

Name _____

Laboratory for Perception of Complex Auditory Stimuli

1. Auditory Beats

Which pairs of tones produce beats and which do not? How do the beats appear to change as the frequency of the second tone increases?

Frequency Pairs	Beats?
100 Hz + 103 Hz	Yes No
100 Hz + 120 Hz	Yes No
100 Hz + 160 Hz	Yes No
100 Hz + 200 Hz	Yes No
100 Hz + 500 Hz	Yes No

2. Noise

Bring on the noise (but not the funk).

3. Complex Tones and the Missing Fundamental

Does the basic pitch of the tone combination seem to change as you remove the fundamental (with all the harmonics present)?

How many of the harmonics (and which ones) must be present for you to hear a pitch that is equivalent to the fundamental frequency?

4. Shepard Tones & Tritone Paradox

The site provides a brief description of how each tone is produced. First, record below how each tone is constructed, then try to articulate the factors that give rise to this illusory experience. What does this phenomenon tell us about the role of context in pitch perception?

How might you explain the tritone paradox—especially the learned component?

5. Music and Mind

How credible do you find the claims about the impact of music on mind?

6. Vowel Sounds

The demonstration illustrates how your vocal tract works to produce vowel sounds. How do the vowels differ from consonants (in terms of production)?

7. Ladle Rat Rotten Hut

Do you find this demonstration compelling regarding the point that Chace wanted to make about the importance of intonation? Why or why not? Any comments?

8. Speech Perception (Categorical Discrimination)

In the table below, record your data for the Categorical Discrimination demonstration.

Sound Pair	Judged Different	Judged Same
1 vs. 4		
4 vs. 7		
7 vs. 10		

Do your data correspond to the expectations, given the different voice onset times (VOTs) involved in the stimuli?

9. Phonemic Restoration Effect

Listen to each trial without looking at the typed sentence. Then place a circle over the exact part of the sentence at which the cough occurred.

Trial 1. The state governors met with their respective legislatures convening in the capitol city.

Trial 2. The mummy discovered in the Egyptian tomb was surrounded by treasure.

Trial 3. The new recreational facility will provide many after-school activities.

Trial 4. The present location of the escaped convict remains a mystery to law enforcement.

Trial 5. Investing wisely today can lead to a financially secure retirement.

Trial 6. I promise to take you shopping when the roads clear up.

Trial 7. The book focuses on the organizational challenges involved in completing these massive jobs.

Trial 8. One can only speculate on the biological diversity of extraterrestrial life.

Trial 9. Many fine watches are manufactured in Switzerland.

10. Reverse Speech

Without a hint, did you hear any "message" in the musical passage? Yes / No

Could you hear the "hint" in the reversed musical passage? Did you hear any other messages?

Without reading any hints, write any words (messages) in the four reverse speech segments?

1.
2.
3.
4.

Now, after reading the hints, could you hear the “hints” in the reverse speech segments?

1.
2.
3.
4.

In the space below, indicate your reaction to the claims you found about reverse speech at the Reverse Speech site. In general, if you didn't read the prompt for the purported underlying message, do you think you could hear the “message?”
