

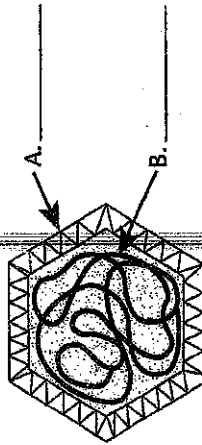
**Viruses and Bacteria - Review and Reinforce**

**Viruses** 995. 440 - 446

**Understanding Main Ideas**

Answer the following questions on a separate sheet of paper.

1. Viruses are considered to be nonliving organisms? How are viruses similar to living organisms? How are they different?
2. How are viruses similar to parasites?
3. How do hidden viruses differ from active viruses?
4. In the diagram below, identify the two structural parts of the virus. Explain the function of each part.



**Building Vocabulary**

Write a definition for each of the following terms on the lines below.

5. virus  
\_\_\_\_\_
6. bacteriophage  
\_\_\_\_\_
7. parasite  
\_\_\_\_\_
8. host  
\_\_\_\_\_

**Viruses and Bacteria - Review and Reinforce**

**Bacteria** 995. 448 - 457

**Understanding Main Ideas**

Answer the following questions on a separate sheet of paper.

1. How are bacterial cells different from the cells of eukaryotes?
2. List four ways that bacteria are helpful to people.

**Building Vocabulary**

Match each term with its definition by writing the letter of the correct definition on the line beside the term.

- |                               |  |
|-------------------------------|--|
| _____ 3. cytoplasm            | a. where two parents combine their genetic material to produce a new organism that differs from both parents |
| _____ 4. endospore            | b. where one bacterium divides to form two identical bacteria cells  |
| _____ 5. binary fission       | c. a small, thick-walled resting cell that forms inside a bacterial cell                                     |
| _____ 6. decomposer           | d. the region inside the cell membrane   |
| _____ 7. sexual reproduction  | e. organism that breaks down the large chemicals in dead organisms into small chemicals                      |
| _____ 8. flagellum            | f. where one bacterium transfers genetic material into another bacterial cell                                |
| _____ 9. asexual reproduction | g. the cell's chemical factories where proteins are produced   |
| _____ 10. conjugation         | h. the process of breaking down food to release energy   |
| _____ 11. respiration         | i. whiplike structure that helps a cell to move  |
| _____ 12. ribosome            | j. where one parent reproduces offspring identical to that parent  |

Name \_\_\_\_\_ Date \_\_\_\_\_ Class \_\_\_\_\_

**Viruses and Bacteria - Review and Reinforce**

**Viruses, Bacteria, and Your Health** pgs. 400-405

**Understanding Main Ideas**

Complete the table below by naming examples of behaviors to avoid, and behaviors to practice in order to prevent the spread of infectious diseases.

What Can You Do to Prevent Catching an Infectious Disease?	
How Disease Is Spread	DO NOT DO
Contact with Infected Person	
Contact with Infected Object	
Contact with Infected Animal	
Environmental Source	

Answer the following questions on a separate sheet of paper.

- Why is it important to know whether your sore throat is caused by a virus or bacteria?
- How do antibiotics work, and why are they becoming less effective?
- How can a vaccine help prevent an infectious disease?

**Building Vocabulary**

From the list below, choose the term that best completes each sentence.

- infectious diseases
- vaccine
- antibiotic resistance
- toxin
- antibiotic

- Dead or altered viruses or bacteria that are used to stimulate the body to be "on alert" are called a(n) \_\_\_\_\_.
- Illnesses that pass from one organism to another are called \_\_\_\_\_.
- Chemicals made by microorganisms that are used to kill bacteria are called a(n) \_\_\_\_\_.
- A poisonous substance produced by bacteria is called a(n) \_\_\_\_\_.
- \_\_\_\_\_ results when some bacteria are able to survive in the presence of an antibiotic.

Name \_\_\_\_\_ Date \_\_\_\_\_ Class \_\_\_\_\_

**Protists and Fungi - Review and Reinforce**

**Protists** pgs. 408-417

**Understanding Main Ideas**

Fill in the blanks in the table below.

Type of Protist	Shared Characteristics	Examples
animal-like	heterotrophs; most move by using pseudopods, cilia, or flagella. 1. _____	sarcodines, ciliates, and 2. _____
3. _____	autotrophs	dinoflagellates, euglenoids, red algae, brown algae, 4. _____, and 5. _____
6. _____	heterotrophs, cells walls reproduce with spores	water molds, downy mildews, and 7. _____

**Building Vocabulary**

Match each term with its definition by writing the letter of the correct definition in the right column on the line beside the term in the left column.

- |                               |  |
|-------------------------------|--|
| _____ 8. protozoan            | a. a form of symbiosis that benefits both species                                    |
| _____ 9. pseudopod            | b. an animal-like protist  |
| _____ 10. spore               | c. a tiny cell that is able to grow into a new organism                              |
| _____ 11. contractile vacuole | d. a chemical that produces color  |
| _____ 12. cilia               | e. a temporary bulge of the cytoplasm used for feeding and movement                  |
| _____ 13. algae               | f. hairlike projections of ciliates that are used to sweep in food and move          |
| _____ 14. symbiosis           | g. plantlike protists  |
| _____ 15. mutualism           | h. structure that collects excess water and expels it from a cell                    |
| _____ 16. pigment             | i. a eukaryote that cannot be classified as an animal, plant, or fungus              |
| _____ 17. protist             | j. close relationship between two species where at least one of the species benefits |

Protists and Fungi • Guided Reading and Study

**Fungi** Pgs. 478 - 485

**What Are Fungi?**

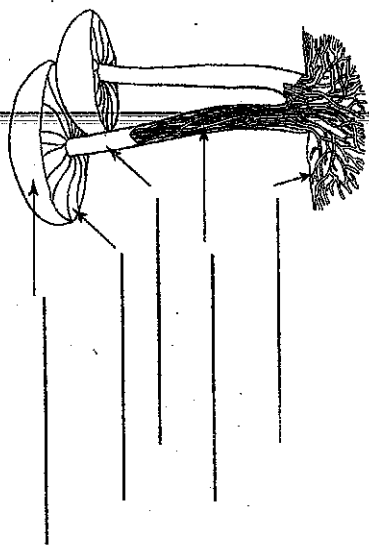
- Circle the letter before each sentence that is true about fungi.
  - All fungi are multicellular organisms.
  - Most fungi are eukaryotes.
  - Most fungi use spores to reproduce.
  - Most fungi are autotrophs.

2. What are three examples of fungi?

3. The cells of fungi are arranged in branching, threadlike tubes called \_\_\_\_\_

4. Is the following sentence true or false? Fuzzy-looking molds that grow on food have hyphae that are packed tightly together. \_\_\_\_\_

5. Identify the structures of the mushroom shown here.



6. Describe the process by which a fungus feeds.

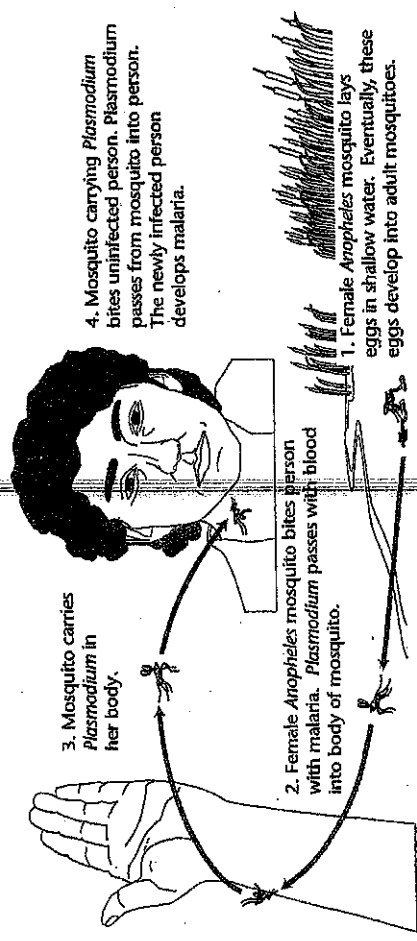
7. Is the following sentence true or false? Some fungi are parasites.

Fighting Disease • Enrich

**Stopping Malaria**

Malaria is an infectious disease caused by the protist *Plasmodium*. This pathogen is transmitted from one person to another by the bite of the female *Anopheles* mosquito. The disease infects more than 150 million people a year and kills between 1.5 to 3.0 million people. Although malaria is treatable, it occurs in parts of the world where effective treatments are largely unavailable. For this reason, the battle against the spread of malaria has focused on prevention.

The diagram below provides information about the spread of malaria and of the life cycle of the *Anopheles* mosquito.



Answer the following questions on a separate sheet of paper.

- Diseases can be spread in four basic ways. In which of these ways is malaria spread?
- Where does the female *Anopheles* mosquito lay eggs?
- How does *Plasmodium* get into the body of a female *Anopheles* mosquito?
- How does a person get malaria?
- Sometimes shallow pools and swamps in an area are drained to help prevent the spread of malaria. Use the diagram to explain why this strategy is effective.
- What are other ways to prevent the spread of malaria?

Name \_\_\_\_\_ Date \_\_\_\_\_ Class \_\_\_\_\_

**Protists and Fungi - Guided Reading and Study**

**Reproduction in Fungi** cont 478-485

- 8. Most fungi reproduce by making \_\_\_\_\_
- 9. Yeast cells reproduce asexually in a process called \_\_\_\_\_
- 10. Is the following sentence true or false? Fungi reproduce sexually when growing conditions become unfavorable. \_\_\_\_\_
- 11. What are the three major groups of fungi?
  - a. \_\_\_\_\_
  - b. \_\_\_\_\_
  - c. \_\_\_\_\_

**The Role of Fungi in Nature**

- 12. Fungi that are \_\_\_\_\_ break down the chemicals in dead organisms.
- 13. Is the following sentence true or false? Certain kinds of fungi cause diseases in plants and in humans. \_\_\_\_\_
- 14. Some molds produce \_\_\_\_\_, substances that kill bacteria.
- 15. How do some fungi help plants grow larger and healthier? \_\_\_\_\_
- 16. An organism that consists of a fungus and either algae or autotrophic bacteria that live together in a mutualistic relationship is a(n) \_\_\_\_\_. The fungus provides the algae or autotrophic bacteria with \_\_\_\_\_. The algae or autotrophic bacteria provide the fungus with \_\_\_\_\_.

Name \_\_\_\_\_ Date \_\_\_\_\_ Class \_\_\_\_\_

**Fighting Disease - Review and Reinforce**

**Infectious Disease** pgs. 492-496

**Understanding Main Ideas**

Complete the following table.

How Infectious Diseases Are Spread		
Source	Example of Method of Transfer	Examples of Diseases Spread in this Way
Infected people	direct contact: shaking hands	2.
	indirect contact: 1.	3.
Contaminated object	4.	colds, flu
5.	animal bite	rabies
Soil, food, water	Contact with pathogen that lives naturally in the soil or water	6. 7.

Answer the following question.

- 8. What are the four major groups of human pathogens?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Building Vocabulary**

Write a definition for each of the following in the spaces provided.

- 9. infectious disease \_\_\_\_\_

- 10. pathogen \_\_\_\_\_

- 11. toxin \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Fighting Disease - Review and Reinforce

**Preventing Infectious Disease** 09.506-510

**Understanding Main Ideas**

Complete the table below by stating whether each characteristic applies to passive or active immunity.

Characteristic	Type of Immunity
Only lasts a few months	1.
Can last for a lifetime	2.
May be gained by coming down with a disease	3.
Passed from a pregnant mother to her unborn child	4.
Can be produced by vaccination	5.

Answer the following on a separate sheet of paper

- Explore two ways in which active immunity is produced.
- Explain why you might treat a bacterial infection but not a viral disease with an antibiotic.

**Building Vocabulary**

Match each term with its definition by writing the letter of the correct definition in the right column on the line beside the term in the left column.

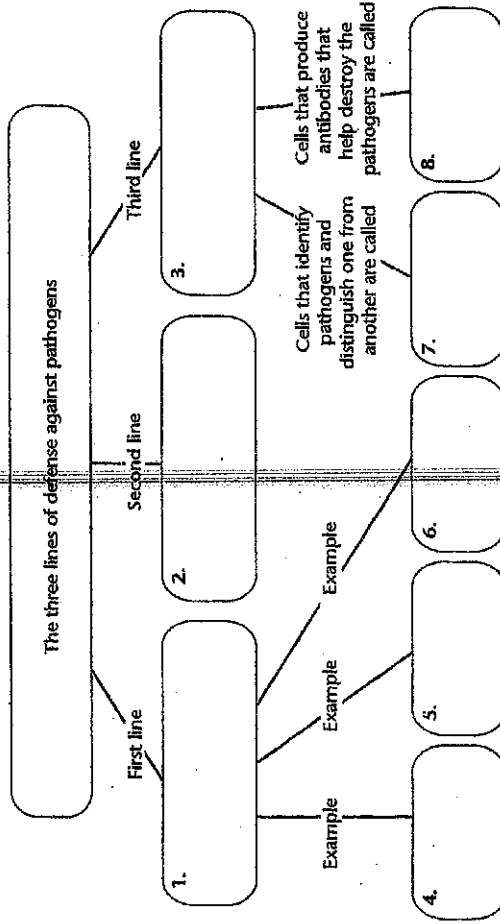
- |                            |   |
|----------------------------|---|
| _____ 8. active immunity   | a. the immunity gained when a person's own immune system produces antibodies in response to a pathogen    |
| _____ 9. antibiotic        | b. a substance consisting of pathogens that have been weakened or killed                                  |
| _____ 10. passive immunity | c. a chemical that kills or slows the growth of bacteria  |
| _____ 11. vaccination      | d. the deliberate introduction of harmless pathogens into a person's body                                 |
| _____ 12. vaccine          | e. the temporary immunity gained from introducing antibodies from another source into a person's own body |

Fighting Disease - Review and Reinforce

**The Body's Defenses** 09.497-503

**Understanding Main Ideas**

Complete the following concept map.



**Building Vocabulary**

From the list below, choose the term that best completes each sentence.

- |          |                       |            |
|----------|-----------------------|------------|
| antibody | immune response       | phagocyte  |
| AIDS     | inflammatory response | lymphocyte |
| antigen  |                       |            |
- A marker molecule on a cell that the immune system uses to recognize a pathogen is called a(n) \_\_\_\_\_.
  - \_\_\_\_\_ is a disease caused by a virus that attacks the immune system.
  - A(n) \_\_\_\_\_ is a white blood cell that engulfs and destroys pathogens.
  - During the \_\_\_\_\_, blood vessels widen in the area affected by pathogens.
  - In the \_\_\_\_\_, the body reacts to each kind of pathogen with a defense targeted specifically for that pathogen.
  - A chemical that helps destroy a specific kind of pathogen by locking onto a specific marker molecule is called a(n) \_\_\_\_\_.
  - The type of white blood cells involved in the immune response are called \_\_\_\_\_.

Fighting Disease • Review and Reinforce

**Cancer and the Environment**

**Understanding Main Ideas**

Complete the table below.

Carcinogen	One Place Where Found	Can Cause What Type of Cancer?
Soot	Chimneys	Skin
Arsenic	1.	2.
3.	Sunlight	4.

Answer the following questions in the spaces provided.

5. Why did Percivall Pott suspect that something in soot caused cancer? What did he suggest should be done to prevent it?

6. What organization is in charge of enforcing environmental laws in the United States? What else does this organization do?

7. What action has been taken to protect people in the United States from the carcinogen arsenic?

8. What does ozone in Earth's upper atmosphere do to ultraviolet light in sunlight? Why do some scientists suspect a link between the amount of ozone in the upper atmosphere and skin cancer?

Fighting Disease • Review and Reinforce

**Noninfectious Disease**

**Understanding Main Ideas**

Answer the following questions on a separate sheet of paper.

1. What is an allergy?
2. What is the difference between Type I and Type II diabetes?
3. What is cancer? Why is it dangerous?
4. What are two factors that make a person more likely to develop cancer?
5. What are three methods used to treat cancer?
6. Should you be worried about getting diabetes or cancer from a friend who has one of those diseases? Explain.

**Building Vocabulary**

From the list below, choose the term that best completes each sentence.

- allergen      carcinogen      insulin  
 asthma      histamine      tumor
7. The chemical \_\_\_\_\_ enables body cells to take in and use glucose for energy.
  8. A(n) \_\_\_\_\_ is any foreign substance that causes an allergy.
  9. \_\_\_\_\_ is the chemical that cells release in reaction to an allergen.
  10. A(n) \_\_\_\_\_ is an abnormal tissue mass caused by cancer.
  11. \_\_\_\_\_ is a condition in which the respiratory passages narrow significantly.
  12. A(n) \_\_\_\_\_ is any substance or factor that can cause cancer.

Ms. 518-521

Ms. 511-515