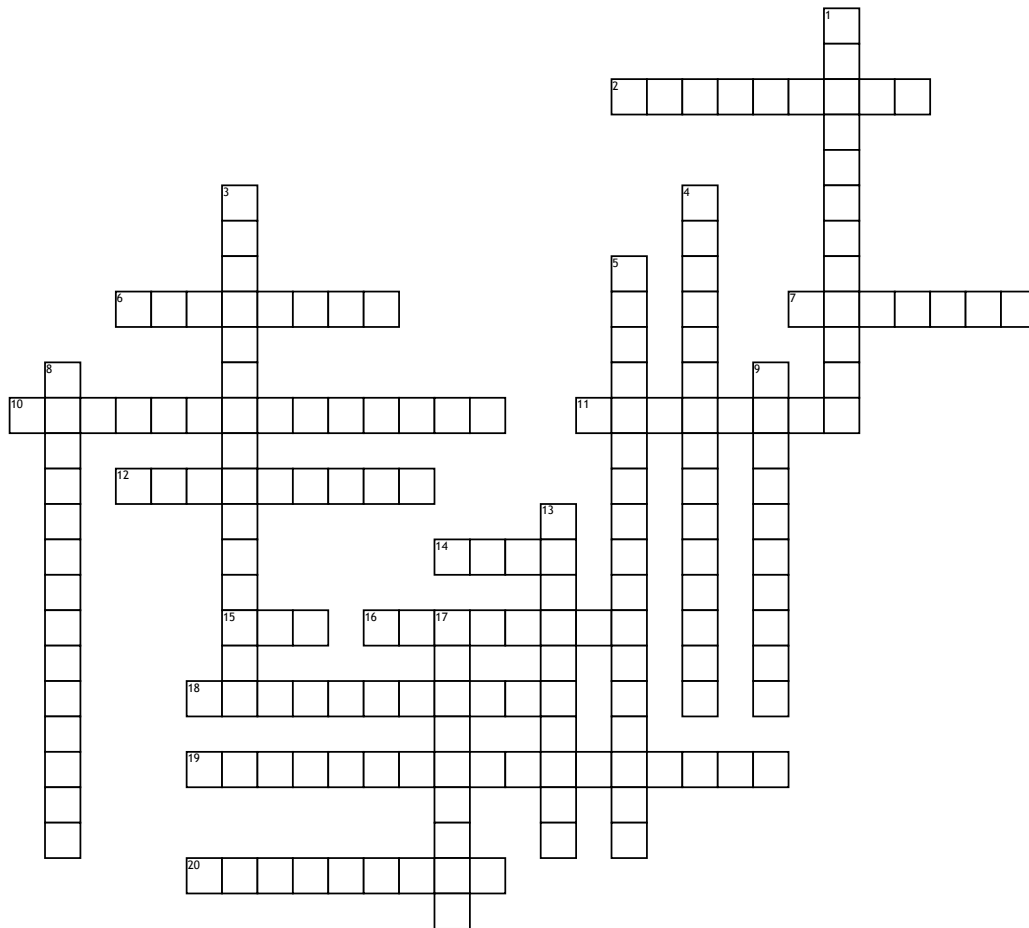


Name: _____

Date: _____

Week 4 Assignment Cochlear Physiology Crossword Puzzle



Across

2. cycles/seconds gives us this measurement, determined by SPEED stapes vibrates at (oscillation rate)

6. bony middle spiral of cochlea

7. motor protein in outer hair cells, contain voltage sensor

10. Because there is so much K⁺ in the endolymph, when the ion transduction channels of the hair cells are pulled open by their tip links, K⁺ rushes into the cell

11. connect to of shorter stereocilia to insertion plaques on the side of taller neighbor (the connection)

12. y axis on audiometer measured in dB, in traveling wave is determined but HOW MUCH stapes moves, related to amplitude

14. Maximum compliance is opposite of the base at the

15. battery that helps move ions, located in stria vascularis

16. Cilia move in the BLANK direction as the HC bodies

18. apex of cochlea where scala vestibuli and scala tympani meet and perilymph mixes. in traveling wave extremely low frequencies create fluid movement here,

19. Absence of stimulus closes channels, K⁺ still leaving HC to the lower-concentration extracellular cortilymph

20. fluid in scala media, high in K⁺, little Na⁺, produced in stria vascularis

Down

1. visual depiction of frequency selectivity of the cochlea

3. membrane that is tonotopically organized, is narrow and thick at base (sensitive to high frequency), and wide and flaccid at apex (sensitive to low frequency), changes in mass and stiffness alters vibratory pattern of this membrane.

4. rests on top of HC bodies, both inner and outer

5. OHC stereocilia shorn directly by, OHC only touch this

8. scientist that won nobel prize in 1961, came up with concept of traveling wave

9. what is it called when tip links deflect away from kinocilia

13. what is it called when tip links deflect towards kinocilia

17. fluid located in scala vestibuli and scala tympani, low in K⁺, high in Na⁺, produced in spiral ligament

Word Bank

opposite
tuning curves
Frequency
prestin
Georg von Békésy

Intensity
Endolymph
tectorial membrane
Perilymph
apex

Inhibition
Hyperpolarization
helicotrema
Basilar Membrane
ATP

Depolarization
modiolus
Excitation
top links
reticular lamina