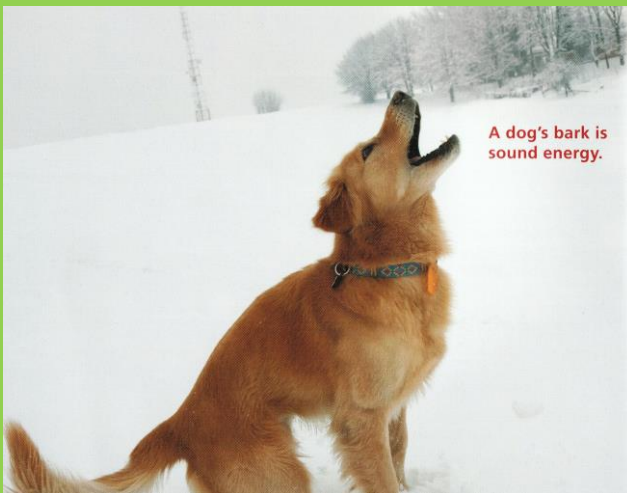


Name _____

Date _____

SOUND

When you hear a person talking, a dog barking, or a police siren, you hear sound. Most sounds are very loud. Others are soft. Sound sounds are high, like a whistle. Others are low, like a rumble of thunder.



A dog's bark is sound energy.

Sound Energy



Vibrations Make Sound

- Remember that _____ is the ability to make something move, happen, or change.
- Sound is the energy that you can _____.
- Sound is made by something _____.
- When something vibrates, it moves _____.

Think about what happens when someone plucks a guitar string.

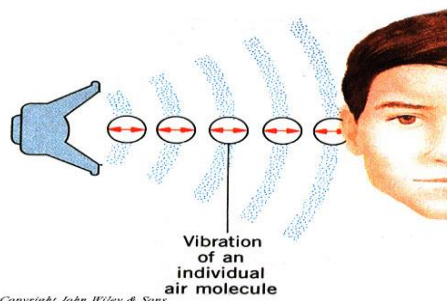
Sound Energy



When someone plays the guitar, the strings vibrate and transmit energy.

- The string _____. Each time the string moves, it bumps against ____ that is nearby.
- The string makes the _____, too. The air bumps against _____, and so on.
- The energy of the vibrations move through the _____.

The waves are like _____ when you toss a pebble into it.



- _____ travel from the guitar in all directions.
- When the sound waves reach your ears, the _____.
- The air makes your _____ vibrate too.
- _____, and you hear the sound of the guitar.

Sounds Move through Matter

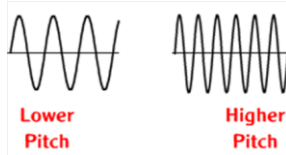
- Sound can travel through _____, not through empty space.
- If you could clap your hands in outer space, it would not make a sound.
- Sound moves through _____.
- It moves fastest through _____ materials.
- It moves more slowly through _____. It moves slowest through _____, such as air.

Did you know? Sounds can be so loud or strong that it shatters glass. This is because the glass absorbs the sound energy.

PITCH

One property of sound is _____.

- Pitch is the _____ of a sound.
- If an object vibrates more _____, it makes a sound with a _____ pitch.
- For examples, a small bell vibrates _____, it has a _____ pitch.
- A huge bell vibrates _____. It has a _____ pitch.



An object that vibrates _____ makes sound waves that are _____.

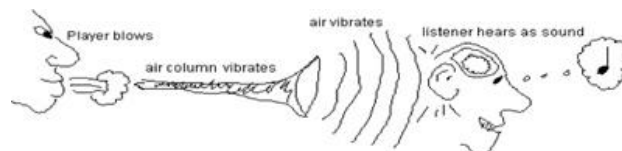
- Sound waves that are _____ make a sound with a _____ pitch.
- An object that vibrates _____ makes sound waves that are _____.
- Sound waves that are _____ make a sound with a _____ - pitch.

You can change a sound's pitch by changing _____ an object vibrates.

- If you _____ a guitar string, it vibrates _____.
- When the string _____, it makes a sound with a _____ pitch.
- If you _____ the guitar string, it vibrates more _____. That makes a sound with a _____ pitch.

You can also change a sound's pitch by changing _____ the vibrating object is.

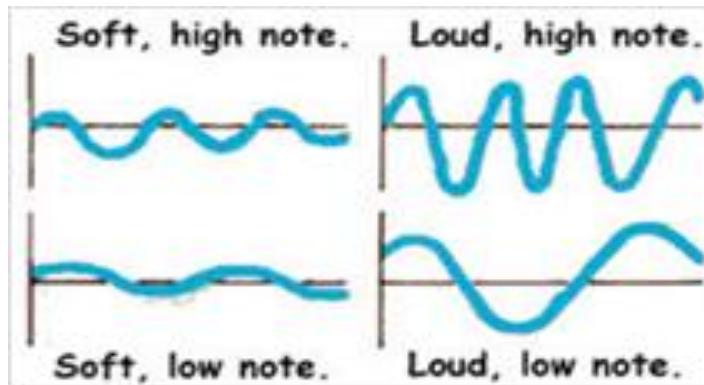
- A _____ violin string has a _____ pitch than a long violin string.
- A _____ string has a _____ pitch than a long violin string.
- In a flute or tuba, air vibrating _____ makes sounds. _____ tubes make sounds with a _____ pitch. A flute has much _____ tube than a tuba. So, a flute's pitch is much _____ - than a tuba's.



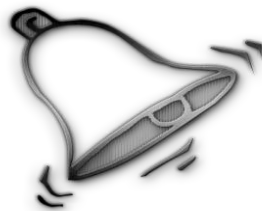
Volume

Another property of sound is _____.

- Volume is the _____ of a sound.
- If you ring a small bell hard, it makes a _____. The sound has a _____.
- If you ring the bell _____, it makes a _____ sound. The sound has a _____. But no matter how hard you ring the bell, its pitch does not change. The bell still makes the same high sound. Only the _____ of the sound changes.



When you ring a bell hard, you put a lot _____ into moving it.



- That energy changes into _____.
- The bell makes _____ that have a lot of energy and a _____.
- When you ring the bell _____, the sound waves have _____ and a _____.

Discussion Question:

What happens to the pitch and the volume of sounds when you turn up the volume on a music player?

Vocabulary: Words to know

1. **Sound**: is the energy that you can hear.
2. **Pitch**: is the highness or lowness of a sound.
3. **Energy**: is the ability to make something move, happen or change.
4. When something **vibrates**, it moves back and forth very fast.
5. **Volume**: is the loudness or softness of a sound.

1. What causes a sound?

- a. something vibrating**
- b. a part of the ear**
- c. an object moving through the air**
- d. light energy.**

2. Which material does sound travel through fastest?

- a. air**
- b. outer space**
- c. water**
- d. a brick**

3. Suppose that a violin string makes sound waves that are close together. The sound waves do not have a lot of energy. What kind of sound will you hear?

- a. a loud sound with a low pitch**
- b. a loud sound with a high pitch**
- c. a soft sound with a low pitch**
- d. a soft sound with a high pitch.**

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