

# CURIOSITY AT HOME

## RUBBER BAND BOX GUITAR



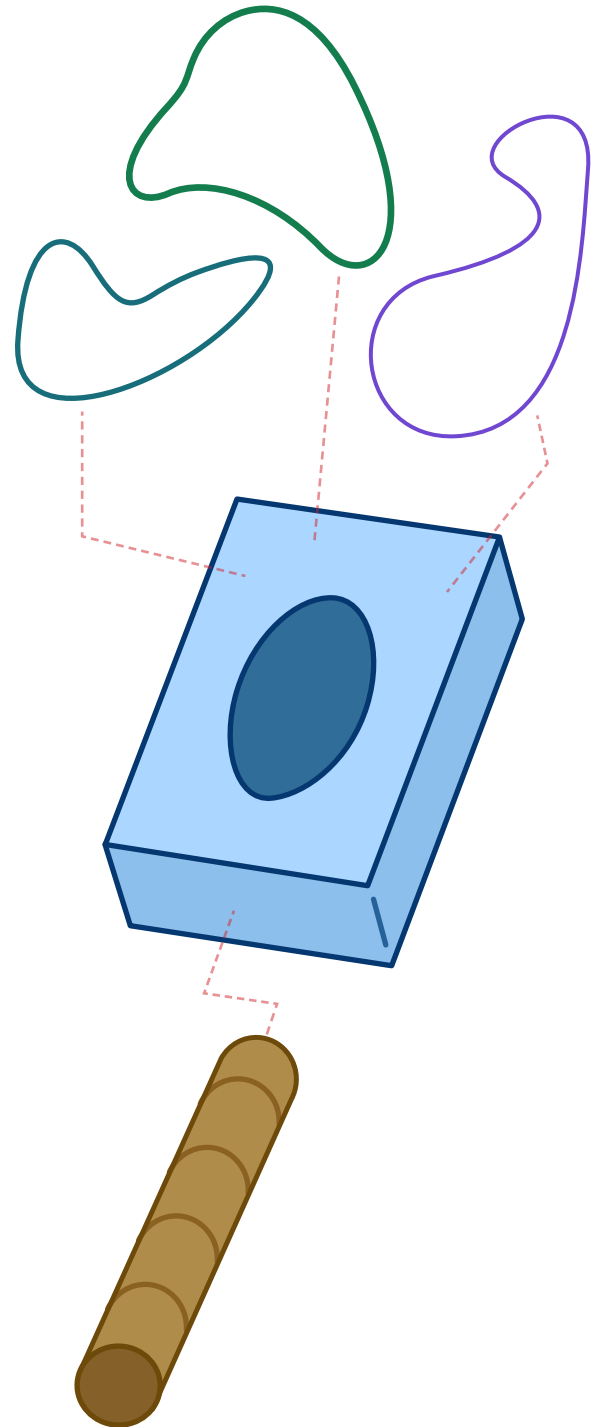
*Playing music is a fun and creative way to express ourselves and important to our overall development. You can make your own rubber band box guitar using just a few common materials.*

### MATERIALS

- Empty rectangular tissue box
- Rubber bands of various thicknesses and lengths
- Tape
- Scissors
- Empty paper towel roll (optional)
- Clean empty food containers, such as coffee containers or soup cans (optional)
- Markers and decorations (optional)

### PROCEDURE

- Remove any plastic left in the tissue box opening.
- Place the rubber bands around the tissue box so that they lay over the opening.
- (Optional to look more like a guitar) Cut one-inch slits around one end of the paper towel roll and fold out. Tape that end to one of the short sides of the tissue box to make a handle.
- (Optional) Use markers and decorations to customize your instrument.
- Strum away!



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### EXPLORE MORE

Now try some of these variations to your musical instrument:

- Try making guitars with different materials, such as clean plastic food containers, coffee containers or thicker cardboard boxes.
- Try using rubber bands of different lengths and thicknesses.
- Cover the opening of your container. Make the opening smaller or bigger. Put openings in different areas.
- Place a pencil between the rubber bands and the container to form a bridge.
- Twist a toothpick or paperclip around the rubber bands to make them tighter.
- What do you notice about how the sounds change when you use these variations?

### WHAT'S HAPPENING?

Just like a real guitar, the sound is made by the vibration of the rubber band that creates a sound wave. If you simply hold a rubber band between two fingers and strum it, the sound is very soft. Once we put the rubber band around the tissue box, the vibrations create a louder sound as the sound waves resonate, or bounce around, the inside of the box.



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### 6–8 GRADE EXPLORATION

- What did you notice about the sounds that each rubber band makes on your guitar? How does the sound of a thin rubber band compare to the sound of a wide rubber band?
- Pitch is how high or low a sound is. Can you order the rubber bands on your guitar in order from highest pitch to lowest pitch?
- Can you make guitars that sound very different?
- What other instruments can you make? For an extra challenge, look up how to make a special one-string guitar called a diddly bow.
- Offer some of your instruments to family members and see if everyone can play together. Start a band and play for your neighbors!
- What do you think you would need to do to tune your guitar? Try downloading a guitar tuning app and see if you can tune your guitar.



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