Name: _____ **Date:** _____

Bouncing Beams and Booming Beats: Pre-K Wave Wizards Quiz

Tiny scientists synthesize sensory data and design imaginary noise-makers to prove light and sound travel through more than just air.

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1. Imagine you are building a secret underwater base. If you want to talk to your fish friends using sound, which material should you send your voice through so it travels the fastest?

A. Cold, wiggly air
B. Solid, heavy metal pipes
C. Empty, dark space
D. Clear, splashing water

2. If you shine a flashlight at a shiny silver tray, the light will ____ off the tray and land on the ceiling.

A. Bounce (reflect)
B. Stop (absorb)
C. Break (refract)
D. Disappear (vanish)

3. True or False: If you could stand on the moon where there is no air, you could still hear a giant drum banging right next to you.

A. True
B. False

4. You want to create a 'Rainbow Machine.' Which of these would be the most important part to help you split white light into all the colors of the rainbow?

A. A flat black rock
B. A clear glass of water
C. A piece of soft velvet
D. A wooden building block

5. When you pull a rubber band very tight and pluck it, it makes a ____ sound than when the rubber band is loose.

A. Lower (deeper)
B. Higher (squeakier)
C. Quieter (softer)
D. Slower (longer)

6. True or False: Light waves can travel all the way through a thick brick wall just like they travel through a window.

A. True
B. False

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7. If you are hiding in a room and see a shadow on the floor, what two things MUST be happening to create that shadow?

A. Singing and dancing
B. A light shining and something blocking it
C. A mirror and a window
D. Water splashing and sound

8. A loud 'BOOM' sound has waves that are very ____, while a tiny whisper has very small waves.

A. Short
B. Blue
C. Tall (high amplitude)
D. Flat

9. Think about a candle flame and a flashlight. How are they the same even though they look different?

A. They both use batteries
B. They both create cold air
C. They both send out light waves
D. They both make loud noises

10. True or False: If you vibrate a string very, very slowly, it will make a sound that is too low for your ears to hear.

A. True
B. False