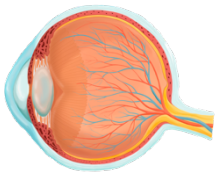
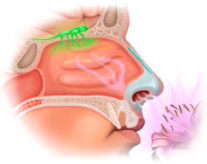
TOPIC: INTRODUCTION TO SPECIAL SENSES

- *Recall:* 2 types of senses:
  - **General senses**: distributed throughout the body.
  - **Special senses**: located in special sense _____.
- There are ____ special sense organs:

Sense	**Vision**	**Smell** (Olfaction)	**Taste** (Gustation)	**Hearing**	**Equilibrium**
Organ	_____ 	_____ Epithelium 	Taste Buds 	Ear & Cochlea 	Semicircular Canals & Vestibule 
Stimulus	Electromagnetic radiation (light)	Chemical properties	_____ properties	Pressure waves	Movement and _____
Perception	Brightness and _____	_____	Sweet, sour, salty, bitter, umami	Sound	Equilibrium

EXAMPLE: For the following questions, carefully consider the relationship between perceptions and the different stimuli that cause them.

a) If a tree falls in the forest and no one is around, does it make a sound?

_____

b) If the light is on in the basement and no one is home, what color are the walls?

_____

c) If a hamburger is on the table and no one takes a bite, does it have a taste?

_____

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PRACTICE: What is the difference between special senses and general senses?

a) Special senses use action potentials, while general senses use graded potentials.

b) Special senses are located in special sense organs, while general senses are distributed throughout the body.

c) General senses include sight, taste, and equilibrium; special senses include pressure, temperature, and pain.

d) The receptors for general senses are receptor cells, while special senses use modified nerve endings.

PRACTICE: Which of the following correctly matches the sense to the type of stimulus it measures in the environment?

a) Electromagnetic radiation: Smell.

b) Pressure waves traveling through a fluid: Hearing.

c) Chemical properties of gasses dissolved in a liquid: Equilibrium.

d) Movement and gravity: Sight.