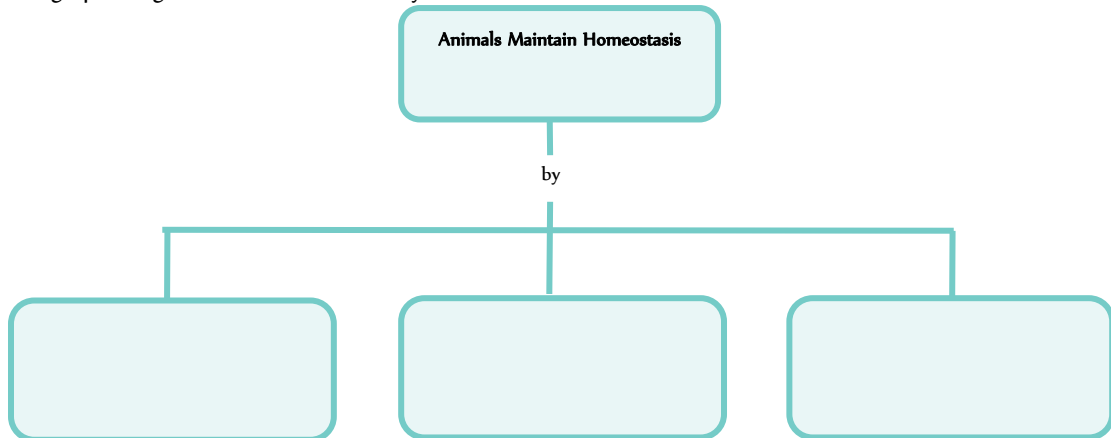
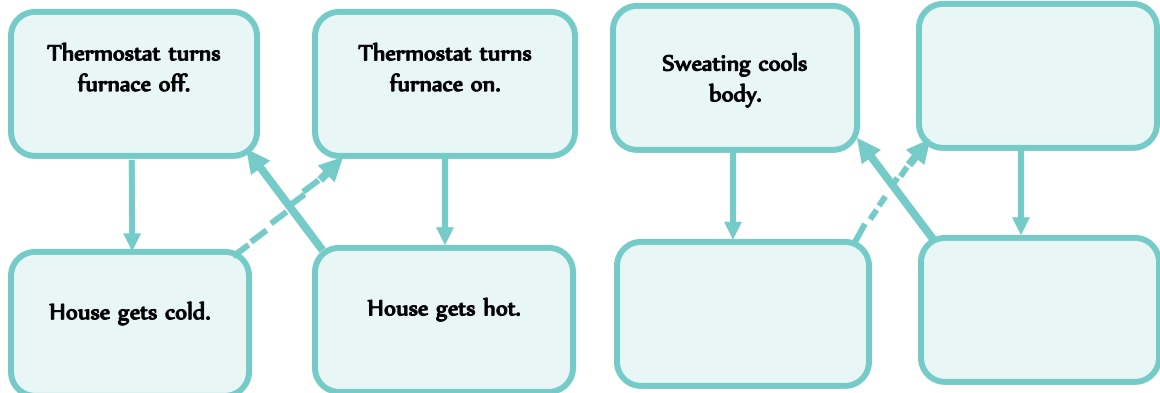


### Homeostasis (p. 732-733, 827-828 and 864-867)

1. Complete the graphic organizer to define three ways that animals maintain homeostasis.



2. Complete the blank boxes in the diagram on the right below to show how body temperature is maintained in a human being.



3. Describe generally how an animal's nervous and musculoskeletal systems work together to allow it to escape a predator.

\_\_\_\_\_

\_\_\_\_\_

4. What is homeostasis?

\_\_\_\_\_

\_\_\_\_\_

5. Name the body system that helps protect mammals from disease and describe how it accomplishes this task.

\_\_\_\_\_

\_\_\_\_\_

6. What are endocrine glands?

\_\_\_\_\_

\_\_\_\_\_

7. What is a feedback inhibition? Give an example of how it is used in the human body.

\_\_\_\_\_

\_\_\_\_\_

8. Why is the liver important for homeostasis?

\_\_\_\_\_

\_\_\_\_\_

9. Which organ systems work together to maintain body temperature?

\_\_\_\_\_

\_\_\_\_\_

## Nervous System (p. 896-897)

1. What are the main functions of the nervous system?

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Name the two parts of the nervous system and explain what each part does

_____	_____
_____	_____
_____	_____
_____	_____

2. Draw and label a diagram of a neuron. Be sure to include the following features in your drawing: axon, axon terminals, cell body, dendrites, myelin sheath, nodes, and nucleus.



3. Neurons that carry impulses from the eyes to the spinal cord and brain are called \_\_\_\_\_.
4. Motor neurons carry impulses from the brain and spinal cord to \_\_\_\_\_ and \_\_\_\_\_.
5. The neuron's cell body has short, branched extensions called \_\_\_\_\_ which receive impulses from other neurons.
6. In most animals, \_\_\_\_\_ of different neurons are clustered in bundles called nerves.
7. The insulating membrane that surrounds a single axon in some neurons is called the \_\_\_\_\_.

## Endocrine System (p. 982-986)

1. The pituitary gland is located at the base of the \_\_\_\_\_ and consists of the
2. \_\_\_\_\_ pituitary and the \_\_\_\_\_ pituitary.
3. \_\_\_\_\_ cells in the \_\_\_\_\_ produce hormones that are released by the \_\_\_\_\_.
4. The two hormones released from the posterior pituitary are oxytocin and \_\_\_\_\_.
5. \_\_\_\_\_ hormones secreted into blood vessels leading to the \_\_\_\_\_ pituitary control its secretions.
6. How does the pancreas use insulin and glucagon together to control blood glucose levels in the body?

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7. What is diabetes mellitus?

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8. Use the key choices to match each pituitary hormone with its action

Key Choices				
MSH	TSH	LH	GH	ACTH

- \_\_\_\_\_ Stimulates ovaries and testes
- \_\_\_\_\_ Stimulates the release of thyroxine
- \_\_\_\_\_ Stimulates release of hormones from adrenal cortex
- \_\_\_\_\_ Stimulates protein synthesis and growth in cells
- \_\_\_\_\_ Stimulates melanocytes to increase production of melanin in the skin

9. Complete the table. Fill in the missing information about each adrenal gland.

Part of the Adrenal Gland	Hormone(s) Produced	Function
Adrenal cortex		
Adrenal medulla		

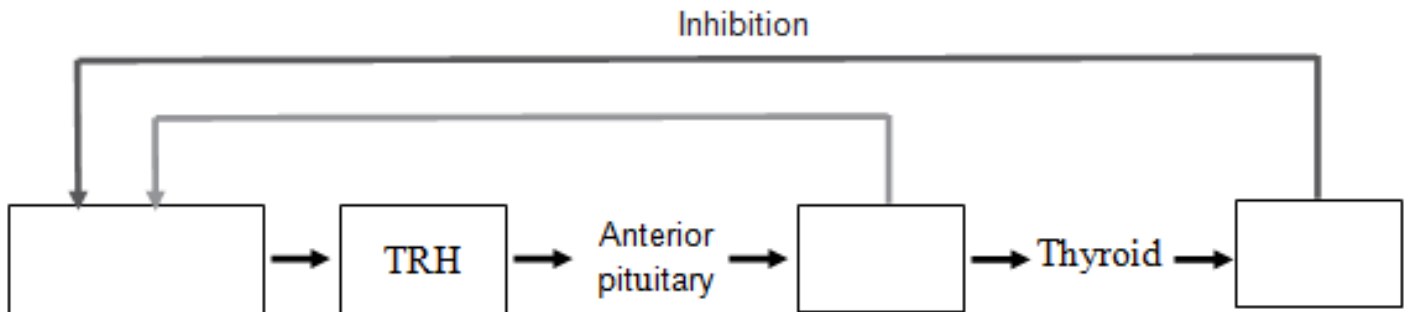
10. What is feedback inhibition?

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11. Complete the flowchart to show how feedback controls regulate the thyroid gland.



### Immune System (p. 1010-1028)

1. What are infectious diseases, and what causes them?

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2. How did the germ theory of disease get its name?

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What is another name that scientists use for a disease-causing agent?

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3. What are Koch's postulates used for?

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4. List two ways that bacteria can produce illness.

- a. \_\_\_\_\_
- b. \_\_\_\_\_

5. Use the key choices to match each type of disease with the type of disease-causing agent that causes it. Some types of disease-causing agents may be used more than once.

Key Choices				
Virus	Protist	Parasitic Worm	Fungus	Bacterium

- \_\_\_\_\_ African sleeping sickness
- \_\_\_\_\_ athlete's foot
- \_\_\_\_\_ botulism
- \_\_\_\_\_ chicken pox
- \_\_\_\_\_ hookworm
- \_\_\_\_\_ influenza
- \_\_\_\_\_ malaria
- \_\_\_\_\_ trichinosis
- \_\_\_\_\_ tuberculosis

6. Are microorganisms always harmful to the human body? Explain your answer, and give an example.

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7. List three ways that parasitic worms cause disease.

- a. \_\_\_\_\_
- b. \_\_\_\_\_
- c. \_\_\_\_\_

8. The \_\_\_\_\_ response is the body's response to specific invaders.

9. A substance that triggers the immune response is known as a (n) \_\_\_\_\_.

10. The main role of \_\_\_\_\_ is to \_\_\_\_\_ for destruction by immune-system cells.

11. The main working cells of the immune system are two types of \_\_\_\_\_. Their specific types are determined by a person's \_\_\_\_\_.

12. \_\_\_\_\_ discover antigens in body fluids.

13. \_\_\_\_\_ defend the body against pathogens that have infected body cells.

14. A runny nose is a symptom of a cold. How is this evidence that the body's immune defenses are working?

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15. How does a vaccine work?

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16. What type of immunity do vaccinations produce?

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17. What type of immunity does a mother pass on to her infant while breastfeeding?

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18. Why is passive immunity only temporary?

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19. After being vaccinated, many children are treated for fever. This is not considered a danger or problem. Why might this happen?

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20. What is the key difference between an immunodeficiency disease and an autoimmune disease? Provide an example of both types of disease in your response.

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**Essential Questions**

1. How do the endocrine, nervous and immune systems work together to maintain homeostasis in the human body when a disruption in one of these systems occurs?

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2. How do external and internal environmental factors impact homeostasis of the human body?

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3. What are some ways that the human body responds to internal changes such as the presence of excess salt?

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4. How do negative feedback loops influence homeostasis in human body systems?

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Unit 8 Directed Reading Guide Rubric					
	Exceeds Standard 100%	Meets Standard 75%	Approaches Standard 50%	Doesn't Meet Standard 25%	Incomplete 0%
Book Section Completeness (40 pts)	All questions in all sections completed.	No more than 5 questions are incomplete.	6-20 questions are incomplete in the entire DRG are incomplete. Work was done in each section.	More than 20 questions are incomplete. or An entire section was left incomplete.	More than one section was incomplete.
Essential Questions (10 pts)	Both essential questions were answered correctly.	X	An attempt was made to answer both of the essential questions. One answer is incorrect.	An attempt was made to answer both of the essential questions. Both answers are incorrect.	One or both of the essential questions was left blank.