

# Chapter 18

## Viruses and Bacteria

### Reinforcement and Study Guide

#### Section 18.1 Viruses

*In your textbook, read about the characteristics of a virus.*

For each item in Column A, write the letter of the matching item in Column B.

Column A	Column B
_____ 1. Genetic material of a virus	<b>a.</b> virus
_____ 2. Where a virus attaches to a host cell	<b>b.</b> T4 phage
_____ 3. Nonliving particle that replicates inside a living cell	<b>c.</b> DNA or RNA
_____ 4. A virus's protein coat	<b>d.</b> capsid
_____ 5. Interlocks with a molecular shape in a host cell's plasma membrane	<b>e.</b> receptor site
_____ 6. Layer that surrounds the capsid of some viruses	<b>f.</b> envelope
_____ 7. A virus that infects <i>E. coli</i> bacteria	<b>g.</b> host
_____ 8. A cell in which a virus replicates	<b>h.</b> attachment protein

*In your textbook, read about viral replication cycles.*

Complete the table by checking the correct column for each statement.

Statement	Lytic Cycle	Lysogenic Cycle
<b>9.</b> Viral genes are expressed immediately after the virus infects the host cell.		
<b>10.</b> Many new viruses are assembled.		
<b>11.</b> This cycle is preceded by a virus entering a host cell.		
<b>12.</b> Viral DNA is integrated into the host cell's chromosome.		
<b>13.</b> Viruses are released from the host cell by lysis or exocytosis.		
<b>14.</b> Reverse transcriptase is used to make DNA from the RNA of a retrovirus.		
<b>15.</b> A provirus is replicated along with the host cell's chromosome.		

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**18****Viruses and Bacteria, *continued*****Reinforcement and Study Guide****Section 18.1 Viruses,  
*continued***

Use each of the terms below just once to complete the passage.

DNA	white blood cells	lysogenic
lytic	AIDS	proviruses

Many disease-causing viruses have both lytic and **(16)** \_\_\_\_\_ cycles. For example, when HIVs infect **(17)** \_\_\_\_\_, the viruses enter a lysogenic cycle. Their genetic material becomes incorporated into the **(18)** \_\_\_\_\_ of the white blood cells, forming **(19)** \_\_\_\_\_. When this happens, the white blood cells still function normally, and the person may not appear ill. Eventually, the proviruses enter a **(20)** \_\_\_\_\_ cycle, killing the white blood cells. As a result, the person loses the ability to fight diseases and develops **(21)** \_\_\_\_\_.

*In your textbook, read about viruses and cancer, plant viruses, and the origin of viruses.*

**Determine if the statement is true. If it is not, rewrite the italicized part to make it true.**

- \_\_\_\_\_ **22.** Some viruses can change normal cells to *tumor* cells.
- \_\_\_\_\_ **23.** Retroviruses and the papilloma virus, which causes *hepatitis B*, are examples of tumor viruses.
- \_\_\_\_\_ **24.** *All* plant viruses cause diseases in plants.
- \_\_\_\_\_ **25.** The first virus ever identified was the plant virus called *tobacco mosaic virus*.
- \_\_\_\_\_ **26.** The patterns of color in some flowers are caused by *tumor* viruses.
- \_\_\_\_\_ **27.** Tumor viruses contain genes that are found in *normal* cells.
- \_\_\_\_\_ **28.** Scientists think viruses originated from *their host cells*.