

Benjamin Franklin's Glass Harmonica

Benjamin Franklin was a founding father, inventor and friend of John Jay's. Franklin is well known for inventing the lightning rod, bifocal glasses and the Franklin stove, but he also invented a musical instrument called the glass harmonica. His inspiration for the harmonica came from noticing the tones were made from glass that had different amounts of water in them.

Try this simple experiment to see if you can make your own harmonica just like Benjamin Franklin.

Materials:

Large tray or countertop
8 similar glasses, as tall and thick as possible; must be glass
Large pitcher of water
Towel
2 stirring sticks

Directions:

1. Arrange the glasses in a row on the tray or counter.
2. Place the pitcher of water near the glasses and have a towel ready for spills.
3. With eight glasses you can produce an eight-note scale. Begin by filling the glass on the far left about $\frac{3}{4}$ full with water.
4. Moisten your finger and rub it on the rim of the glass to produce a note. If you have trouble making this work, try moistening the rim of the glass and tapping it gently with your stir stick. When you are pleased with the sound, go on to the next glass.
5. Put less water in the second glass.
6. Continue from left to right, with a little less water for each glass. The last glass should have very little water.
7. When all the glasses are ready, start testing up and down the eight-note scale. If you find a note that doesn't sound right, try changing the amount of water.
8. Keep practicing! Some people have the best results by rubbing their moisten finger on the rim; others have more success tapping the notes with a stirring stick.