Sound: hunt, label and twang

Names: Class: Date:

Work with a partner. Try things out first, then write what you found.

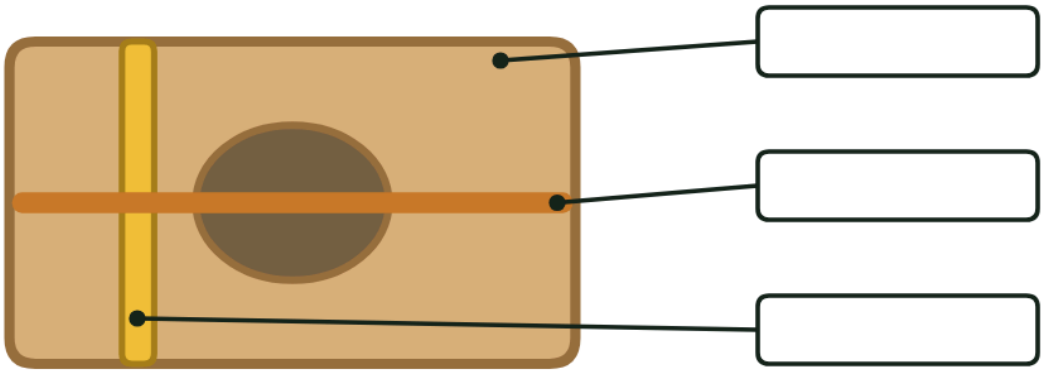
PART 1 Sound hunt

Find six things in your classroom that you can make a sound with. Make each sound, then fill in a row.

Thing	What I did: strike, blow, scrape, pluck or shake	What vibrated

PART 2 What vibrates on a box guitar?

Write these labels in the boxes: rubber band, box, pencil. Then colour the part that vibrates when you pluck it.



1. What do you do to the rubber band to make a sound?

2. How could you make the sound higher?

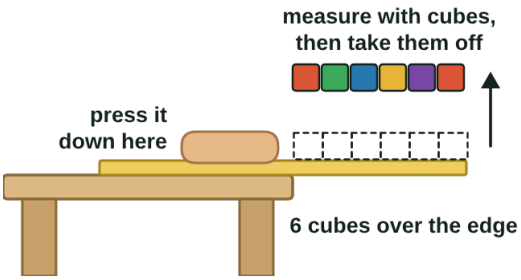
Answers (turn the page round). Part 1: answers vary; check that each action matches what was done, and that the part named is the part that moves. **Part 2:** the labels are box (top), rubber band (middle) and pencil (bottom), and the rubber band vibrates; question 1, pluck it; question 2, stretch the band tighter, or move the pencil so that a shorter part of the band vibrates. **Part 3:** with fewer cubes over the edge, the ruler vibrates faster, the blur is smaller and the sound is higher; twang it the same way each time to keep the test fair; held still, it stops vibrating and the sound stops.

PART 3 Twang a ruler

Aim: To find out how the sound changes when less of the ruler hangs over the edge of the desk.

You need: A ruler (a 30 cm ruler works well), a desk and some cubes from the maths tub.

Safety. Keep your face back from the edge of the desk. Twang gently, because a ruler can flick up.



1. With one hand, press the ruler down firmly on the desk near its edge. Part of the ruler should hang over the edge.
2. Line up cubes along the part over the edge to measure it, then take the cubes off. Start with 6 cubes.
3. Predict: will the sound be high or low? Write your prediction in the table.
4. Twang the end of the ruler gently with your other hand. Listen and watch, then write what you heard and saw.
5. Do it again with 5, 4, 3 and 2 cubes over the edge. Twang it the same way each time.
6. Twang it once more, then press a finger on the end to hold it still. Listen to the sound.

Cubes over the edge	We predict: high or low?	We heard: high or low?	We saw: a big blur or a small blur?
6			
5			
4			
3			
2			

1. When did the ruler make the highest sound?

2. How did you keep the test fair?

3. What happened to the sound when you held the ruler still?