

Name _____

Laboratory for Sound Stimuli and Anatomy of the Auditory System

1. **The Auditory Stimulus** (Just read and listen 😊)

2. Auditory Anatomy

a. Identify the major parts of the auditory system and their functions. For the functions, make every attempt to go beyond the information provided in your textbook.

Letter	Name	Function
A.		
B.		
C.		
D.		
E.		
F.		
G.		
H.		
I.		
J.		
K.		
L.		

b. Identify each of the structures of the inner ear seen in the diagram. What is the function of each structure? Again, try to provide more information than is found in your textbook.

Letter	Structure	Function
A		
B		
C		
D		
E		
F		
G		
H		

c. For each of the structures in the auditory pathway, provide a brief explanation of the structure. As always, attempt to provide information that goes beyond what you've read in the textbook or heard in lecture.

Structure	Function
Cochlear Nucleus	
Superior Olivary Nucleus	
Inferior Colliculus	
Medial Geniculate Nucleus	
Auditory Cortex	

3. Auditory Tests, Disorders, and Treatments

a. Be sure that you understand the information represented in the audiogram. Can you see how high-frequency hearing loss would be depicted?

b. Next, gain a sense of the impact of high-frequency hearing loss by listening to the same auditory information (pick from among the samples provided) passed through two different types of low-pass filters. (A low-pass filter means that low frequencies can pass, but high frequencies cannot.) Such hearing loss is typically due to exposure to environmental noise.

c. Conduct a web search to learn more about tinnitus. In the space below, describe some causes and treatments for tinnitus. Which treatment would you prefer? Why?

d. *Otitis Media* What can you learn about the causes and treatments for Otitis Media? Which treatments would you use for your child? Why are children more susceptible than adults?

e. What is your overall sense of cochlear implants? Do you view this treatment as effective? Can you see any reason not to proceed with such an operation?
