

XYLOPHONE

DIFFICULTY: 5



When cutting wood
you will need the
help of an adult!



YOU WILL NEED:

- ★ wooden batten, size 4 cm (width) x 210 cm (length) x 1.8 to 2 cm (thickness); you can use different types of wood, since even pine wood will give you a good tone; this is easily obtainable from DIY stores
 - ★ round elastic band, length 120 cm
 - ★ cardboard box size 45 cm (length), 35 cm (width) and 25 cm (height)
 - ★ 2 wooden spoons
 - ★ wood saw
 - ★ protective gloves
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- 1 If you are content with a randomly tuned xylophone, you can cut the wooden batten into 8 lengths between 20 and 30 cm.



When cutting use
protective gloves
and take
precautions to
avoid cutting your
fingers.



2 If you want a properly tuned xylophone, cut the wooden batten into sections with lengths to suit the individual tone:

tone C: 29.3 cm
tone G: 23.6 cm

tone D: 28.4 cm
tone A: 22.6 cm

tone E: 26.8 cm
tone B: 21.1 cm

tone F: 25.9 cm
tone C: 19.8 cm



Since wood is a natural material and does not have a uniform structure, the length of the bars specified only corresponds to the illustrated xylophone example.

Therefore, the wood should be cut into bars at least 0.8 cm longer, which can then be more precisely tuned (i.e. shortened) by checking the tone against a tuned instrument (e.g. electronic keyboard) or electronic tuner (see p. xx). The tone pitch of the bars is tested by picking one up by its narrow edge at about 1/5 of its length and striking on it with a stick.

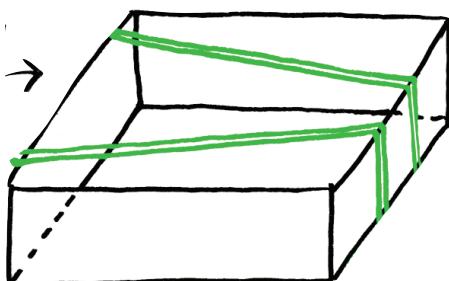


THE TONE IS TOO LOW SO I'LL MAKE THE BAR A LITTLE SHORTER.

3 Cut the elastic band into four strips, each about 30 cm long and tie them into loops.

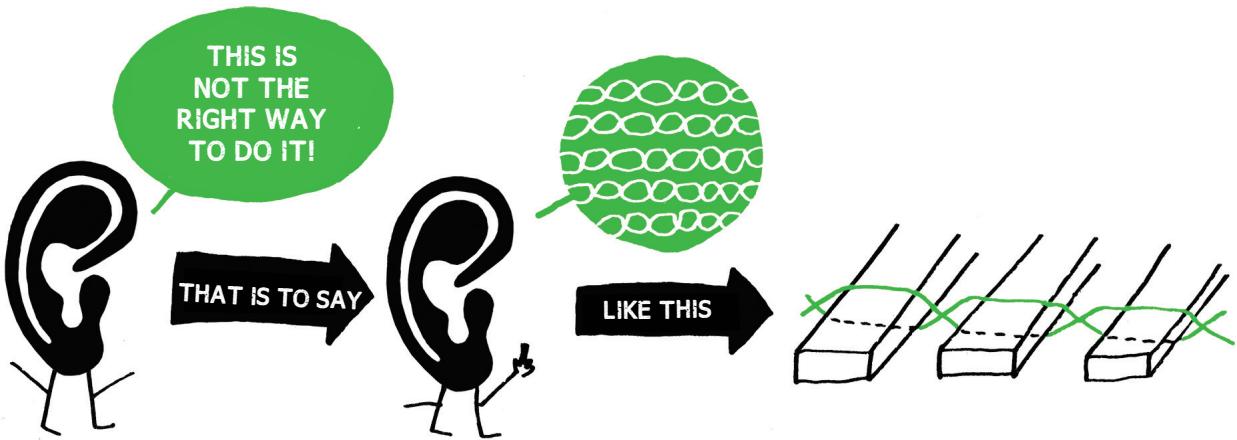
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ELASTIC BANDS STRETCHED ACROSS THE BOX



Take two pairs of elastic bands and stretch them lengthways across the cardboard box so that on one side the distance between the pairs of elastic bands is less than on the other.

5 Insert the wooden bars and weave them in and out of the two rubber bands as shown in the picture. In doing so, the rubber bands should be installed at a distance of approximately 1/5 from both edges of each bar (this is where the bar has a node, i.e. a point which does not vibrate when the instrument is played, while the middle part of the bar oscillates and produces tones).



The xylophone is played with sticks made of some hard material or you can use plain wooden spoons.

The xylophone belongs to the group of instruments known as idiophones. The sound on it occurs when an individual bar, when struck with a stick, oscillates between its two nodes (i.e. the places where the bar is embedded in the rubber band).

