

BOOM WHACKERS

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Boom Whackers are eight plastic tubes with different lengths use for eight notes. These can be purchased for about \$25 online or you can make your own.

It is possible to construct these yourself using clear polycarbonate fluorescent tube lamp guards. These tube are designed to protect florescent tubes from shattering and can be found at Lowe's or other hardware stores.

<u>TUBE</u> <u>COLOR</u>	<u>NOTE</u>	<u>LENGTH</u> <u>(inches)</u>
Red	C	24 1/2
Orange	D	21 3/4
Yellow	E	19 1/4
Green	F	18 1/8
Blue	G	16
Violet	A	14 1/8
Magenta	B	12 1/2
None	C	11 3/4

The tubes normally come in 46.25" and 92.25" in length with a diameter of about 1.625". Note that the end-caps provided with the tubes can be used on each tube to create

other notes. We put black duct tape over the opening in these caps. This can demonstrate the difference in natural frequencies between "open end" and "closed end" organ pipes of the same length. We taped pieces of colored paper in each tube to make it easy to sort the tubes by note. These colors are used on our PowerPoint music sheets below.

The tubes can be cut with scissors or a sharp knife. The following cutting procedure can results in a complete set of tubes for the table above.

$$46.25'' \text{ Lamp Guard: } 24 \frac{1}{2}'' + 21 \frac{3}{4}'' = 46.25''$$

$$92.25'' \text{ Lamp Guard: } 19 \frac{1}{4}'' + 18 \frac{1}{8}'' + 16'' + 14 \frac{1}{8}'' + 12 \frac{1}{2}'' + 11 \frac{3}{4}'' = 91.75''$$

HOW TO USE: Have students hit their head (or palm) with the tube, with appropriate timing.

PowerPoint Slides with Music: <http://www.tsaapt.org/demos.html>

Inspire groups to work together by challenging them to make music together. Give each team member a different sized Boom Whackers, have them come up with a rhythmic creation in 10 minutes, then listen in awe to their live performances. Aside from the energy and fun this creates, you'll enjoy a rich discussion about the challenges of leadership and teaming.

Close Encounters: D E C C_ G_

