

Kim's Awesome Thumb Piano!!!

By Kimberly Mowry
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Motivation:

The reason I decided to build a thumb piano is because I really wanted to build something. I enjoy building things and I saw this as a great opportunity to do so. Originally I wanted to try to make a music box but after some investigations, I realized there were so many moving parts and so many ways that it could go horribly wrong and I would end up with no project at all. After consulting with Professor Errede, he suggested making a thumb piano and after more research, it seemed like an attainable goal. Unfortunately, there were also many struggles ahead in my journey and it would not be the piece of cake project I thought it would be.

The Box:

Building the box was actually the easiest part. My uncle has an entire garage full of old wood and woodworking tools. I built the actual box out of an old shingle. It took forever to try to drill the hole out of the middle because the drill thing I had access to was just really obnoxious. It's hard to describe the struggle but it was like beating my head against a rock for a while until it finally started looking like a real box with a hole.

The Tines:

The biggest issue I had to face in building this thumb piano was finding the correct material to use for the tines. Since these are the things that actually make the sound, they are the most important parts. My first attempt at making tines was made from using wooden food skewers. This turned out to be a bad choice because when I first tried to tune the thumb piano I ended up actually breaking a couple of the skewers. For my second attempt, I used plant tag

holders. These worked a lot better because they were flatter and this distributed the force over more area better. To hold the tines, I discovered that the holding contraption I had built didn't hold the tines very easily. To beat this problem, I used beverage cozies. These provided enough squishy material to mold the tines into a stable movement.

The Tuning:

The tuning of the thumb piano was quite rough. I ended up using an app on my iPhone to tune the thumb piano. I had a hard time trying to tune at first because I had all the tines in and did tuning for each. Unfortunately, every time I moved one tine, it would move all the other tines. I eventually figured out that tuning one at a time and marking it, then putting them all together and making minor adjustments worked best.

The Music:

The music I chose to try and perform is Beethoven's Ode to Joy. I was trying to figure out which song would be easiest to do on my thumb piano since it only had five notes. I remembered back from when I first started playing actual piano when I was in second grade and remembered playing a very simple version of Ode to Joy that only used 5 notes. When I was looking for a music score, I looked online and it seemed that the second part of the score had an extra note. In my rendition I just changed it slightly in order to make it suitable for only 5 notes.

Overview:

I really enjoyed this project. It gave me a chance to build something and make a working musical instrument. I'm planning on trying to continue to make it better and hopefully be able to do more elaborate songs in the future.



Finished Thumb Piano



Second Attempt to for Tines



Music Score I Chose



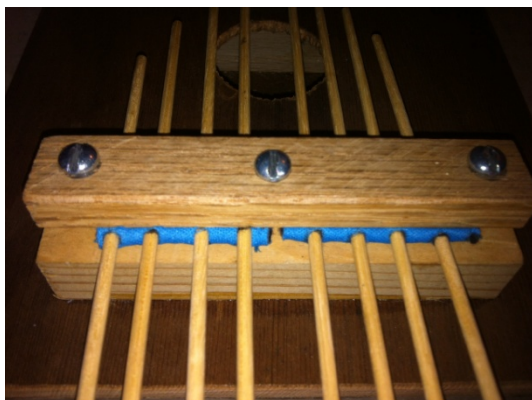
Picture of the Tuning App



Beverage Cozy I Used



Overview of the Box



Close up of the First Attempt of Tines