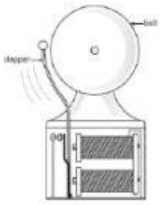
4.P.4B.2 Change in Vibration Indicator Assessment

Name: _____

1. Look at the diagram below. The bell makes a sound when it is hit by the clapper because the bell

A. rotates.
B. vibrates.
C. releases heat.
D. produces electricity.



2. One way to change the volume of a noise is to move far away from the source of the noise. Why does this work?

A. You cannot hear what you cannot see.
B. The closer the vibration, the softer the sound.
C. The farther away the vibration, the softer the sound.
D. The farther away the vibration, the louder the sound.

3. Mariah designed an investigation using a guitar. She labeled the strings from 1 to 5, making the thinnest string #1 and the thickest string #5.

Investigation of String Thickness & Pitch

Lowest Pitch	⟷			**Highest Pitch**
String #5 (thickest)	String #4	String #3	String #2	String #1 (thinnest)

Based on her data, Mariah could conclude that string #1 _____

A. does not vibrate.
B. vibrates the fastest.
C. is the longest string.
D. has the loudest volume.

4. A musician bought new strings for a guitar. The thickness of each string influences its rate of vibration. How does the rate of vibration affect the sound of the guitar?

A. The rate of vibration allows sound to be reflected.
B. The rate of vibration affects the tuning of the guitar.
C. A different rate of vibration results in a different volume.
D. Changing the rate of vibration can vary the pitch of the sound.

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5. Which statement is true about strings or wires?

A. Thicker wires or strings vibrate faster than thinner ones.
B. Thinner wires or strings vibrate faster than thicker ones.
C. Thick and thin wires vibrate at the same speed.
D. The thickness of the strings or wires does not impact vibrations.

6. How does tightening the wires of a guitar to tune the instrument change its vibration and pitch?

A. Tighter wires vibrate faster, making the pitch higher.
B. Tighter wires vibrate slower, making the pitch higher.
C. Tighter wires vibrate faster, making the pitch lower.
D. Tighter wires vibrate slower, making the pitch lower.

7. Which statement is true about how the length of an object affects the sound?

A. Shorter materials vibrate slower than longer materials. This makes the pitch of the object higher.
B. Shorter materials vibrate faster than longer materials. This makes the pitch of the object lower.
C. Longer materials vibrate slower than shorter materials. This makes the pitch of the object lower.
D. Longer materials vibrate faster than shorter materials. This makes the pitch of the object higher.

8. Vibrations that cause sound can travel through _____.

A. solids.
B. liquids.
C. gases.
D. all of these.

9. Shaking maracas, strumming a guitar, and striking a tambourine are alike in that each produces sound waves _____

A. by vibrating.
B. that travel through empty space.
B. that travel at the same speed.
D. that travel in air slower at high temperatures.

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