Musical Bottles: Parent's Instructions

In this experiment, kids will explore the sense of sound using the four steps of scientific inquiry: 1) observe, 2) hypothesize, 3) experiment, 4) conclude.

Materials:

4 identical glass or plastic bottles, empty
water
a spoon

Step 1: Observe

Have your child find 3 things that make noise. Ask your child what kind of noise these things make. Have your child use descriptive words like: loud, soft, squeaky, rattle, etc. Have your child write down his or her observations in the experiment log.

Step 2: Hypothesize

Ask you child what kind of noise bottles make. Can bottles be musical instruments? Have your child write down his or her hypothesis in the experiment log.

Step 3: Experiment

1. Pour different amounts of water into each bottle. Try: one bottle that is almost full, one bottle that is half full, one bottle that is one-quarter full, and one bottle that is almost empty.
2. Blow across the tops of the bottles. What do you hear?
3. Tap each bottle with the spoon. What do you hear?
4. Have your child write down his or her answers in the experiment log.

Step 4: Conclude

Ask your child what each bottle sounded like. Did they sound different from each other? Did they sound different when you used

a spoon instead of blowing over them? Ask your child if he or she can think of why the bottles might have sounded different. Have your child write down his or her conclusions in the experiment log.

Challenge:

Try adding different amounts of water to the bottles to see what kind of sounds your child can make. See if he or she can play a simple song, such as "Mary Had A Little Lamb," or another song that you and your child know well.

Musical Bottles: Kids' Instructions

You will need:

4 empty bottles that look the same
water
spoon

Step 1: Observe

Find 3 things that make noise. What kind of noise do these things make? Are they loud or quiet noises? Do they squeak? Do they rattle? What other words can you use to talk about noise? Write down your observations in the experiment log.

Step 2: Hypothesize

What kind of noise do bottles make? Can bottles be musical instruments? Write down your hypothesis in the experiment log.

Step 3: Experiment

1. Pour different amounts of water into each bottle. Have a parent or another adult help you with this step.
2. Blow across the top of each bottle. What do you hear?
3. Tap the bottles with a spoon. What do you hear?
4. Write down your answers in the experiment log.

Step 4: Conclude

What did each bottle sound like? Did they sound different? How did they sound different? Can you think of why they might sound different? Write down your conclusions in the experiment log.

Challenge:

Try changing the amounts of water in the bottles to make different sounds. Can you play a song with the bottles?

Experiment Log: Musical Bottles

1. What I Observed:

2. My Hypothesis:

3. What My Bottles Sounded Like:

4. My Conclusion: