

Procedural Guidelines for Creating a String Instrument Box Harp

Read all directions before beginning this project.

Materials Needed:

1. Small box
 - A. Children's shoe box
 - B. Checkbook box
 - C. Cigar box
 - D. Tissue box
2. Rubber bands
 - A. Various widths and lengths
3. Scissors
4. Ruler
5. Art supply options
 - A. Paper – to cover box
 - B. Paint
 - C. Markers
 - D. Colored pencils
 - E. Crayons

Step 1: Planning phase

1. Your box should reflect something about you. Design a box cover that reflects your personality, your family, your hobbies, or something else you would like others to know about you.
2. On a piece of paper, draw a picture of your future instrument or write a short paragraph describing what your instrument will look like.
3. List the art supplies you will need to decorate your box.

Step 2: Decorating your box

1. Using the arts supplies listed above, decorate your box. If you make changes from the original design, note the changes on the original design and circle the changes.

Step 3: Setting up your instrument

1. Select the rubber bands you are going to use on your instrument. Remember that the width of the rubber band will affect the pitch.
2. If you have chosen a small box, rubber bands can be stretched around the box at different intervals. If you have chosen a larger box, rubber bands will be stretched across the box at different intervals.

3. Use a ruler to evenly space the rubber bands.
4. Once you have determined the placement of the rubber bands, cut short slits in the top of the box rim to insert rubber bands.
5. Pluck (pizzicato) your rubber bands and rearrange them until they pitches run from low to high. If you are unable to differentiate between two pitches, the rubber bands may be too similar. Ask a partner to listen or change rubber bands.

Extensions:

1. By running a pencil under the rubber bands in a perpendicular line, you create a bridge like the one found on real string instruments. What effect does the bridge have on the pitches created by plucking the rubber bands?
2. What happens to the sound if you wrap the rubber bands around a metal bread pan or other baking dish?