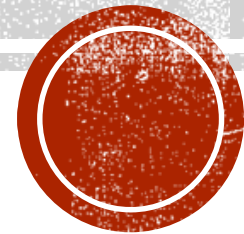


WEEK OF NOV. 16

Waves



MONDAY, NOVEMBER 16

- **Write down you homework**
 - Then leave your agenda out to be stamped.
- Put your homework in your homework folder.
- **Complete your Do Now**
 - Make sure you write your NAME, STUDENT # and CLASS on it.



VOCABULARY FLASH CARDS

- Write the following words or phrases on the front of each card:

Sound

Sound Wave

Pitch

Loudness/Volume

Decibels

Hertz



VOCABULARY FLASH CARDS

- Use your notes to fill in the definition for each.
- Use the single hole punch to put one hole in the corner of each card.
- Use a string to tie them together. (Keep it loose because we will be adding more)



MAGIC SCHOOL BUS — HUNTED HOUSE

- Take a 3 minutes to read over the questions.
- While watching the video, answer the questions.

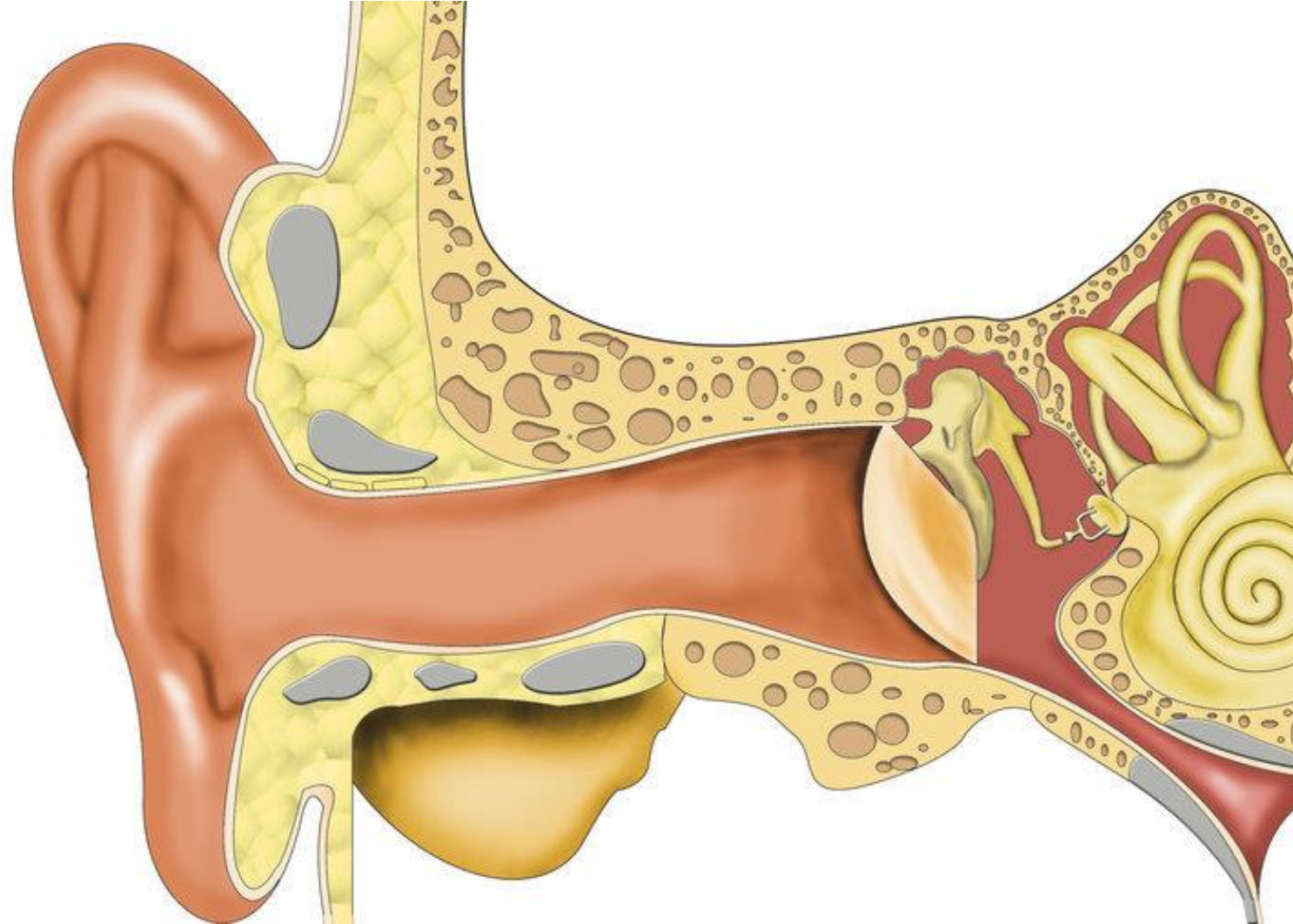


TUESDAY, NOVEMBER 17

- Name all the parts of an ear that you know.
- Then describe what you think the function/purpose of those parts are.

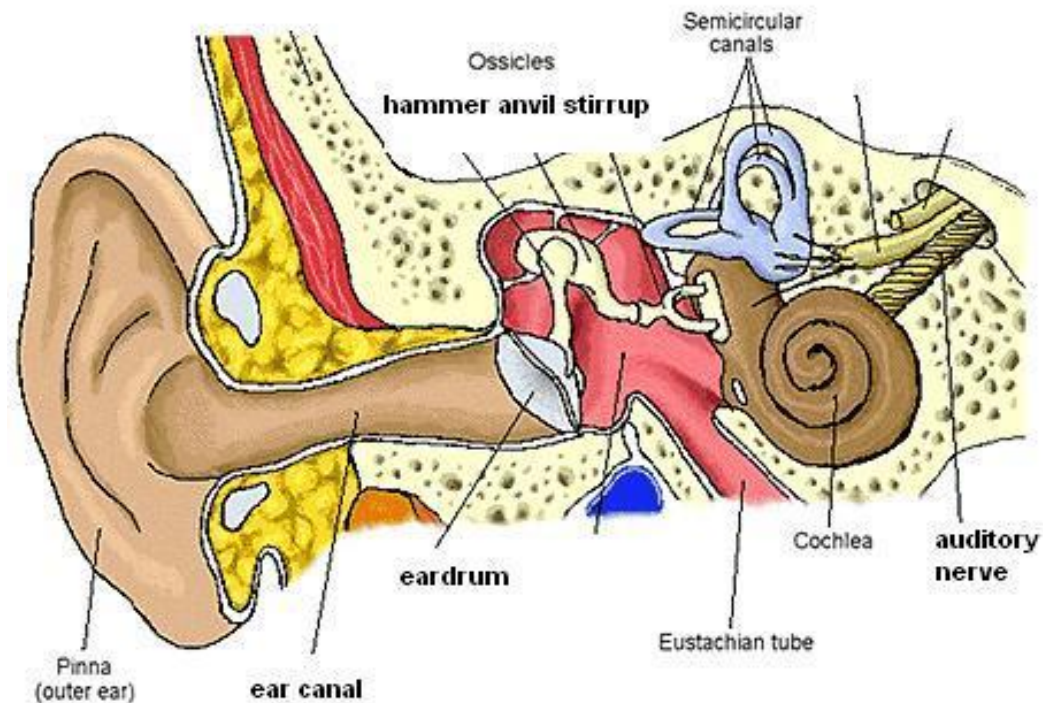


The Human Ear

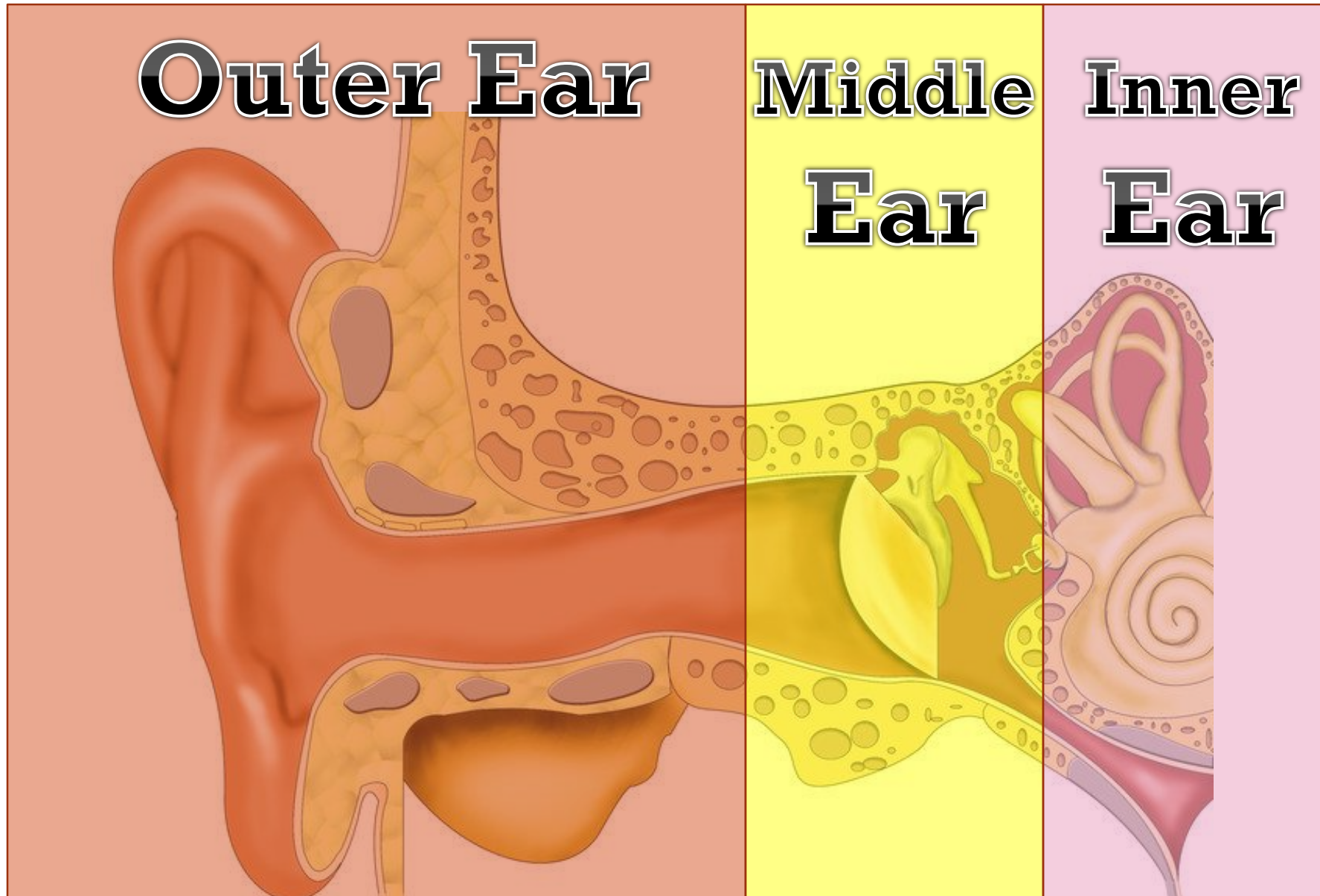


The Human Ear

The form of the human ear can receive sound waves as vibrations and convert them to signals that are processed by the brain.

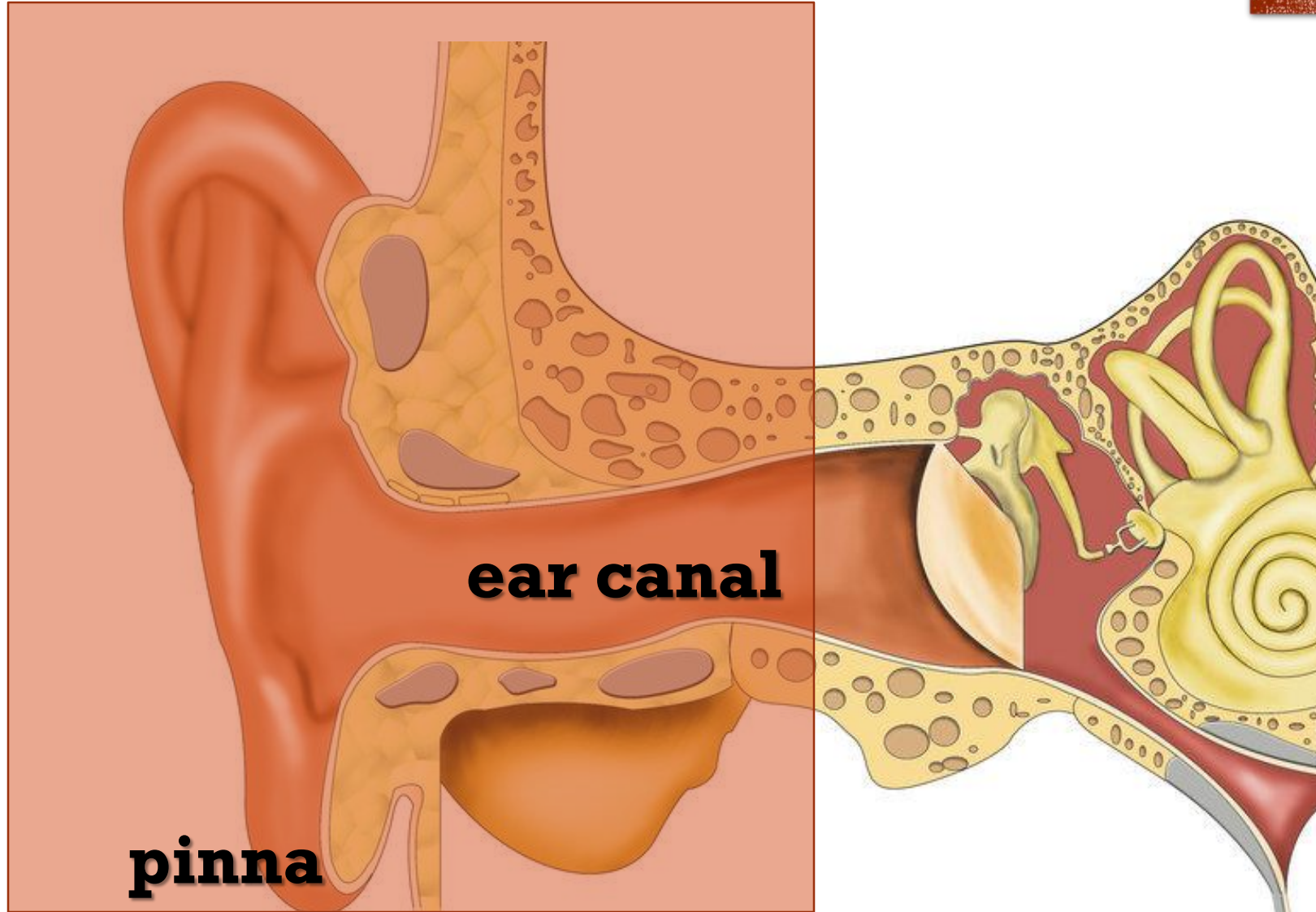


There are three main sections we will look at...



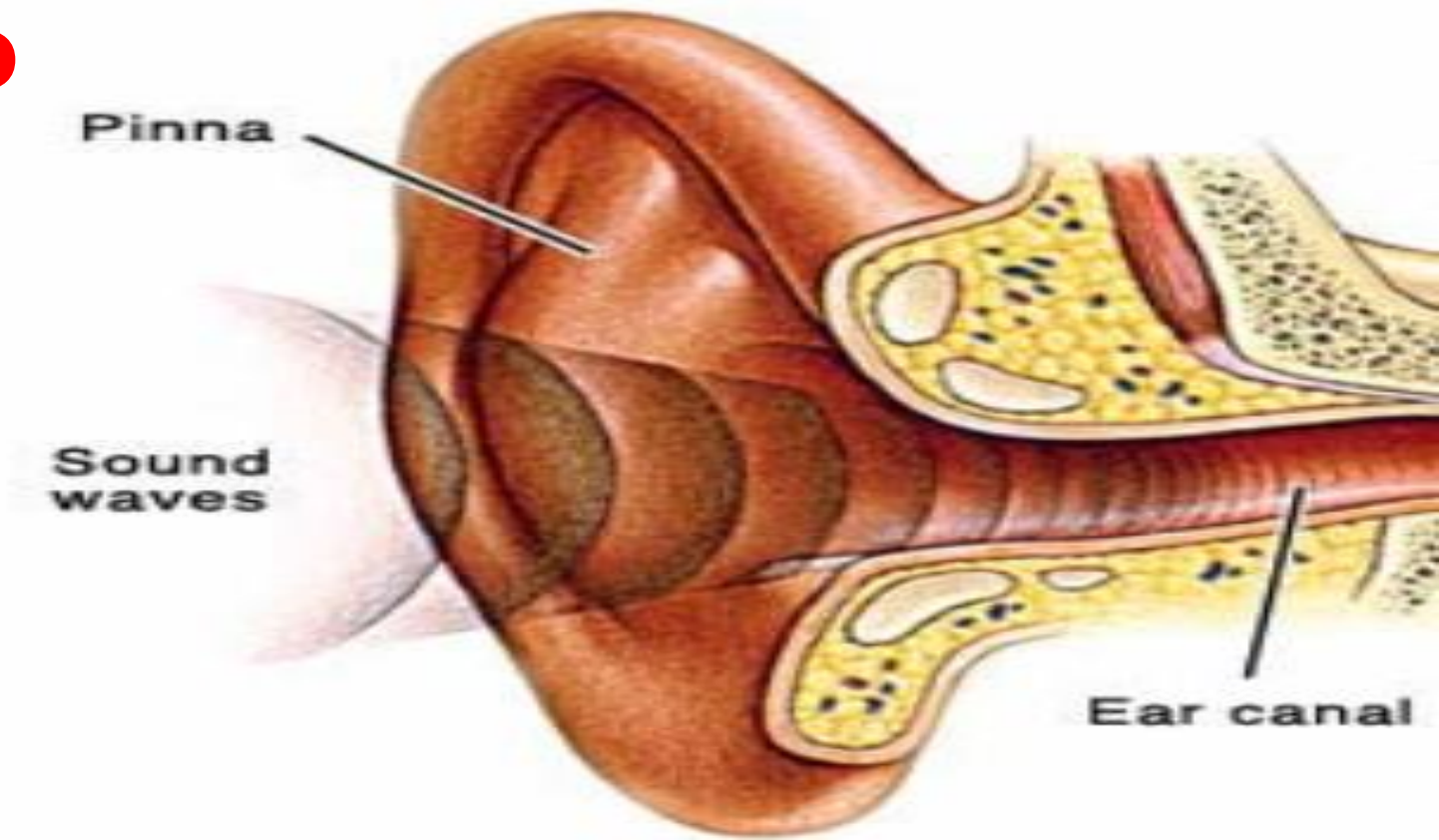
Outer Ear

Label Diagram
& Fill in Chart

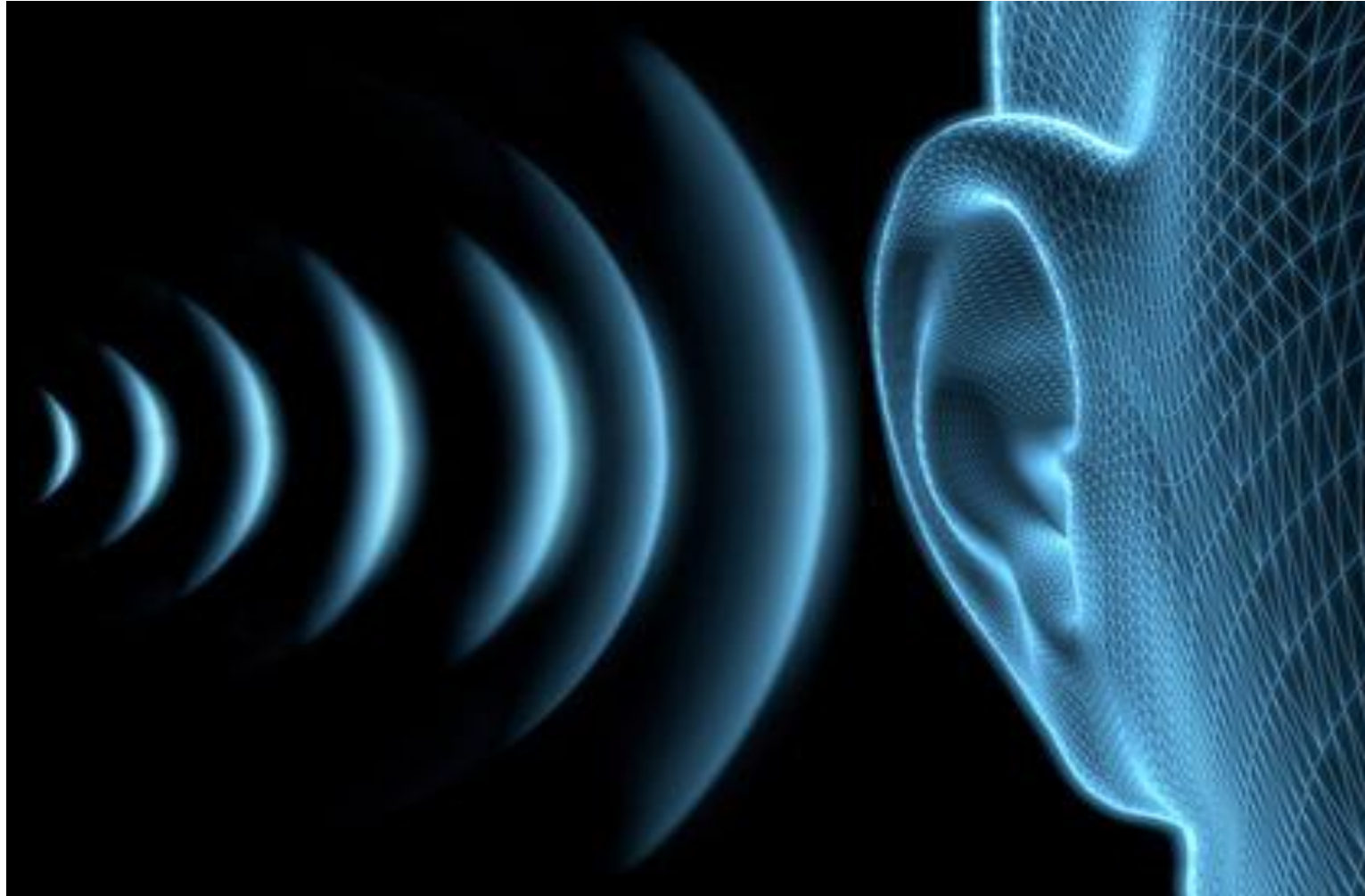


WHAT HAPPENS HERE?

The pinna collects the sound waves (vibrations) and funnels them into the ear canal, where they are amplified.

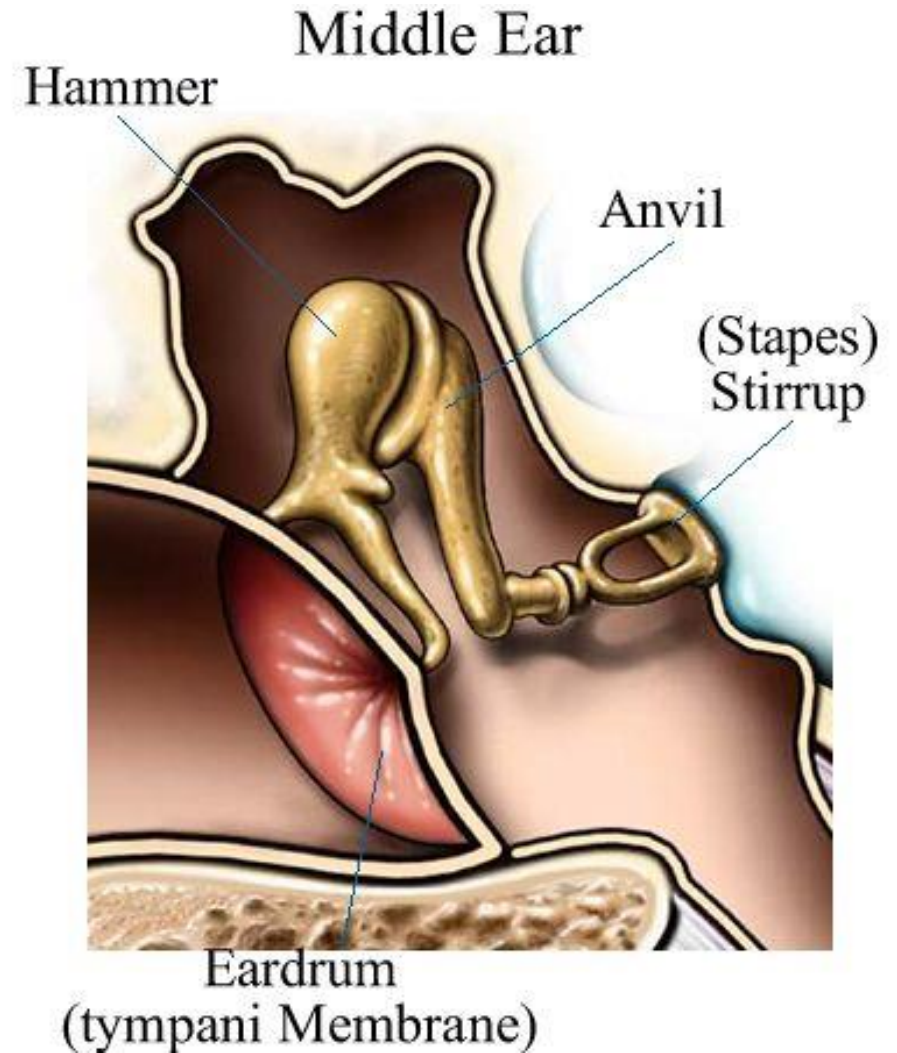
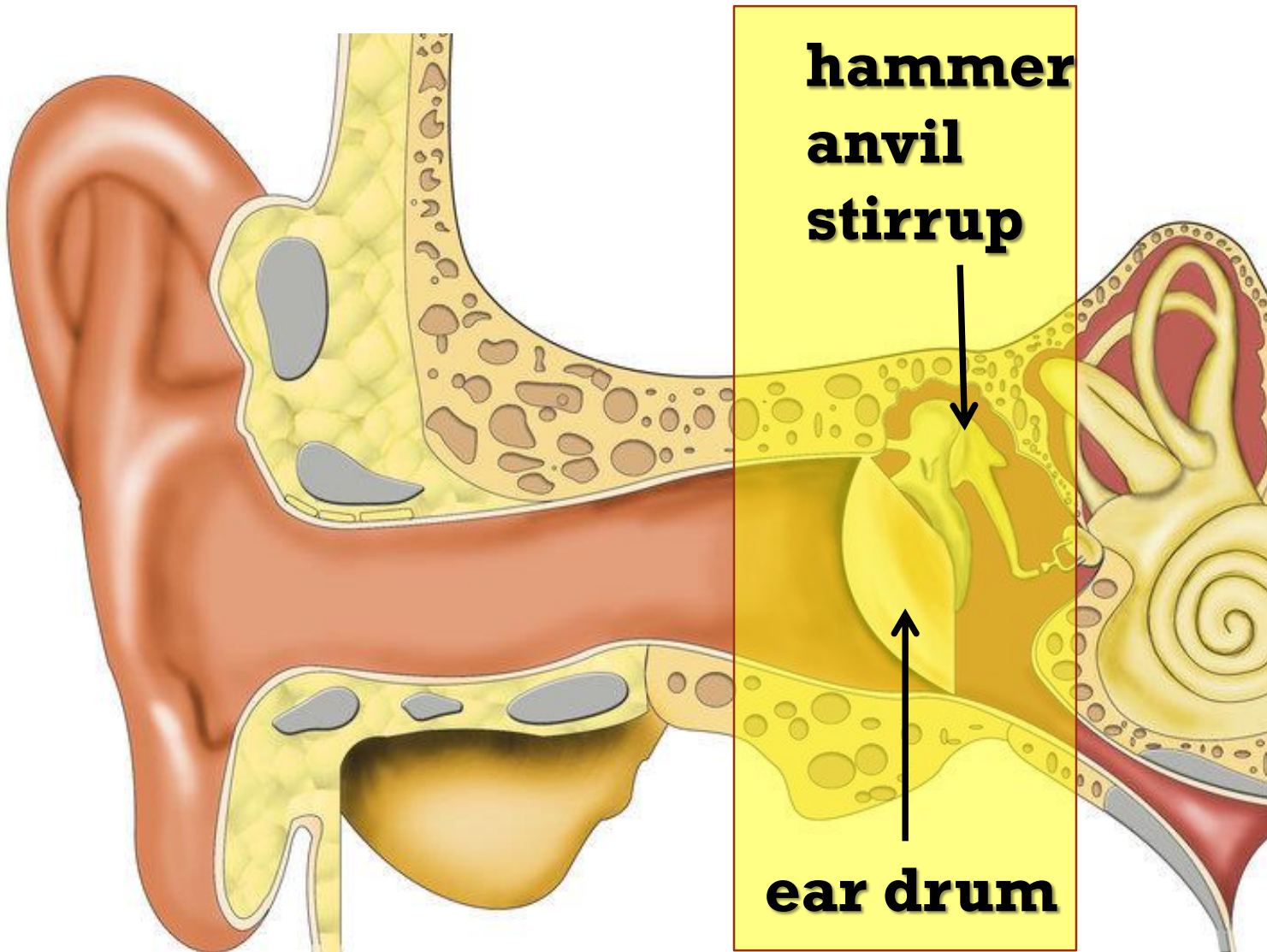


The outer ear collects and amplifies sound waves.

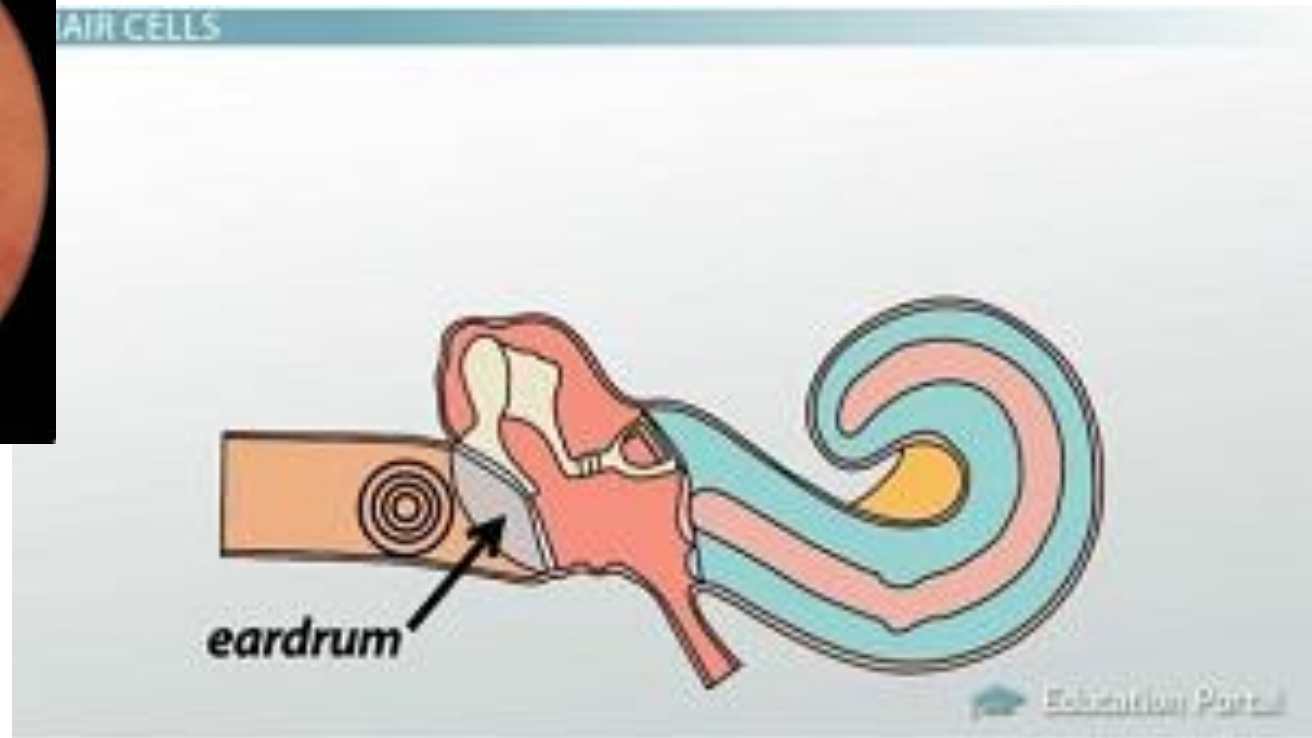


Middle Ear

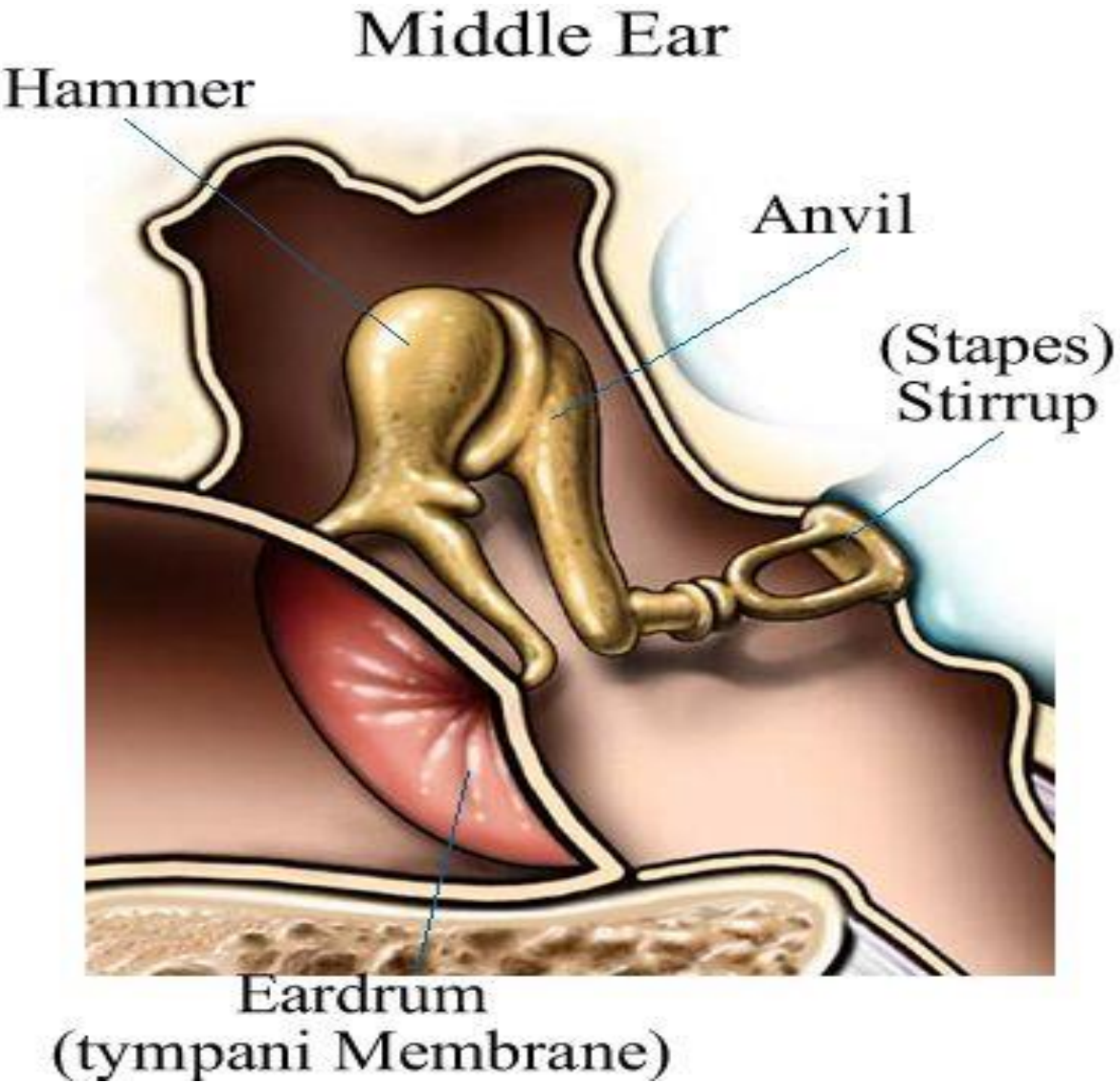
Label Diagram
& Fill in Chart



The sound waves then vibrate the ear drum.







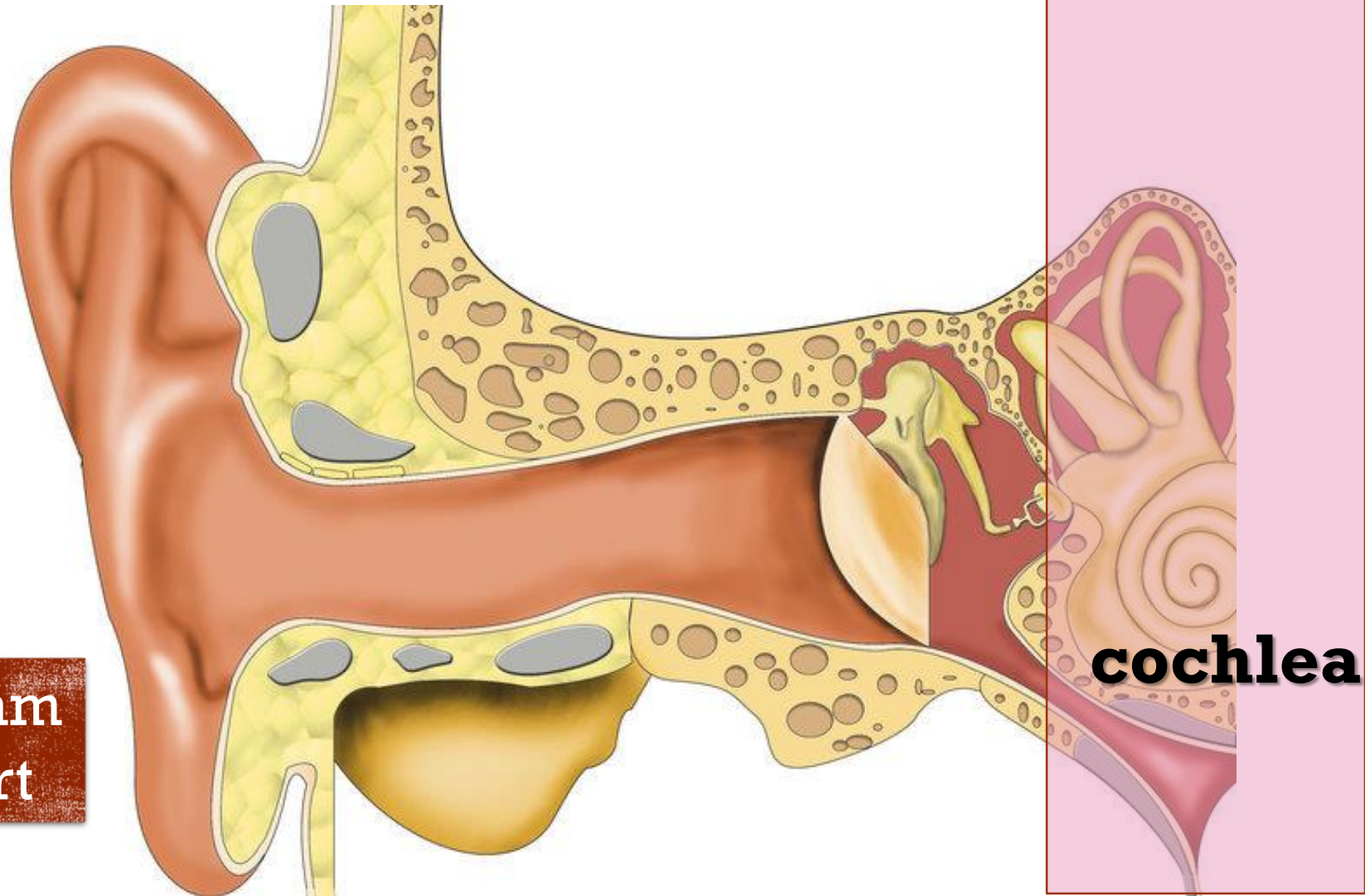
**The eardrum
vibrating causes
3 tiny bones of
the middle ear to
vibrate.
(hammer, anvil,
stirrup)**



**These bones
act as levers to
increase the
vibrations.**



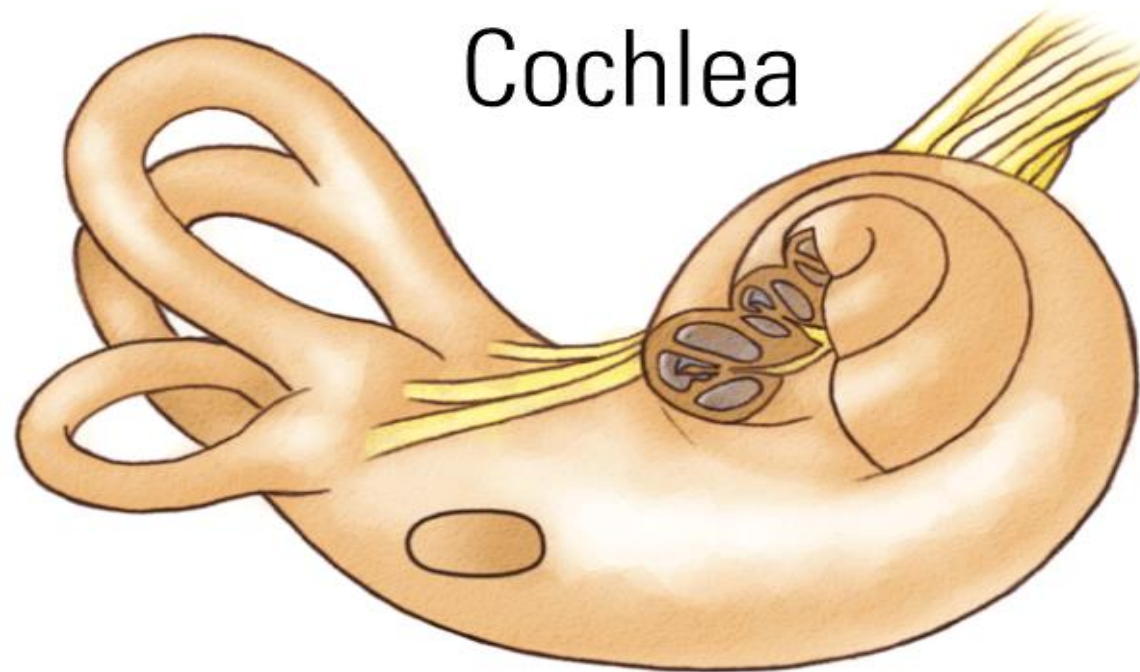
Inner Ear



Label Diagram
& Fill in Chart



The stirrup then vibrates against the cochlea, which is filled with fluid.



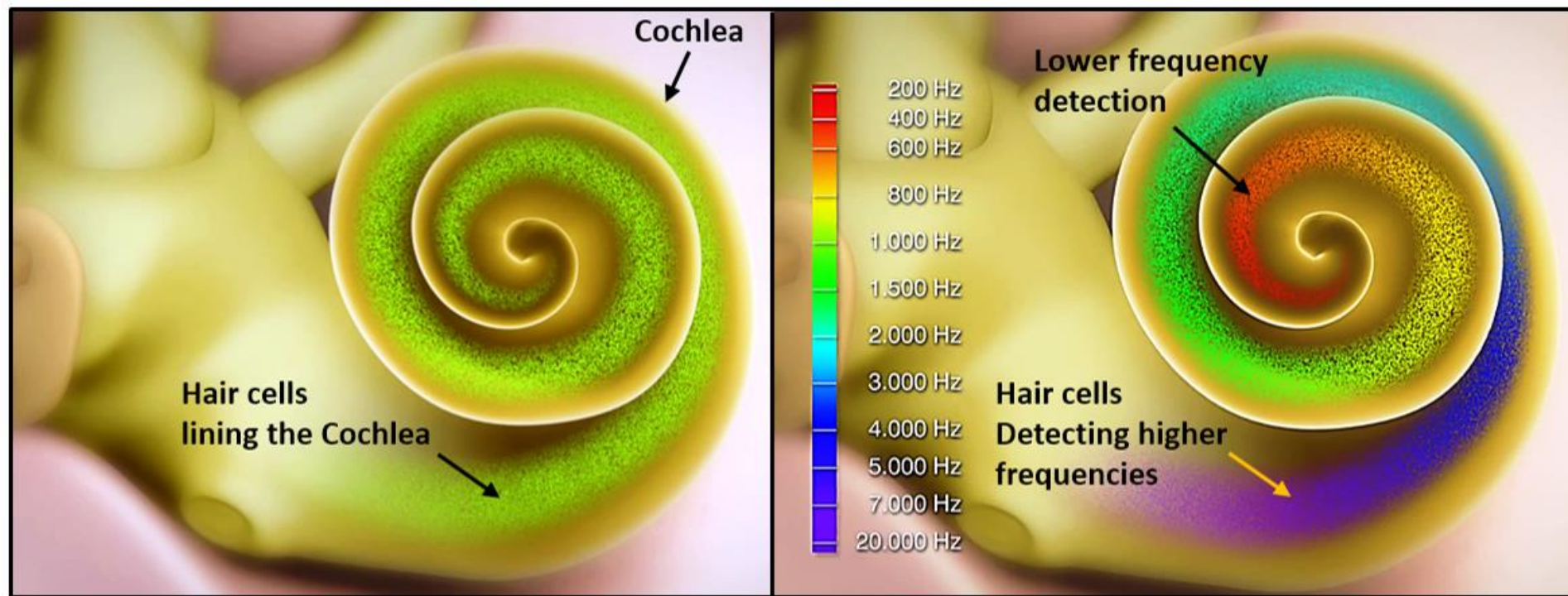


Your cochlea is smaller than the fingernail on your baby finger



There are tiny hairs in the cochlea.

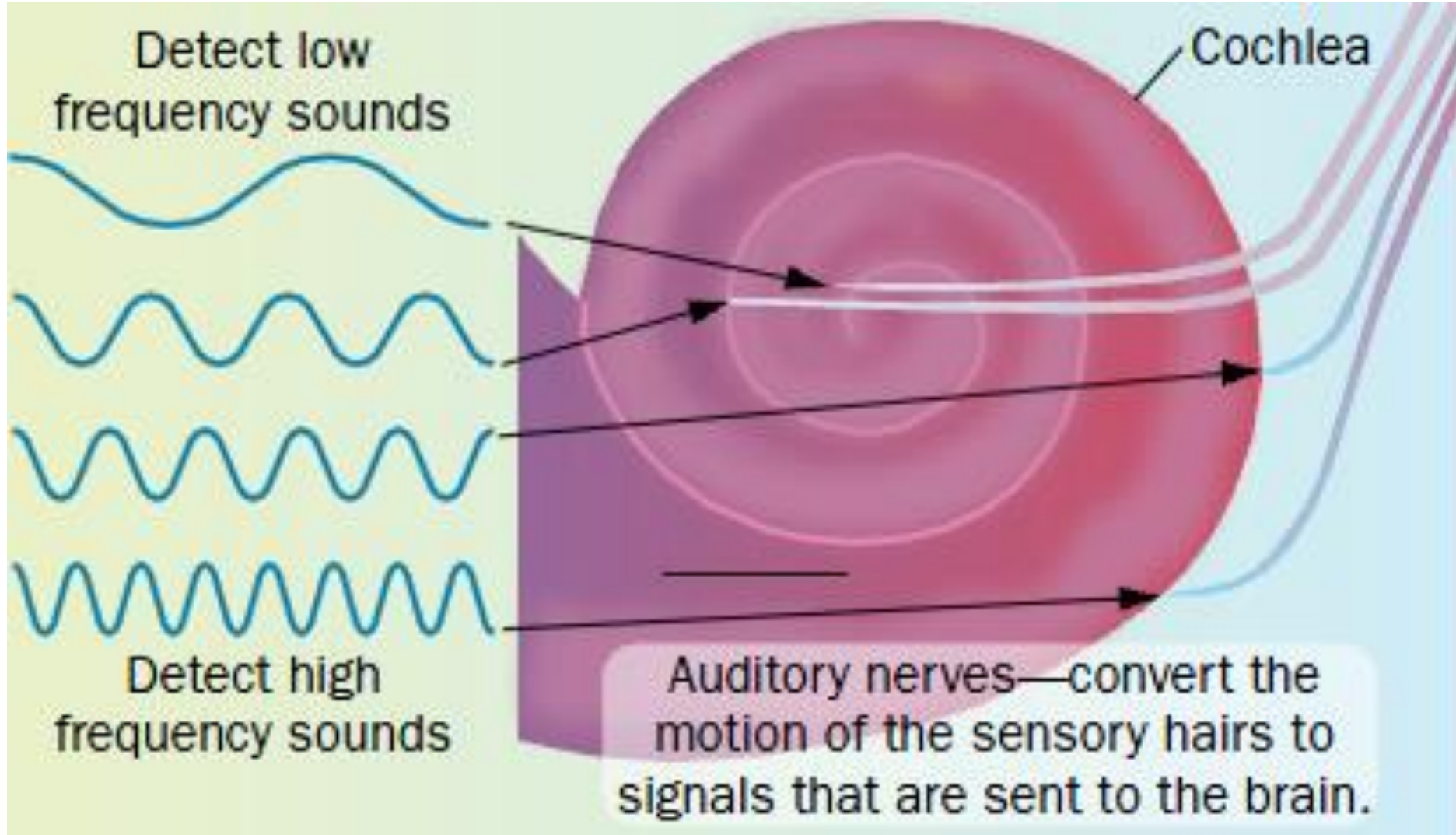




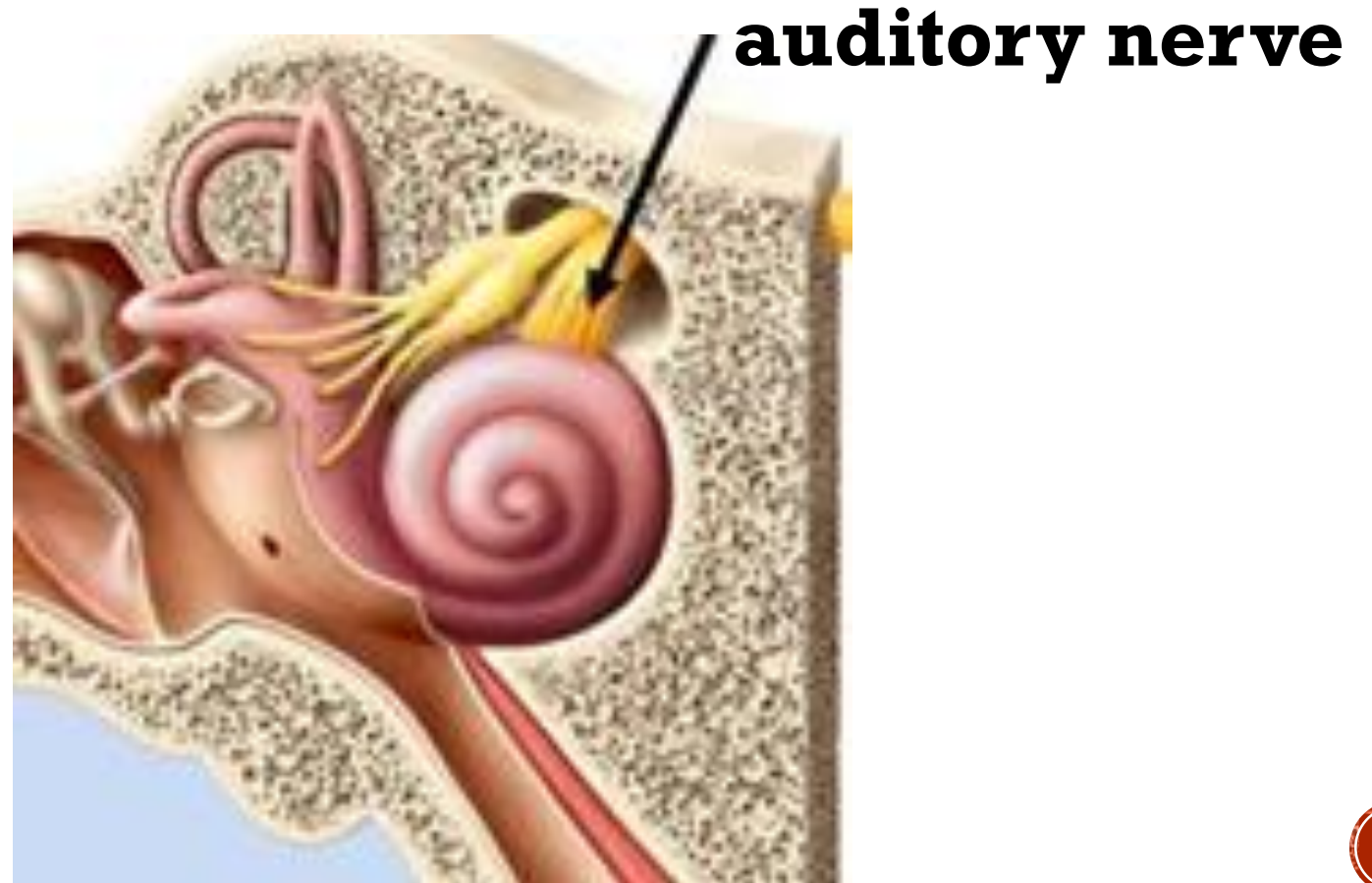
Many times older people have a harder time hearing high frequency sounds??

This is because the hair cells detecting higher frequency sounds are getting the most damage because they are where the sound waves first hit!

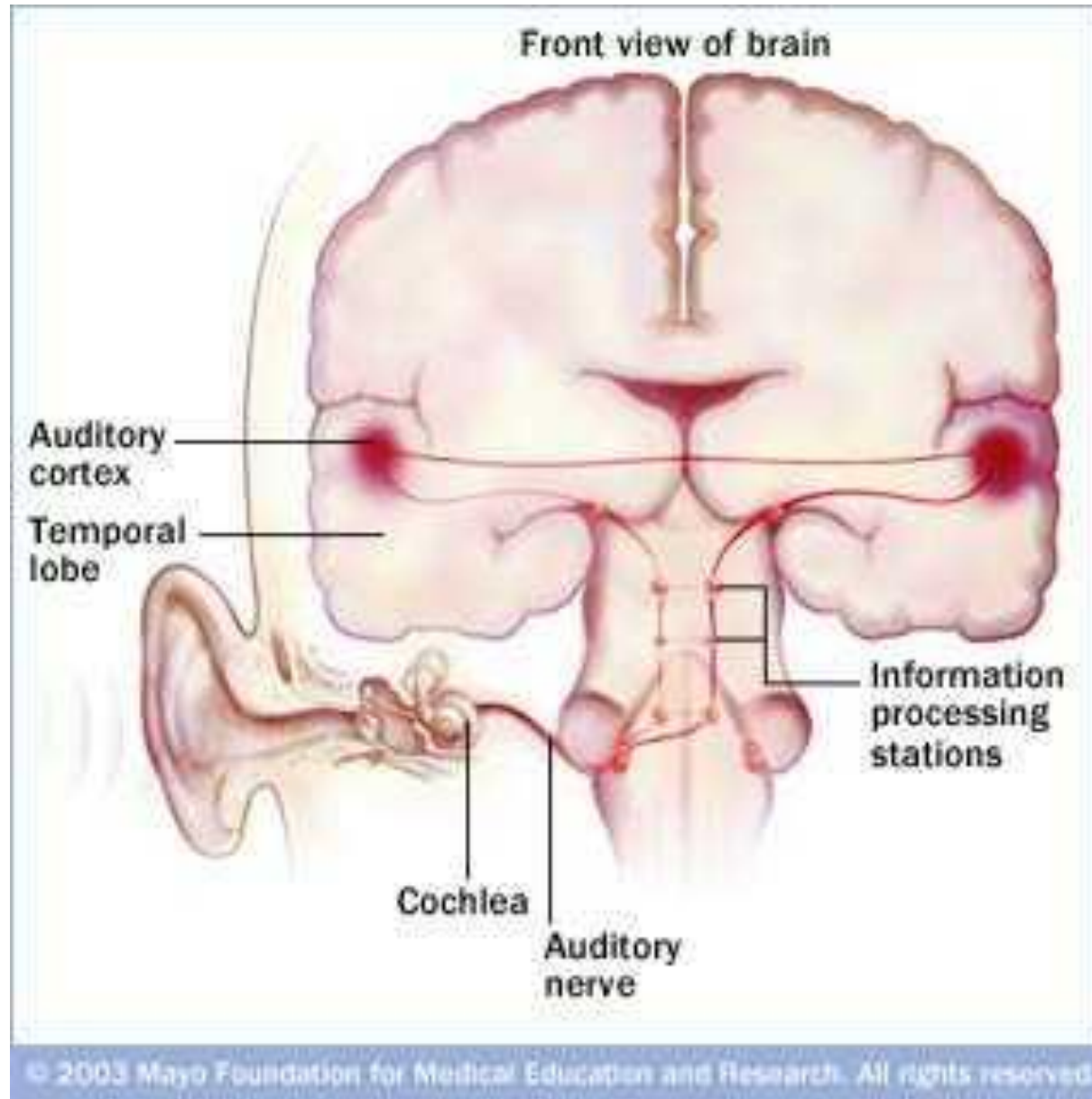




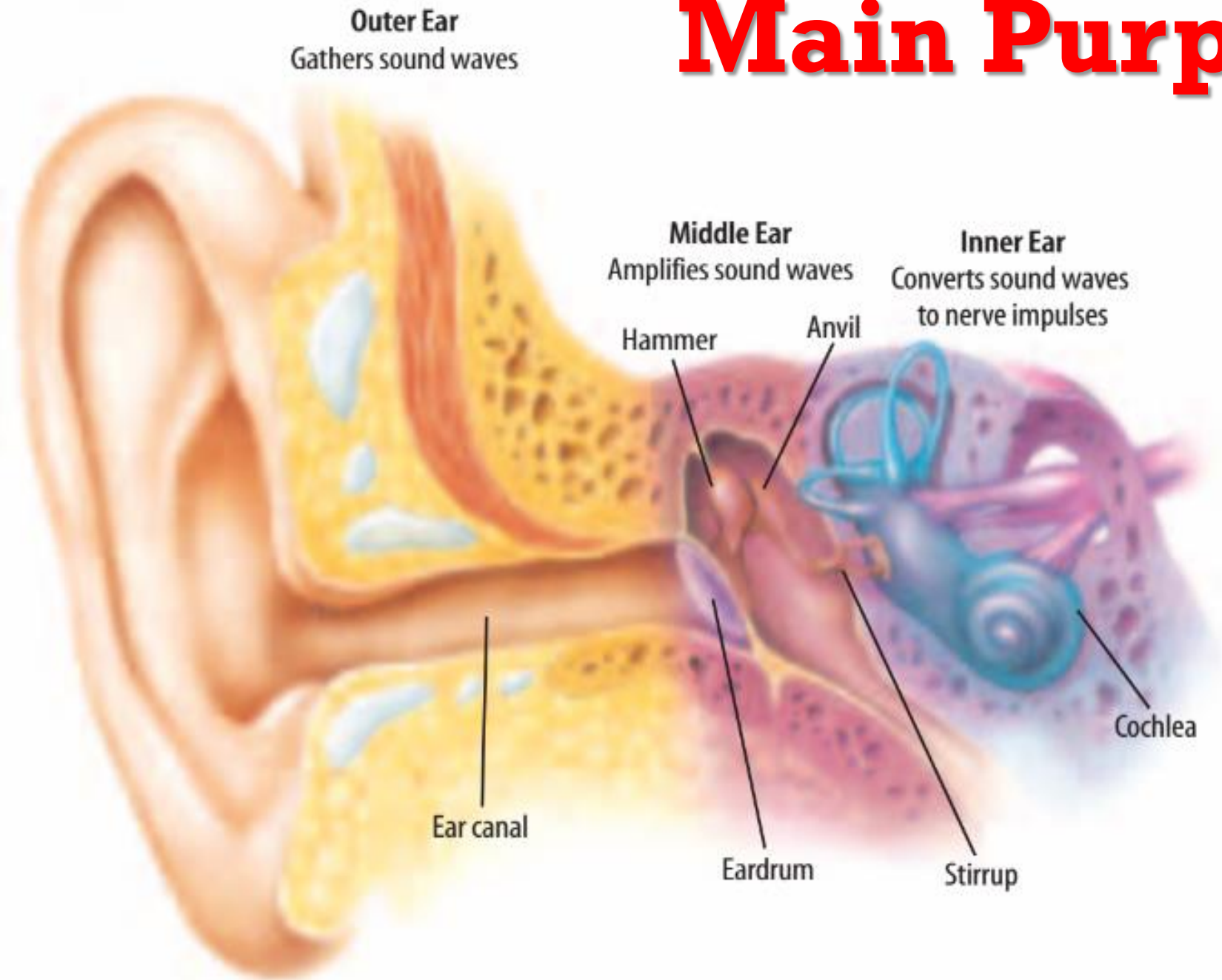
The tiny hairs in the cochlea send electrical signals to the auditory nerve and on to the brain.



The brain interprets sound!



Main Purpose



HOW THE EAR WORKS

“How Your Ear Works” (1:42)

<http://www.youtube.com/watch?v=r-c5GpoD8wI>



WEDNESDAY, NOVEMBER 18

Read the paragraphs, then define the words & answer the questions below:

- Horizontally:
- Larynx:

- What does Hz stand for?
- What can you conclude from: Males = 125 Hz, Females = 210 Hz, Children = 300 Hz



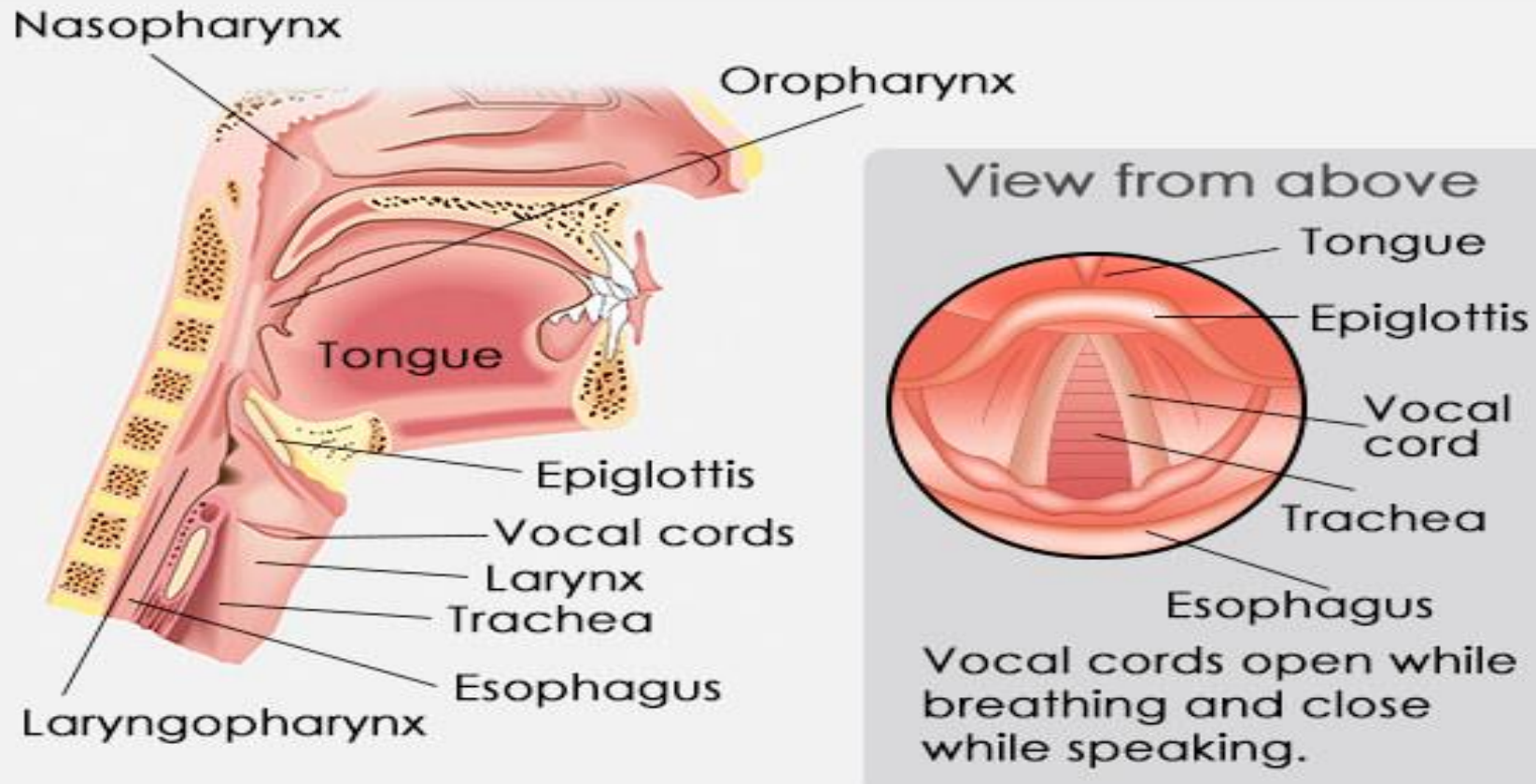
VOCAL CORDS



The Vocal Cords are located in this area



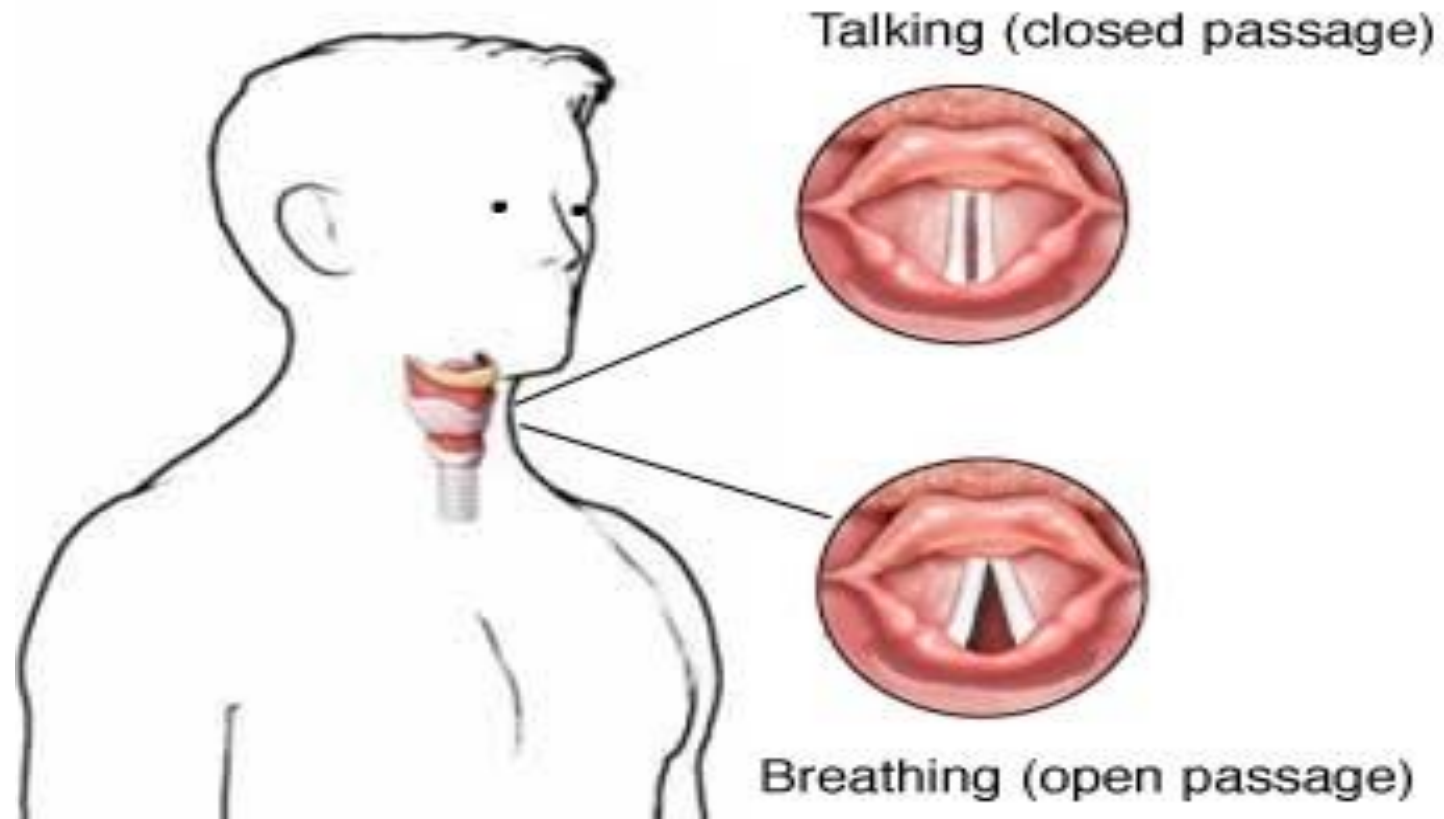
LARYNX AND VOCAL CORDS



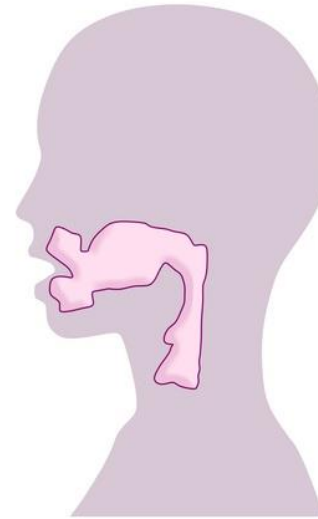
The vocal cords (also called vocal folds) are made up of two bands of membrane, which are stretched across the larynx (also called voice box)



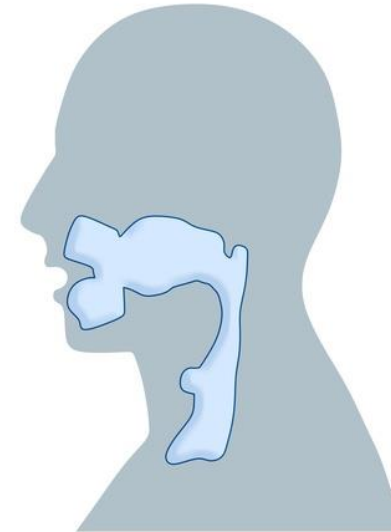
Vocal cords vibrate when you talk to make sound



A person's voice pitch is determined by the resonant frequency and size of their vocal cords.



*Female
Vocal Tract*



*Male
Vocal Tract*

- In an adult male, the average frequency is 125 Hz.
- In an adult female, the average frequency is 201 Hz.
- In an average child, the average frequency is 300Hz



VOCAL CORD VIDEO CLIP

“Vocal Cords” <https://www.youtube.com/watch?v=v9Wdf-RwLcs>



What are the similarities/ differences between a lion roaring and a baby crying?



<http://www.youtube.com/watch?v=FWb73pA7Xu4>



<http://www.youtube.com/watch?v=laxyoaHOP1c>



LION VS BABY

Roaring is similar to what a baby sounds like when it cries, except a baby produces a very **high pitched** sound and a lion produces a very **low pitched** sound



FLASH CARDS

- Writing the following words/phrases on the front of each notecard:
 - Outer Ear Parts
 - Middle Ear Parts
 - Inner Ear Parts
 - Outer Ear Purpose
 - Middle Ear Purpose
 - Inner Ear Purpose
 - Vocal Cords
 - Larynx



THURSDAY, NOVEMBER 19

- What are the three phases of matter?
- Through which type of matter does sound travel the fastest through?



FRIDAY, NOVEMBER 20

- Fill in the three states of matter and how you think sound travels through them.

