

Make a thumb piano!



I first met the thumb piano when I worked as a teacher with VSO in Malawi. It was known locally as a 'kalimba'. Anyone that has twanged a ruler at school is familiar with the principle.

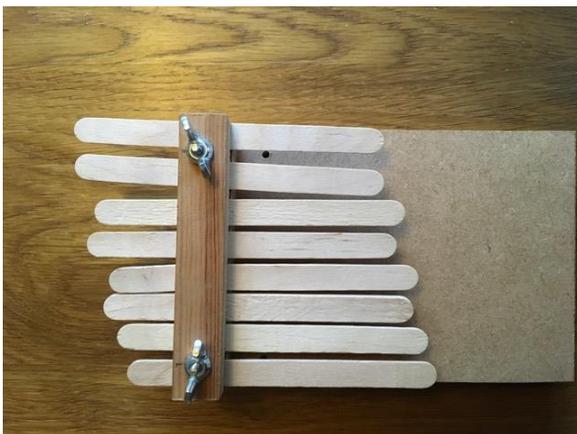
The shorter the ruler the more vibrations it makes in a second (this is called its frequency) and the higher the frequency, the higher the pitch sounds to our ears. So by adjusting the length of the 'ruler' you can tune the instrument. In the real instrument the vibrating rulers are made of metal – this makes the note last longer – but in mine I have used wooden craft sticks. To make

them tuneable I have sandwiched them between two pieces of strip-wood and attached those to a base made out of MDF using two bolts with butterfly nuts.



The dimensions of the base and the separation of the holes allows for 8 craft sticks which gives a simple octave. Six would work for Messy Church. One problem is that craft sticks, despite appearances, are not all the same thickness which means that when you screw down you may not securely clamp all of them. The thickness also affects the pitch, so you will see in my finished version that the lengths don't change regularly as you go up the octave.

The dimensions are not critical – the thickness of the timber base, for example, was determined by what I had in the garage. The width of the base is about 10cm and the holes are 7.3cm apart (73mm) in the base and in the strip-wood.



It helps to have access to a powered saw and a drill in a stand to make the cutting and drilling easy. This needs to be done before the session.

Two bolts are needed (long enough to go through everything. The thread on mine is 45mm long). The thickness of the bolts isn't critical. I'd get the thinnest to save on cost. DIY superstores tend to sell them in small packets which are rather expensive. Try a specialist hardware shop.

The head of the bolt is at the bottom and there is a risk it will scratch the surface of your best table so I have buried the bolt heads by drilling a second hole about halfway down the base. The inner hole needs

to be just big enough for the bolt to pass through just by pushing it. The outer hole just big enough for the head of the bolt to be concealed.

You have to tune it by ear! Enjoy!

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