Viruses, Bacteria, Protists, and Fungi

Viruses (pp. 318–323)

This section describes what viruses are, how they multiply, and how you can treat a viral disease.

Use Target Reading Skills

Complete the Venn diagram to compare and contrast active viruses and hidden viruses. Consider what they are, how they multiply, and how they take over the host cell.

Active Viruses

Hidden Viruses
What Is a Virus? (pp. 318–319)

1. Why do biologists consider viruses to be nonliving?
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

2. Is the following sentence true or false? Viruses multiply the same way as other organisms. ________________

3. Circle the name of a living thing that provides energy for a virus or an organism.
   a. parasite
   b. host
   c. bacteriophage
   d. particle

4. Viruses act like ________________ because they destroy the cells in which they multiply.

5. Is the following sentence true or false? Each virus can enter only a few types of cells in a few specific species. ________________

6. Is the following sentence true or false? All viruses have the same shape. ________________

7. A virus that infects bacteria is called a(n) ________________.

8. Is the following sentence true or false? Viruses are much smaller than bacteria. ________________

9. Circle the letter of each sentence that is true about viruses.
   a. They are larger than cells.
   b. They need to be inside a living cell in order to reproduce.
   c. They contain genetic material.
   d. They are all round in shape.

10. Label the two basic parts of a virus in this diagram.

    a. ________________
    b. ________________
Viruses (continued)

11. Is the following sentence true or false? Some viruses are surrounded by an outer membrane envelope. ________________________

12. What are two functions of a virus’s protein coat?
   a. ____________________________________________________________________
   b. ____________________________________________________________________

13. Is the following sentence true or false? The shape of the proteins allows the virus's coat to attach to only certain cells in the host. ________________________

How Viruses Multiply (pp. 320–321)
Match the kind of virus with the way it multiplies in a cell. Viruses may be used more than once.

<table>
<thead>
<tr>
<th>How It Multiplies</th>
<th>Viruses</th>
</tr>
</thead>
<tbody>
<tr>
<td>14. The virus’s genetic material becomes part of the cell’s genetic material.</td>
<td>a. active virus</td>
</tr>
<tr>
<td>15. The virus immediately begins to multiply after entering the cell.</td>
<td>b. hidden virus</td>
</tr>
<tr>
<td>16. The virus stays inactive for a long time.</td>
<td></td>
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</tbody>
</table>

17. Is the following sentence true or false? When the virus is active, the cell makes the virus’s proteins and genetic material and new viruses are made. ________________________

18. What happens when a cell is full of new viruses?
   ____________________________________________________________________
   ____________________________________________________________________
Viruses, Bacteria, Protists, and Fungi: Reading/Notetaking Guide

Viruses and Disease (pp. 322–323)

19. Is the following sentence true or false? Viruses can cause diseases only in humans. ________________

20. List at least two ways that viral diseases can be spread. ____________________________________________

21. What is often the best treatment for viral infections? ____________________________________________

22. A ________________________ is a substance introduced into the body to stimulate the production of chemicals that destroy specific disease-causing viruses and organisms.

23. How does a vaccine work? ____________________________________________

24. What are some other ways to protect against viral diseases? ____________________________________________
