

# What Is Sound?

*BUZZZZZZZZ*



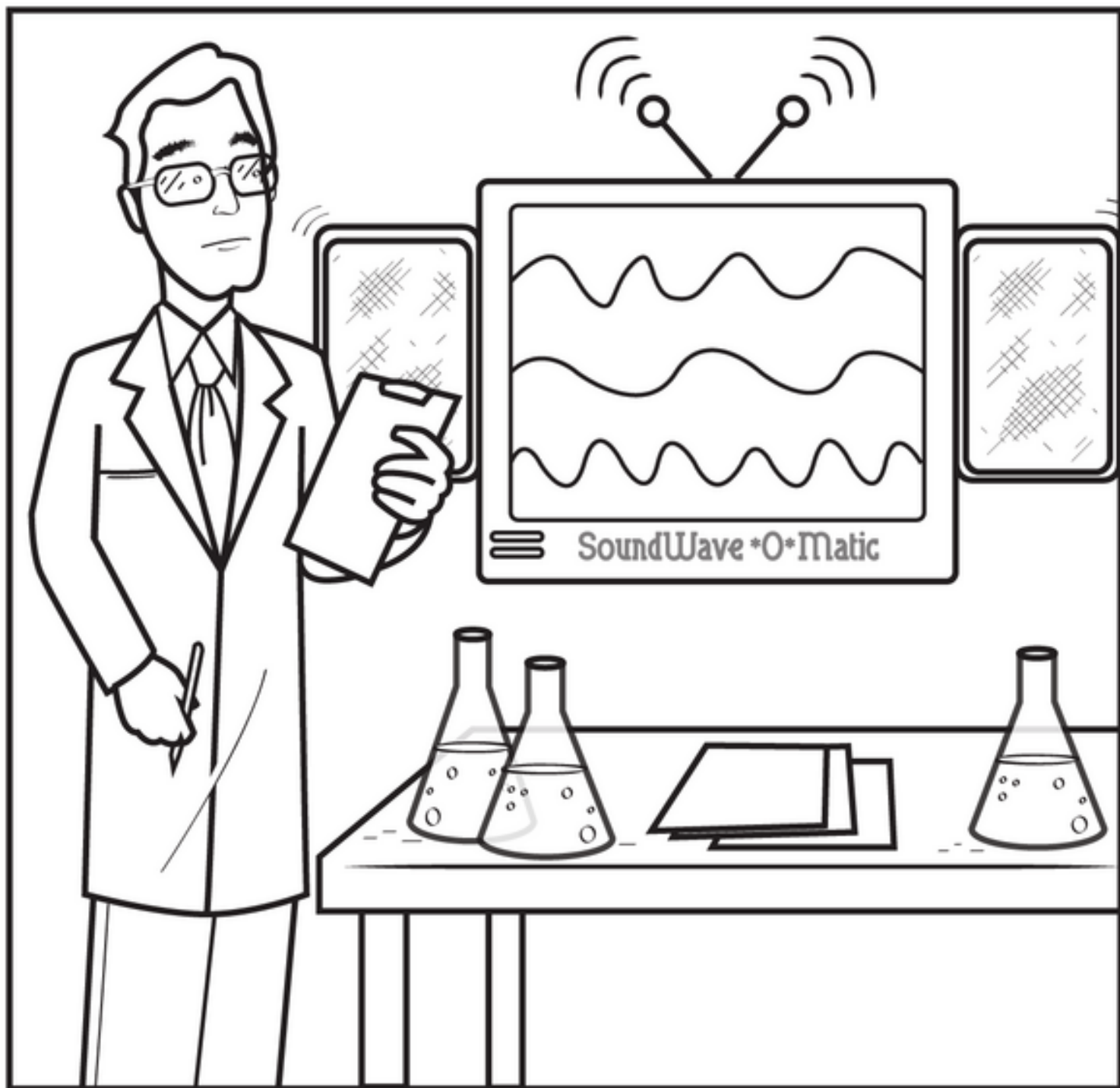


Boom, tinkle, whirr, boink, bong, buzz, kerplunk,  
achoo!

What do these words have in common? What do they  
say to you?

Yes, they're all connected. They are words that make  
a sound.

What would our world be like if these sounds were  
not around?



Sound is a type of energy that travels to us in waves.  
Many scientists have studied sound to learn how it  
behaves.

Sounds are made by vibrations that release energy.  
This is energy makes the sound we hear, but it's  
something we can't see.



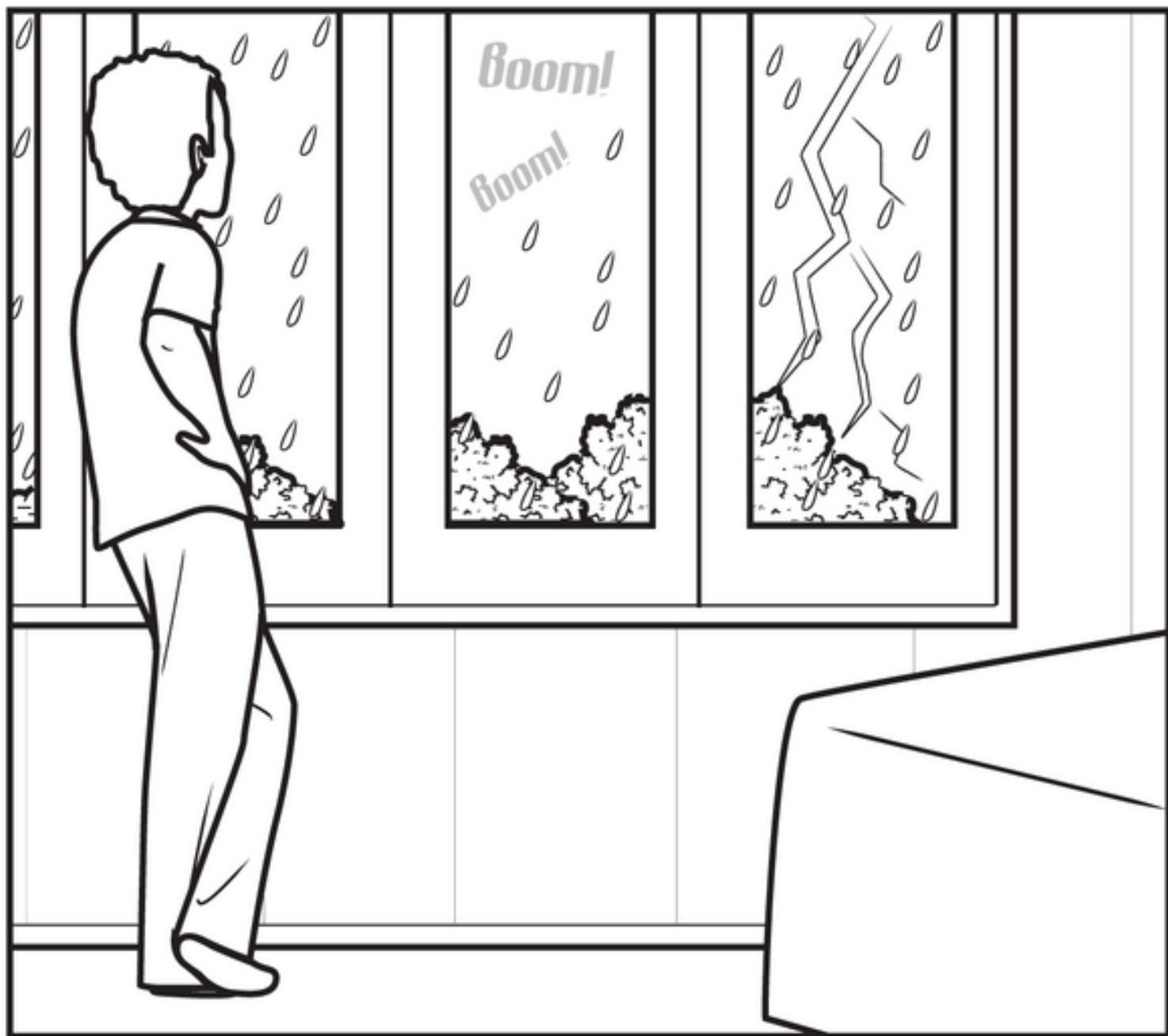
When the sound waves reach us, they vibrate inside our ears.

This sends a signal to our brain. Then we hear sounds, it appears.

Sound must travel through a “medium” like solid, liquid, or gas.

Sound travels fairly slowly; a light wave it cannot pass.





Sound is much, much slower than the speed of light.  
That's why we hear thunder later during a lightning  
storm at night.

Sound cannot travel through a vacuum. There is no  
sound in space.

Sound must travel through matter or you will not hear  
a trace.

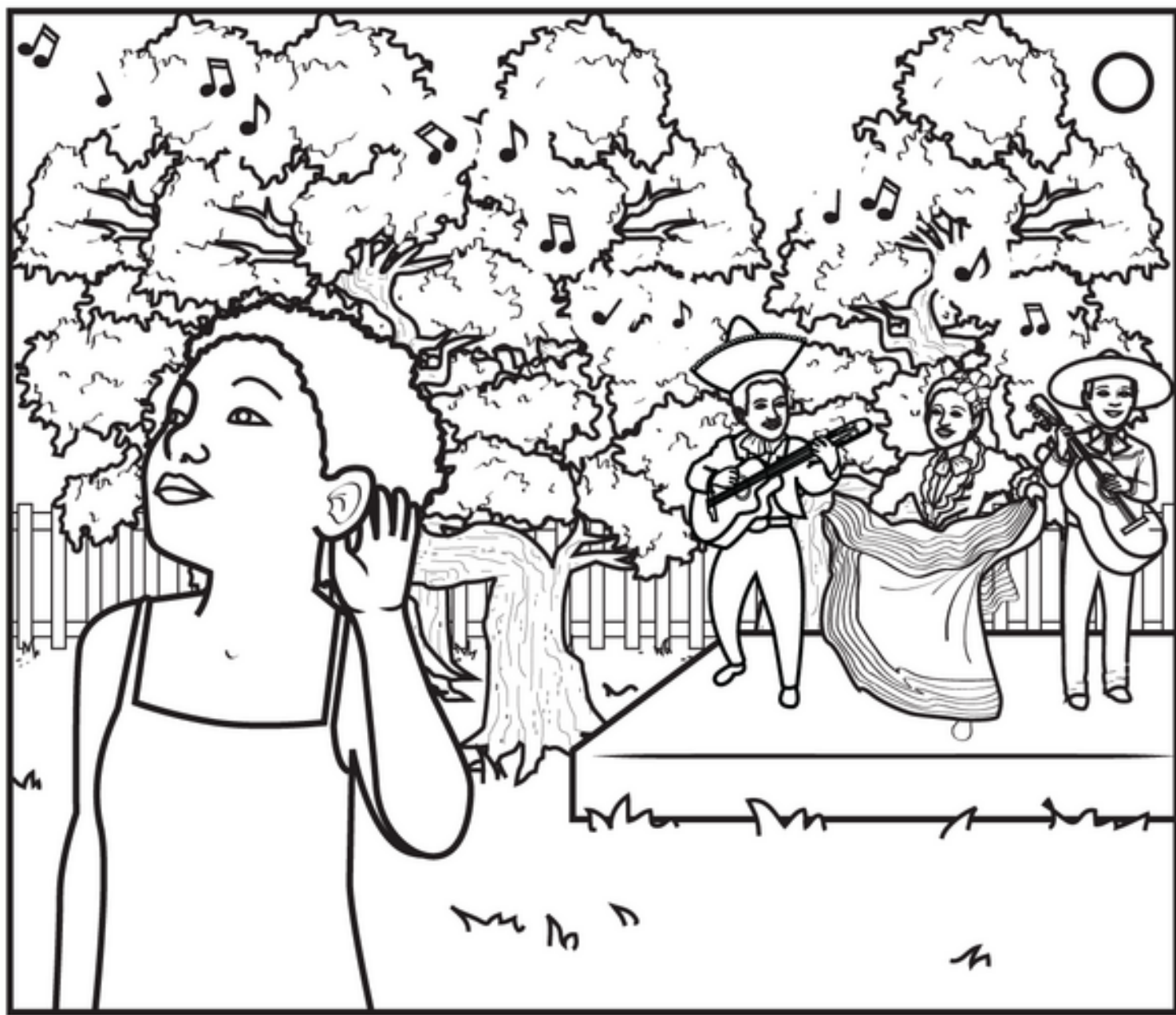


Sound has some important qualities. One of them is frequency.

The faster a sound wave vibrates, the higher pitched the sound will be.

Pitch is another quality. It is the highness or lowness of a sound.

When you hear a tuba playing, a lower frequency will be found.

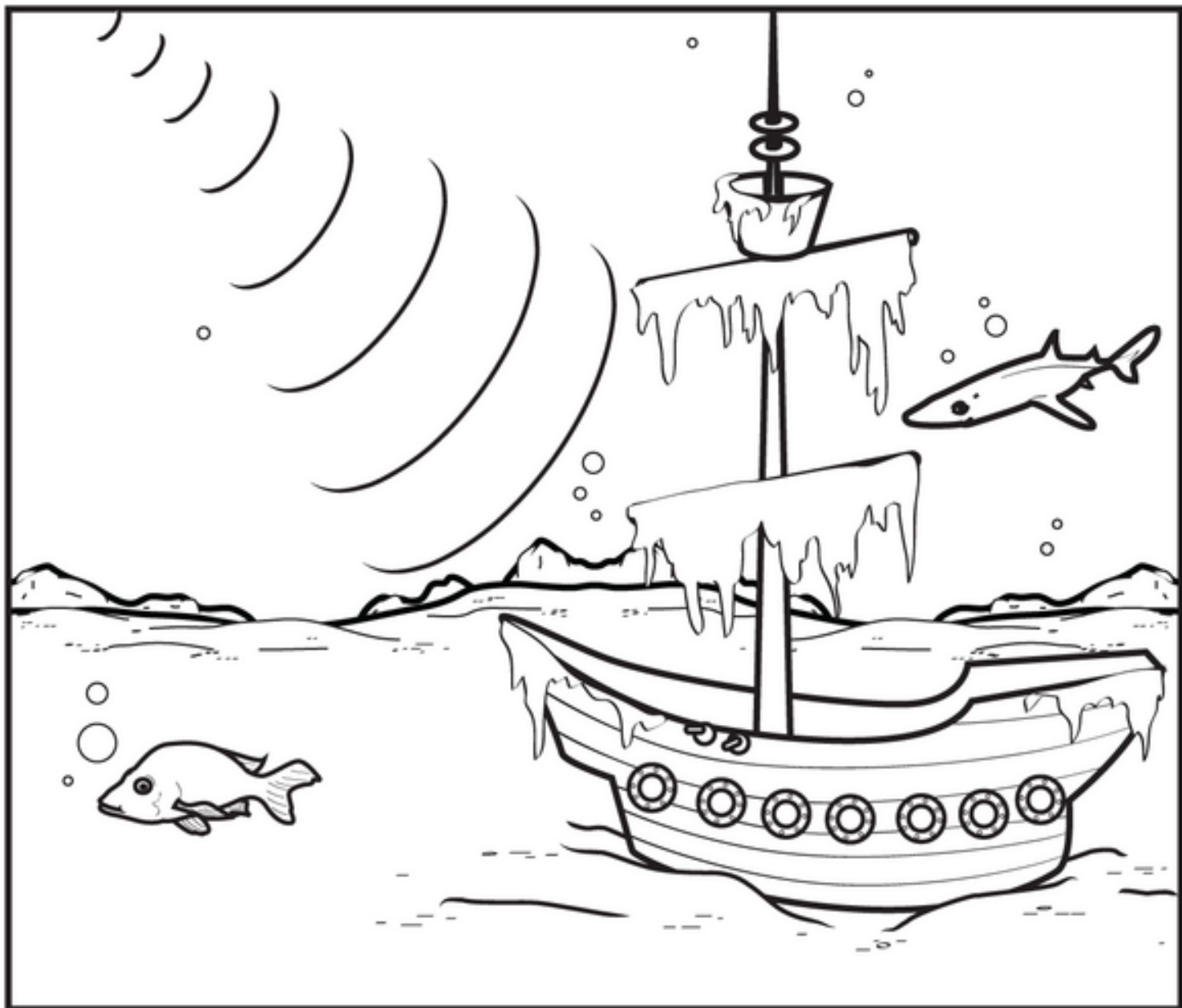


Intensity is another quality with which a sound wave is endowed.

That means if its got a lot of energy, a sound wave will be **LOUD!**

You will not hear that loud sound if you are too far away.

You can see a band from quite a distance but you might not hear them play.



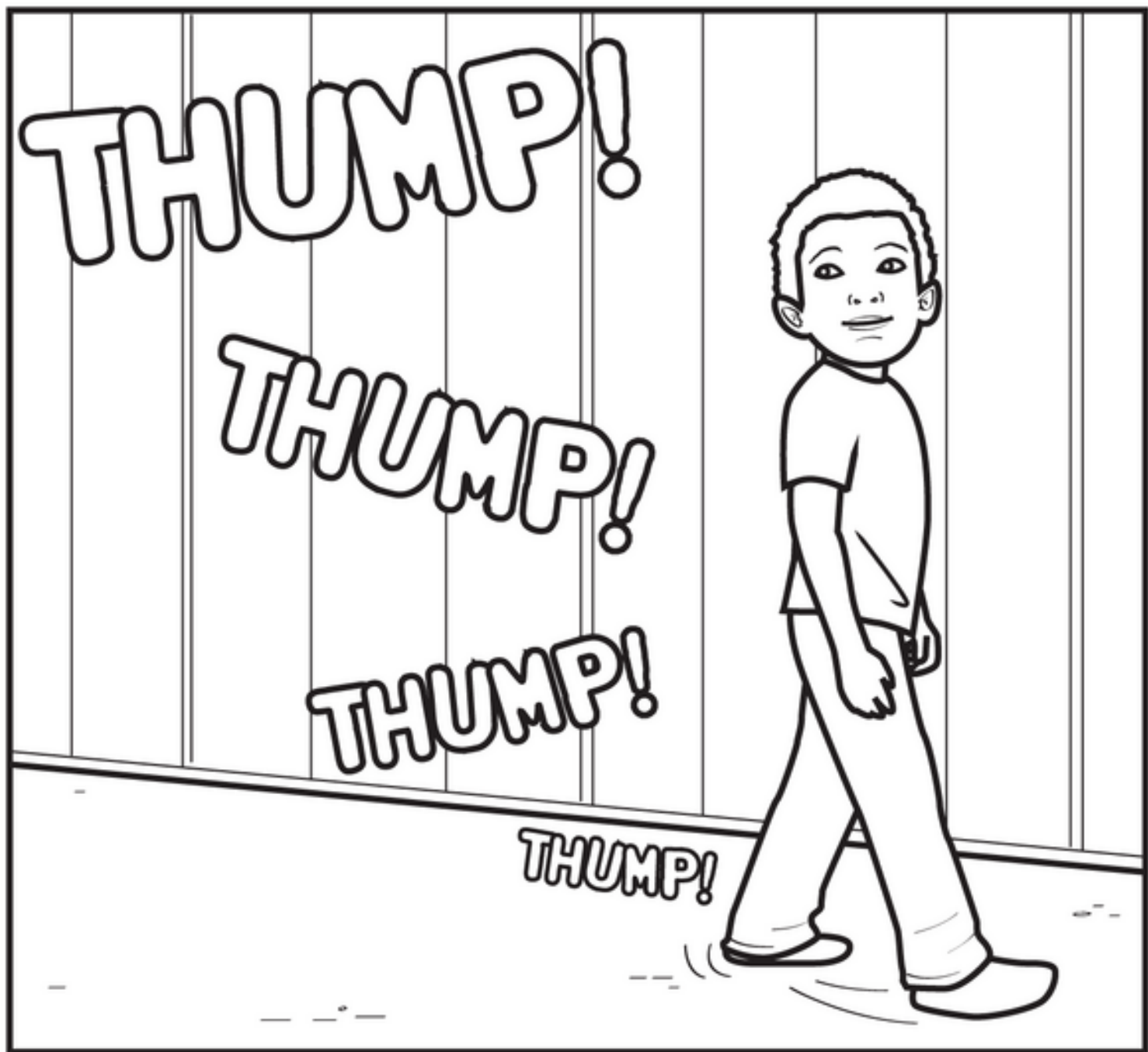
Sound can be used for many things besides just making noise.

Ultrasound waves are used in medicine to help both girls and boys.

Geologists use sound waves to look for oil deep underground.

Sonar is used underwater to see where sunken ships are found.





Achoo, kerplunk, buzz, bong, boink, whirr, tinkle,  
and boom!

Can you hear your footsteps when you're walking  
through a room?

Sound is all around us. Sound is quite useful energy.  
If you could describe yourself as any sound, which  
one would it be?

1. How does sound travel?
  - a. in circles
  - b. in waves
  - c. in squares
  - d. in a zig zag line

Answer: \_\_\_\_\_

2. Sound is made by what?
- 

3. What happens when a sound wave reaches us?
  - a. It vibrates inside our ear.
  - b. It tickles our eyelashes.
  - c. We can see it.
  - d. We blink.

Answer: \_\_\_\_\_

4. Sound can travel through anything but what?
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5. Which of these is a quality of sound?
  - a. color
  - b. pitch
  - c. feel
  - d. taste

Answer: \_\_\_\_\_

6. How are sound waves used by geologists?
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7. Writing Prompts: Deaf people cannot hear sound. Describe what you think you would miss the most if you were deaf.
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