

# MUSIC 110 – Unit 1

## What is Sound?

# What is sound?

Sound is air vibrating (under compression) from a source

These vibrations hit our ears. . . .

The frequency of the vibration changes the pitch of what we hear.

Slow frequency = “lower”

Faster frequency = “higher”

Hertz (Hz): A measurement of “Cycles per second”

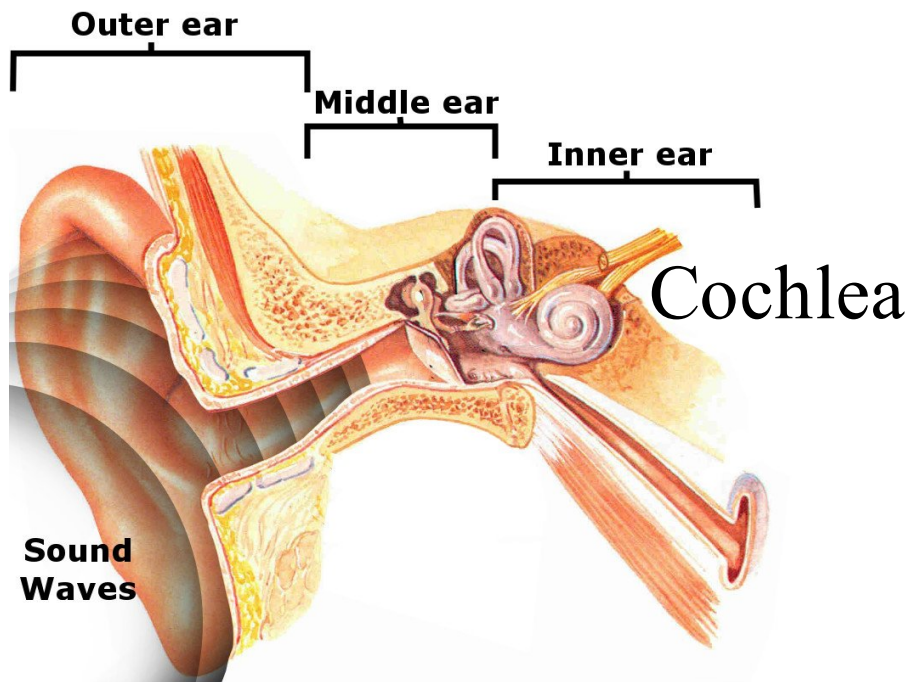
Sample Guitar String: The note “G” below “middle C”

**196 Hz**

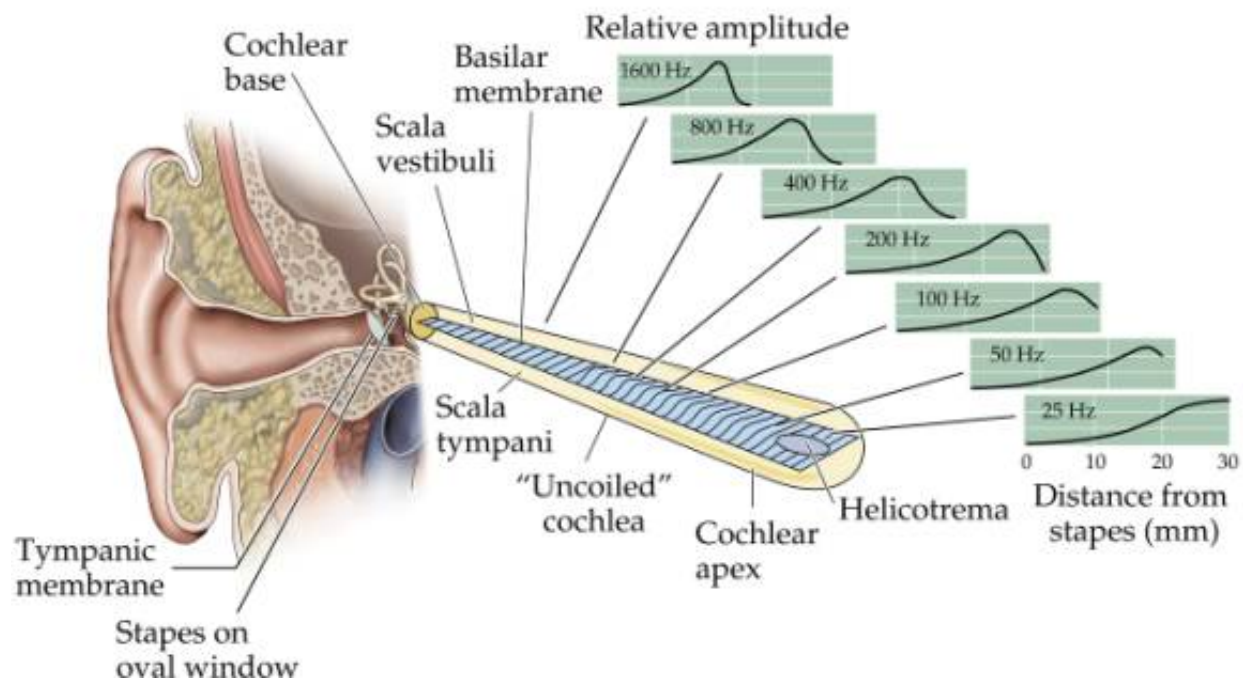
That same string vibrating twice as fast: G above “Middle C”

**392 Hz**

# How the human ear hears vibrations



# The cochlea unwound. . . (Basilar membrane)



Vibrations slower than 15 Hz: *felt* but not heard!

Vibrations faster than 20,000 Hz: inaudible by most  
humans!

It changes over time as you age!