**Tuning a Glass**

**What to do:** Line up the eight drinking glasses in a row on the kitchen counter. (Plastic bottles will not work.) It does not matter if the glasses are all the same size or not. If they are, it’s quicker to tune them. Fill the glasses part full of water, so that they look pretty much like those in the illustration: as you can see, each glass has a little less water in it than the one to its left. Now use the pencil to gently but firmly strike the side of each glass.

**What happens:** You will hear a different tone from each of the glasses. The more water there is in a glass, the lower the tone that it makes. Call the first glass on your left "do," which is the first note of the musical scale. Strike the next glass. If its tone is the next step up the scale move on. If not, either add a bit of water or pour some out until the glass’s tone is one step up. Continue in this manner until you have tuned the eight glasses to play a musical scale.

**Why:** We know that vibrations cause sound. Striking the side of a glass causes it to vibrate. The speed of the vibration depends upon how much glass and water there are to set in motion. The more water, the slower the vibrations and the deeper the tone.

**YOU NEED**
- eight drinking glasses
- water
- pencil

**Tune More Glasses**
Now set up eight glasses that are different in size. The more different, the better. Keep in mind that it is the total amount of water that determines the tone of the glass. Tune these eight glasses to play a musical scale by adding or pouring out water until each tone is one step above the one to its left.