

# Craft Kit #37 - One-String Lutes



Curator Benjamin Liggett

## **A Luthier's Tale**

July 2 - September 19, 2021

**108** CONTEMPORARY

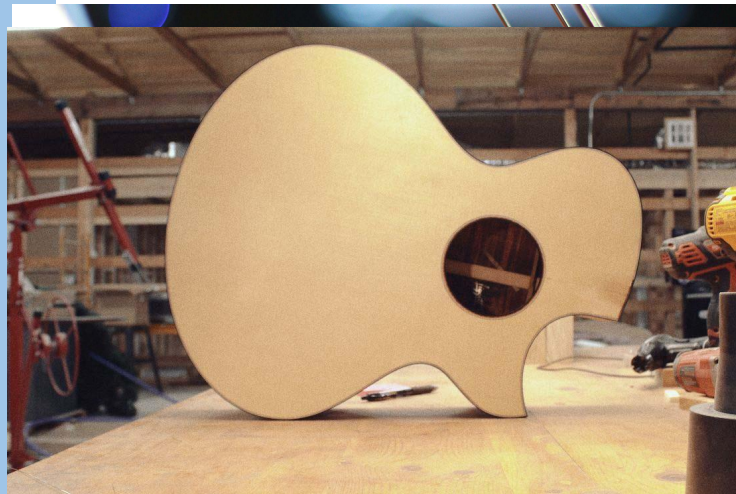
*Art. Craft. Design.*

# Welcome to 108|Contemporary!

We are a non-profit gallery in Tulsa, Oklahoma that specializes in contemporary craft. From July 2 through September 19, 2021 we have an exhibition called *A Luthier's Tale*, all about the art of making stringed instruments. Let's learn about luthiers and their work before we make a guitar inspired by the pieces we see there.

On the way we'll ask ourselves some questions. There are no wrong answers! When you view fine art and craft, your experience will be unique and personal. Perhaps the person next to you will have different answers to the same questions. By hearing each other's perspectives, we may find new and exciting ways to interpret what we see!

- *A Luthier's Tale* is all about stringed instruments. What makes a musician?



# What is a “Luthier?”

A luthier is the name for a person who makes stringed instruments. Luthiers must learn woodworking, finishing, building, and other high quality instrument skills. Luthiers go through many hours of training to become skilled craftspeople. Some luthiers work in factories and some work independently. Most luthiers are also excellent musicians!

- Why do you think a luthier would be a musician as well?



# What is a “Luthier?”

When a luthier makes an instrument, every single decision is made considering sound. On the inside, they make an internal structure that requires knowledge of sound design in order for the acoustics to be just right. They build the neck and hand carve it. Then they carefully shape the sides and finish the guitar with great detail. Creating an instrument takes a long time and an extremely skilled hand.

- What skills might you need to make your favorite instrument?



# How Do Strings Make Sound?

When strings on an instrument are plucked or rubbed on with a bow, the string vibrates and creates noise. The body of the instrument helps amplify sound and the length of the strings determine the pitch. Strings are made of a variety of materials such as nylon or steel, and were traditionally made with sheep's intestines. Bows on string instruments are typically made of horse hairs.

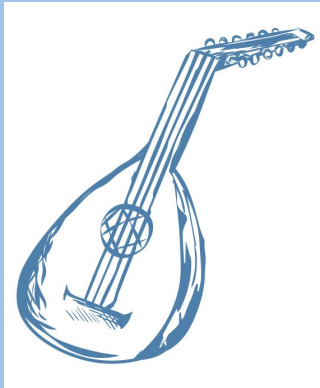
- Have you ever played a string instrument? What did it feel like?





# Types of Stringed Instruments

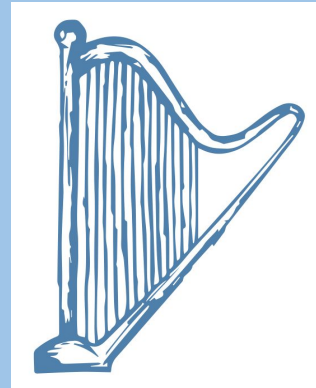
The act of creating sound with a string covers a wide breadth of instruments found all throughout the world. However, stringed instruments have four general families they can be divided into.



Lutes are defined by an enclosed sound chamber or resonator with strings passing over it. Lutes also have a separate neck where the strings are stretched.



A zither is an instrument with strings that are parallel and the same length as the string holder or body.



Harps are defined by strings of uneven length, a resonator, and a neck.



Lyres consist of a round or square-shaped sound chamber with two arms.

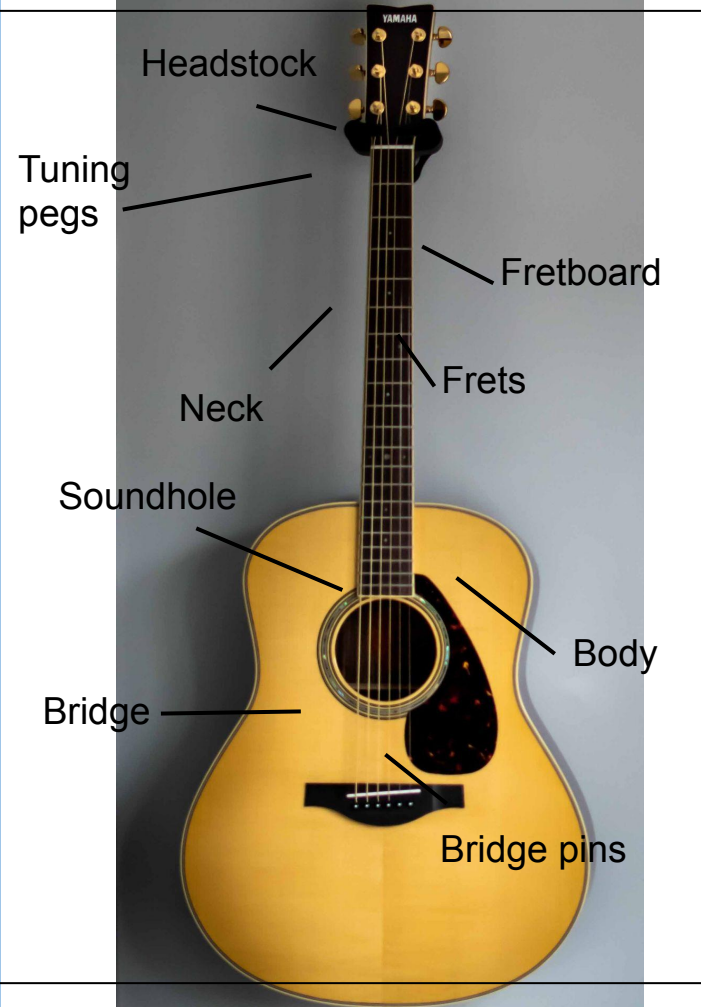
# Stringed Instrument Anatomy

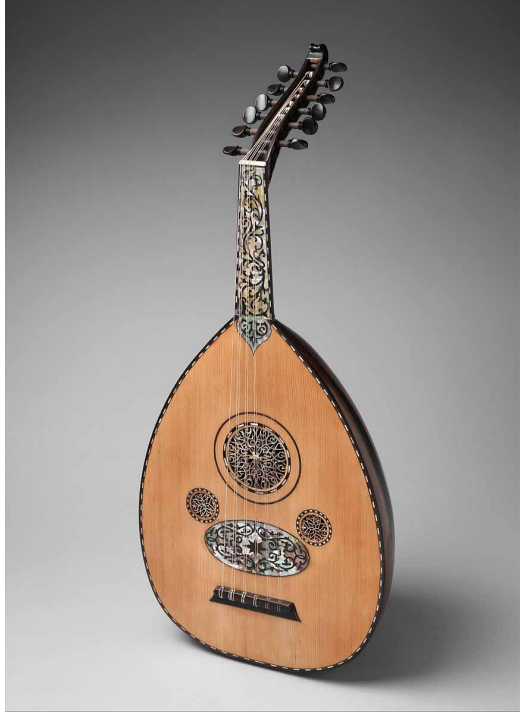
Most lutes have a similar anatomy to a guitar, as show to the left. While there is some variety, these are the general terms that we use when talking about stringed instruments.

On this acoustic guitar, the frets tell musicians where to place their fingers to change the pitch.

The body is made of wood and is hollow to create a louder sound. The soundhole helps with that as well.

- Each part of an instrument is designed with a purpose. Pick a part. What do you think is that pieces function?





*Ud.* 1916, Manol. The Metropolitan Museum of Art. New York, New York.

## Lute History

The first recorded lute-like instrument is called an “oud,” or “ud,” and is found in Mesopotamian artifacts. An oud is made from light wood and has a pear shape. The earliest ouds are prehistoric, but modern ouds are still used in music today!

Another important lute instrument is the European Lute, which derived from the oud. The lute had curved back and was often plucked using a feather as a pick. By the early Renaissance, the lute had 20 strings! The modern guitar is a descendant of the Renaissance lute.

- What other stringed instruments might have come from the lute?





## Orchestral Stringed Instruments

Most classical orchestras include 4 members of the string family, all played with bows. The violin is the baby of the family and makes the highest sounds. It often plays the melody. The viola is slightly bigger and has thicker strings. Violas usually play the harmony. Next is the cello, which is so big that it has to be played sitting on a chair. It plays both harmony and melody, and is said to sound the most like a human voice. The lowest instrument is the double bass which has to be played standing up because it is over 6 feet tall. The double bass helps hold the rhythm in an orchestra and plays the lowest harmony.

- Which of these instruments have you seen or heard outside of an orchestra?

# Guitars: Acoustic or Electric?

An acoustic guitar has a hollow body with a hole carved in the center and six strings running from the body to the top of the neck. The bars on the neck are called “frets,” and are a guide for different pitches. An electric guitar is smaller than an acoustic guitar and is plugged into an amplifier, or amp. Electric guitars make a different sound than acoustic, but are played the same way.

- Why would a musician want to use an electric guitar instead of an acoustic?



# The Banjo

The banjo might look a little bit like a guitar, but the banjo has a body, or “pot” like a drum—circular and covered in a tight skin. The back of the pot may be open or covered. A standard banjo has five strings and makes a loud, snappy twang when played. Though we may think of the banjo as purely American, its origins are in West Africa! In that region there are almost 60 different instruments that resemble the modern banjo. When enslaved Africans were brought to the U.S. they used their memories of the instruments from their homelands to create the modern banjo. It was primarily used in African American music until the late 1800s.

- What kind of music do banjos make you think of? Why?



## Diddley-Bows

A diddley-bow is a catch-all term for a handmade one string instrument in the U.S. These derived in African-American communities in the 1800s hundreds, Traditionally, blues singers would put one against the side of a house consisting of one string, a can, and nails. The whole point of a diddley bow is using what you have like broom wires, glass bottles, and cans.

- Do you think the diddley-bow is a harp, a lute, a zither, or a lyre?



Bulger, Peggy A. Moses Williams playing the diddley bow- Waverly, Florida. 1982 (circa). State Archives of Florida, Florida Memory. <<https://www.floridamemory.com/items/show/115512>>, accessed 27 May 2021.

# Materials

For our rubber band guitars, we want to use materials that will help us make a sound. In our guitar the body, is a soap box. For our neck, we are using a popsicle stick. The most important piece of the puzzle is the string which is a rubber band. All of these pieces help the guitar make music; The resonator makes it louder, and the neck changes the pitches.

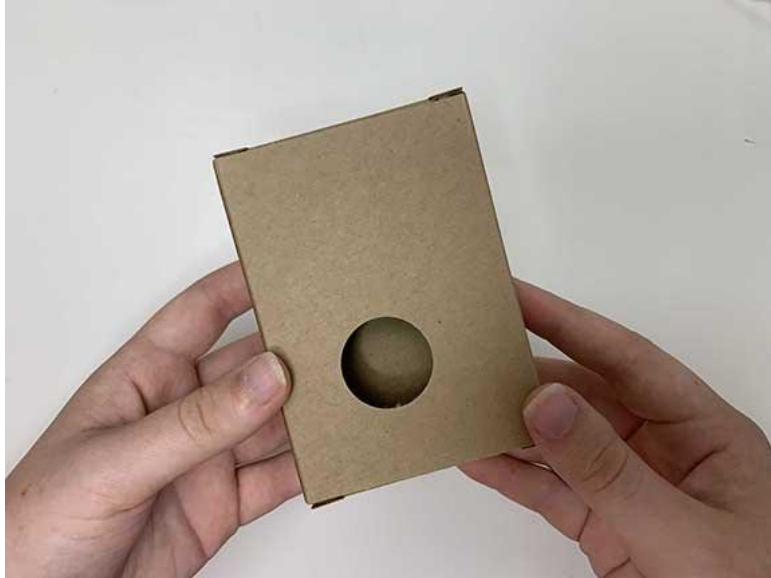
## In the kit

- 1 soap box
- 1 bead
- 1 rubber band
- 1 full popsicle stick
- 1 half popsicle stick
- 1 dowel rod

## You will need

- Scissors
- Glue
- Ruler
- Paint, crayons, glitter, beads, etc. (For decoration)





## Assemble the Box

Assemble the box. This is the body of your guitar. The soundhole will sit closer to the base of the guitar body than the top.

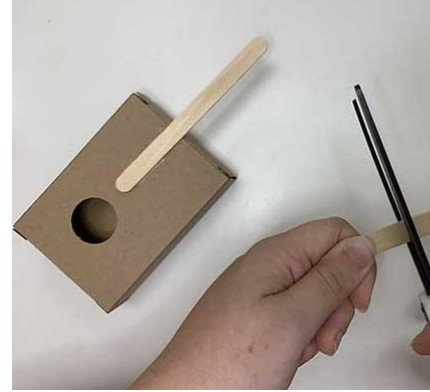


## Build the Neck

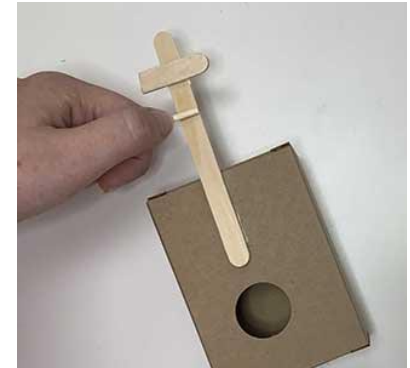
Glue the long popsicle stick to the box. This will be the lute neck, so make sure to leave 3 inches of popsicle stick clear of the box.

Cut the small popsicle stick in half. Glue one half near the top of the full sized popsicle stick, perpendicular to the neck. It should look like a lowercase t.

To finish the headstock, cut a piece of dowel that is the width of the long popsicle stick. Glue it to the middle of the short popsicle stick. Let the headstock and neck dry.



Caroline is measuring out the length for the nut by holding a dowel rod against the width of the neck.



# Build the Bridge

Cut two pieces of dowel rod the same length as the remaining half of the small popsicle stick. Below the soundhole, glue the skinny side of the popsicle stick and glue a cut dowel rod on either side to support it. Wait for the glue to completely dry on the neck and bridge.





Caroline used colored pencils to draw lemons on the face and a tree on the back.



## Decorate!

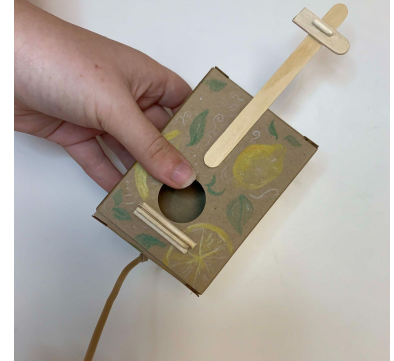
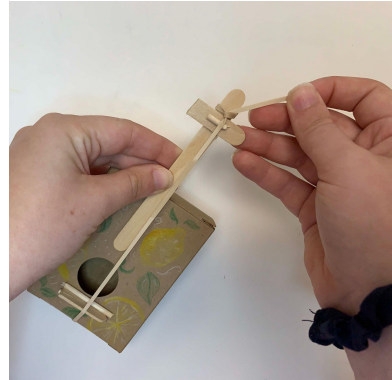
Decorate your guitar how you would like! You can use paints, crayons, colored pencils, or 3D elements. We don't recommend markers.

# String Your Instrument

Cut the rubber band open. Thread one end through the small hole at the bottom in the box. Tie the rubber band to a bead on the inside of the lute. This keeps your string in place. Tie the other end to the top of the neck above the headstock.



Caroline ties the bead on the inside of her lute with the rubber band then closes it.



## Glue the Box

For added strength, add a dab of glue to the flaps of the box. Wait for them to completely dry.





Caroline is marking her pitches after using her ear to find them

Then she cut her frets so they are ready to be attached.



## Optional: Make Frets

Take the remainder of your dowel and cut it into pieces that are the width of the neck. Our starting pitch, or “do,” is the sound that the guitar makes when you pluck the string without holding anything down. Slide your finger up and down the guitar string to find the 7 other notes in a scale, using a pen or pencil to mark the neck where you find them. For extreme accuracy, feel free to use an online tuner. As a general rule, the octave occurs halfway between the bridge and nut. [Here](#) are some songs that start with intervals to help you find the pitch from “do.”



# Attach the Frets

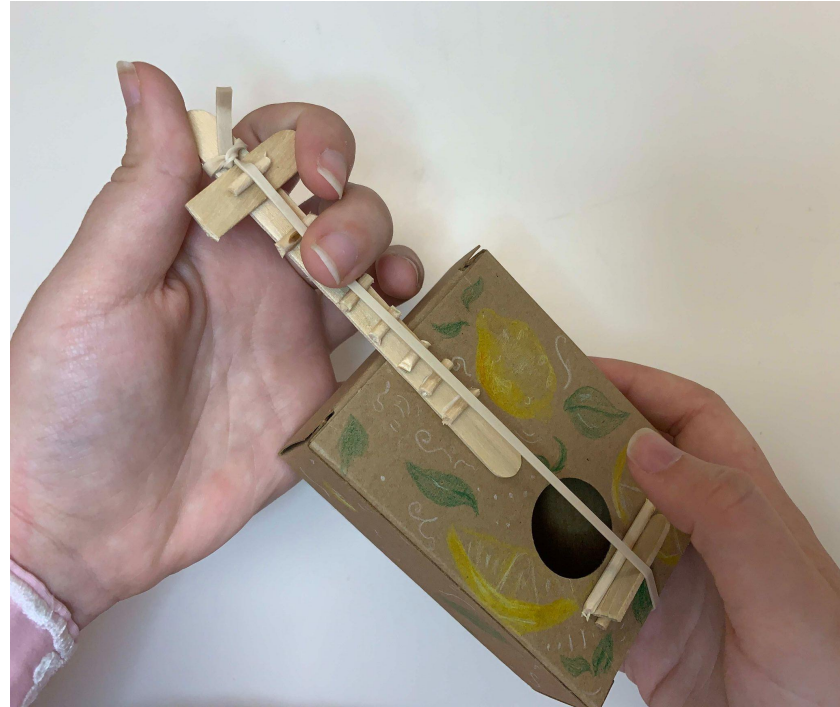
Glue the frets onto the guitar where you marked the pitches. Glue down frets on the marks you made. We found it best to remove the string from the headstock while we added frets.

Wait for the glue to completely dry.



# You Did It!

Time to play! Post your lute on social media and tag @108contemporary with the hashtag #108craftkits!



# Other Resources

- **Other Craft Kits**

- <https://108contemporary.org/craft-kits/>

- **About the Diddley-Bow**

- <https://108contemporary.org/about-the-diddley-bow/>

- **A Luthier's Tale Video**

- <https://www.youtube.com/watch?v=MuhBV4HHMFk>