CHAPTER 40 THE NERVOUS SYSTEM AND THE EFFECTS OF DRUGS

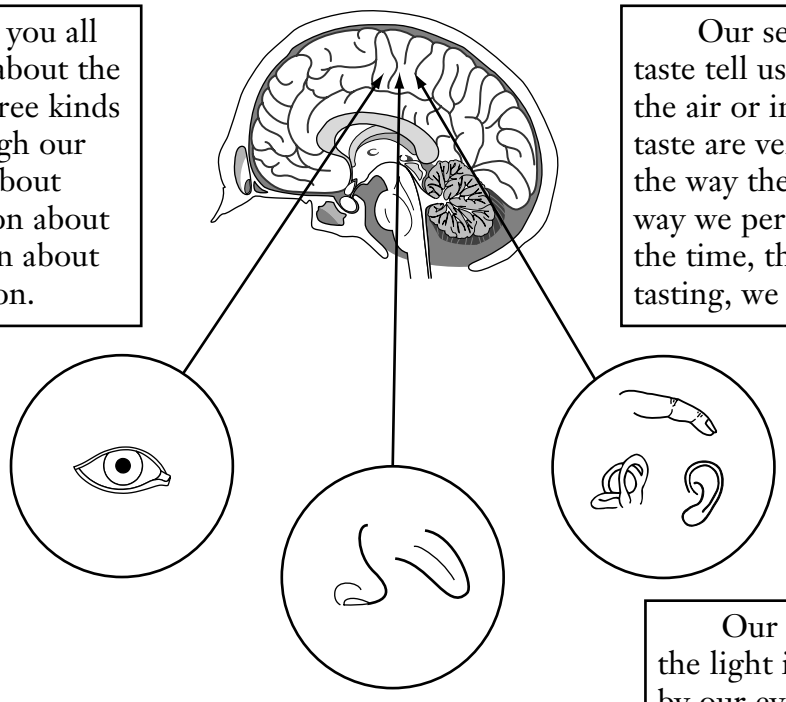
Section 40.2 The Senses

Study the Diagram

Read the paragraphs in the boxes and study the diagram. Then answer the questions.

Your senses give you all of your information about the world. We receive three kinds of information through our senses: information about chemicals, information about light, and information about mechanical stimulation.

Our senses of smell and taste tell us about chemicals in the air or in our food. Smell and taste are very similar, both in the way they work, and in the way we perceive them. A lot of the time, things we think we are tasting, we are actually smelling.



Our senses of touch, hearing, and balance are very closely related. The sense of touch comes from pressure directly on the skin. Pressure receptors in the ears sense changes in air waves and allow us to hear. Organs in the ears called semicircular canals maintain our balance by detecting the movement of fluid that occurs when we move our head.

Our sight is based upon the light information received by our eyes. Our eyes have cells adapted for seeing different kinds of light. Rod cells allow us to see in dim light; cone cells work best at seeing color, as well as sharp images in bright light.

1. Which sense do you think an acrobat uses the most when walking blindfold on a tightrope? Which organ is responsible for this sense? _____

_____

2. Why is it hard to taste food when you have a stuffed-up nose? _____

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3. Cats have many rods and few cones in their eyes. Do you think cats see well in the dark? How well do you think they see colors? _____

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