

Smell and Taste Worksheet

Multiple Choice Questions

1. Which part of the brain is primarily responsible for processing smells?
 - ☐ a) Cerebellum
 - ☐ b) Olfactory bulb
 - ☐ c) Hippocampus
 - ☐ d) Medulla oblongata
2. What are the tiny hair-like structures in the nose that detect smell called?
 - ☐ a) Cilia
 - ☐ b) Papillae
 - ☐ c) Neurons
 - ☐ d) Axons
3. Which of the following is NOT a basic taste?
 - ☐ a) Sweet
 - ☐ b) Sour
 - ☐ c) Spicy
 - ☐ d) Bitter
4. The sense of taste is primarily detected by which organ?
 - ☐ a) Nose
 - ☐ b) Tongue
 - ☐ c) Skin
 - ☐ d) Eyes
5. Which cranial nerve is involved in the sense of smell?
 - ☐ a) Optic nerve
 - ☐ b) Olfactory nerve
 - ☐ c) Vagus nerve
 - ☐ d) Trigeminal nerve

True or False

6. The sense of smell can influence the sense of taste. (True/False)
7. Taste buds are located only on the tongue. (True/False)
8. The olfactory receptors are located in the nasal cavity. (True/False)
9. Umami is one of the five basic tastes. (True/False)
10. The sense of smell is also known as gustation. (True/False)

Short Answer Questions

11. Name the five basic tastes.

12. Describe the role of the olfactory bulb in the sense of smell.

13. How do taste buds detect different flavors?

14. Explain how the sense of smell can affect the sense of taste.

15. What is the function of cilia in the nasal cavity?

Fill in the Blanks

16. The sense of taste is also known as _____.

17. _____ are the sensory receptors for smell.

18. The _____ nerve carries signals from the taste buds to the brain.

19. _____ is the taste associated with savory flavors.

20. The _____ is the part of the brain that processes smell information.

Matching

21. Match the term with its definition:

- Olfactory bulb
- Taste buds
- Cilia
- Papillae
- Olfactory nerve

Structures on the tongue that contain taste receptors

Hair-like structures in the nasal cavity

Nerve that transmits smell information to the brain

Brain structure involved in processing smells.

Small bumps on the tongue that contain taste buds

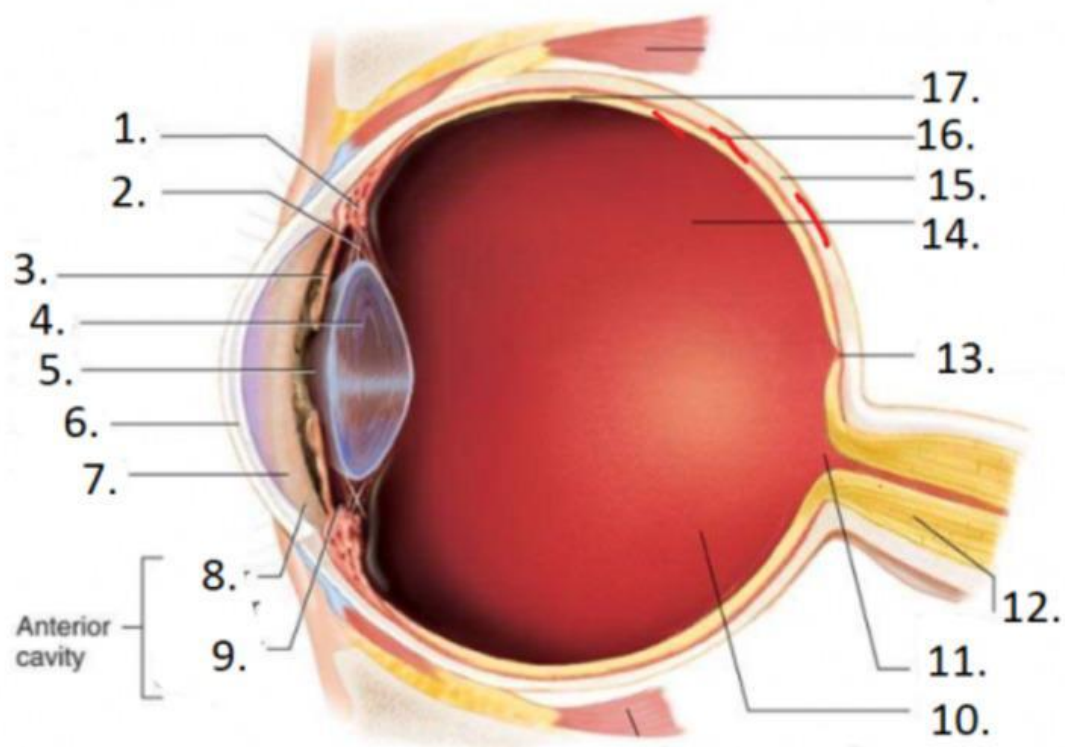
Essay Questions

23. Discuss the relationship between the
create the perception of flavor.

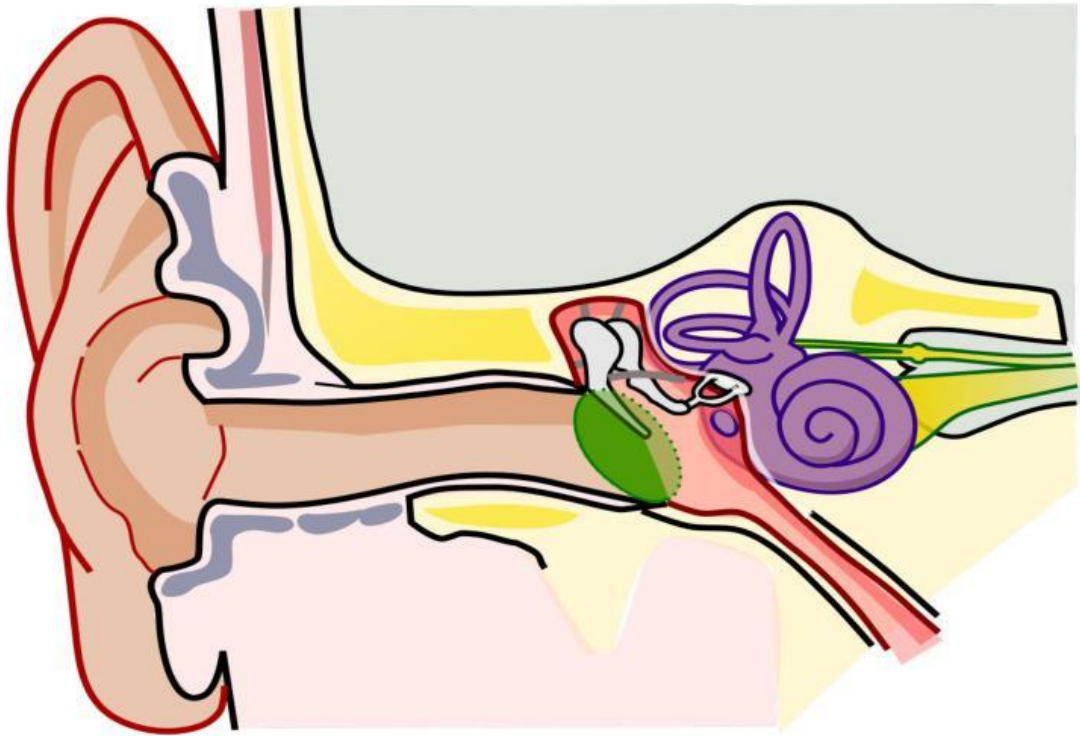
24. Explain the process of olfaction from the detection of odor molecules to the perception of smell in the brain.

25. Describe how different factors, such as age and health, can affect the senses of smell and taste.

Drag and drop the correct structure name to its location.



1. How do our eyes capture and transmit images to the brain?



Cochlea: The vibrations cause the fluid in the cochlea to ripple, which moves hair cells that sit on top of the basilar membrane.

Eardrum: The sound waves hit the eardrum, causing it to vibrate.

Middle ear: The vibrations are passed to the malleus, incus, and stapes, which are three small bones that amplify the sound.

Outer ear: Sound waves enter the ear through the external auditory canal.

Hair cells: The hair cells bend, which opens pore-like channels that cause chemicals to rush into the cells. This creates an electrical signal.

Auditory nerve: The electrical signal travels to the brain through the auditory nerve.

Inner ear: The sound waves travel to the cochlea, a fluid-filled snail-shaped organ.

Brain: The brain interprets the electrical signals as sound