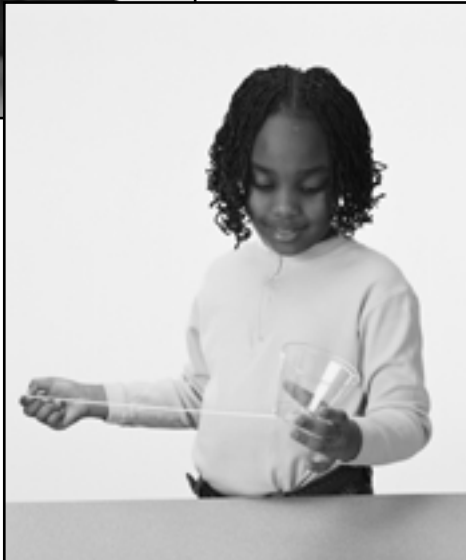
1. Make a kazoo. Punch a hole in the cardboard tube. Cover the end of the tube with a piece of waxed paper. Put the rubber band around the tube.



Be careful with sharp objects and rubber bands.

2. Make a musical cup. Punch a hole in the bottom of the cup with a sharpened pencil. Put a piece of string into the hole. Tie a paper clip to the end of the string and pull the other end of the string through the hole. Wet the string with a wet paper towel.

3. Make a shaker. Fill a can with beans. Put the lid on the can.
4. Play each instrument.
Observe and **record** what you hear.
5. Play the kazoo first. Next, make a sound with the shaker. Then play the musical cup.
6. To play the cup, hold it in one hand and use the fingers of your other hand to pull down on the string.



Circle *loud* or *soft* to describe the volume.

○ Circle *high* or *low* to describe the pitch.

Write the name of something that sounds like the musical instrument.

Musical Instrument	Volume	Pitch	Sounded Like...
kazoo	loud soft	high low	
musical cup	loud soft	high low	
shaker	loud soft	high low	

○ Student data will vary.

Conclusions

1. Which musical instrument had the loudest volume?

Answers will vary.

2. How did the instruments sound alike?
How did the instruments sound different?

Accept any reasonable answer.

New Questions

1. What could you do to change the way each instrument sounded?

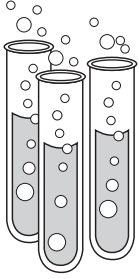
Accept any reasonable answer. Students might say that they could have added more water to the string, changed the length of the string, or changed the size of the cup. They could use a different kind of paper to make their kazoos. They could use another type of object inside their shaker instead of beans.

2. Write a new question you have about sound.

Accept all questions.



Name _____



ACTIVITY

Making Sound with a Drum

Draw a picture of your drum.

A large, empty rectangular box with a thin black border, intended for a student to draw a drum. In the bottom right corner of this box, there is a small line drawing of two glasses, one slightly behind and to the right of the other, both containing liquid and having bubbles rising from them.

Student drawings will vary.

Name _____

What Happened

① How do you make a sound with your drum?

by hitting the drum with the pencil

② What part of the drum vibrates?

The top, or balloon part, of the drum vibrates. The air inside the drum also vibrates.

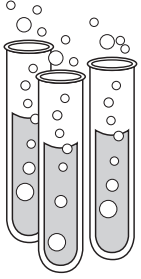
What If

What are other ways that you could make sound with your drum?

Possible answers include hitting the drum with another kind of object, such as

hands, a larger stick, and so on.

Name _____



ACTIVITY

Changing Volume

Record what happened to the sound when you added the cup.

Students should record that the sound is louder when the cup is added.

Predict what would happen if you covered the cup with your hand while you blew into the straw.

Accept all reasonable predictions. Most students will say that the sound will not be as loud.



Name _____

What Happened

① Which time was the sound loudest?

The sound was loudest the second time.

② What caused the sound to be louder?

The sound was louder the second time because the cup made the sound

louder. The cup pointed all of the sound waves in one direction.

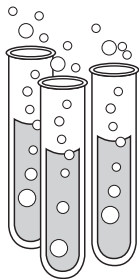
What If

How could you make the sound even louder?

Answers will vary. Possible answers include using a larger cup or using more

force to blow into the horn.

Name _____



ACTIVITY

Making a Bottle Instrument

Draw how much water is in each bottle.
Students should draw horizontal lines to mark the water level in each bottle.



Predict which bottle will make the highest sound when you tap it. **Write** an *H* on that bottle.

Students should write an *H* on the bottle they think will make the highest sound. Accept all predictions.

Circle the bottle that made the highest sound when it was tapped.

Students should circle the bottle with the least amount of water in it.

Name _____

What Happened

- ① What did you notice about the amount of water in each bottle and the noise it made?

The more water a bottle contains, the lower the sound it will produce.

- ② What is vibrating to make the sounds?

The glass and the water are vibrating.

What If

What would happen to the sounds if you added more water to each bottle?

The pitches would be lower.