

Viruses and Bacteria ▪ *Guided Reading and Study*

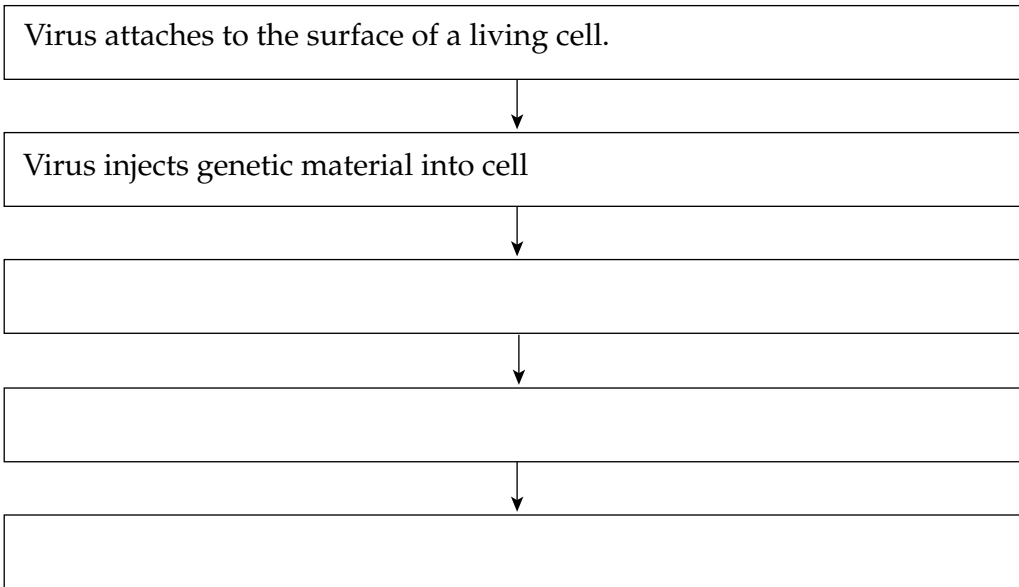
Viruses

This section describes what viruses are, what they look like, and how they multiply.

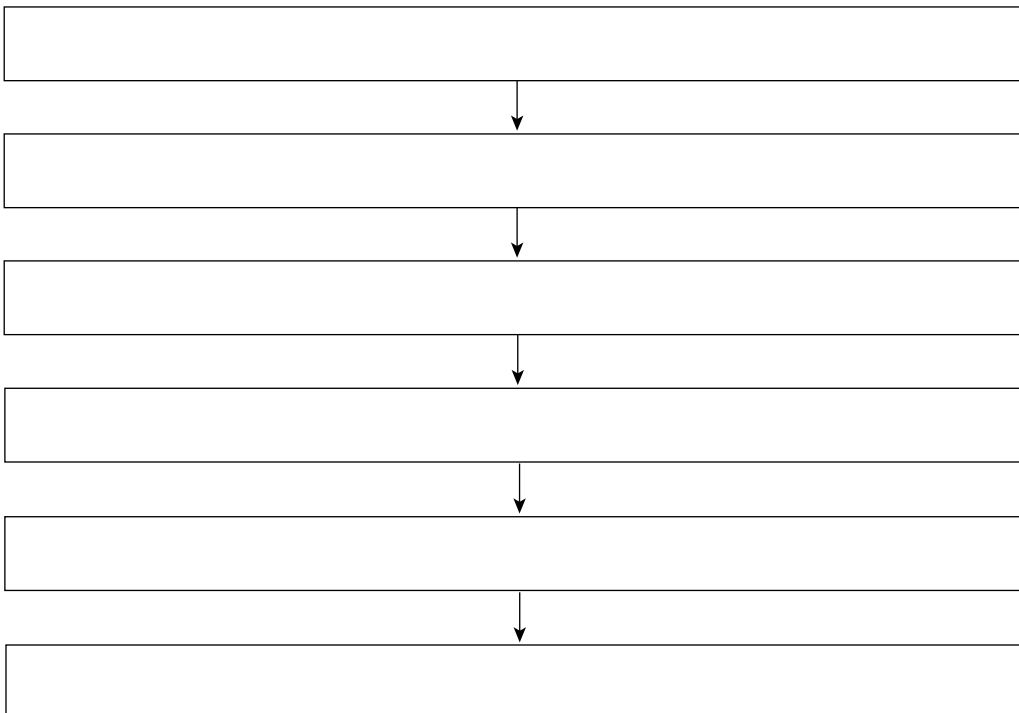
Use Target Reading Skills

As you read, make two flowcharts that show how active and hidden viruses multiply. Put the steps in the process in separate boxes in the flowchart in the order in which they occur.

How Active Viruses Multiply



How Hidden Viruses Multiply



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Viruses *(continued)*

What Is a Virus?

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. What organisms can viruses infect?

6. Is the following sentence true or false? Each virus can enter only a few types of cells in a few specific species. _____
7. Is the following sentence true or false? All viruses have the same shape.

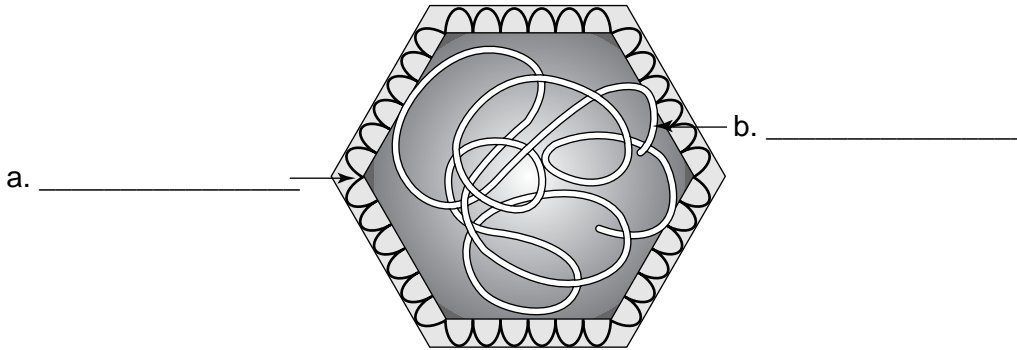
8. A virus that infects bacteria is called a(n) _____.
9. Is the following sentence true or false? Viruses are much smaller than bacteria. _____
10. Because viruses are so small, they are measured in units called _____.
11. How are viruses named?

12. 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 can be named after people.
 - d. They infect only animals.

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The Structure of Viruses

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



14. What are two functions of a virus's protein coat?

- a. _____
- b. _____

15. 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

Match the kind of virus with the way it multiplies in a cell. Viruses may be used more than once.

How It Multiplies

- _____ 16. The virus's genetic material becomes part of the cell's genetic material.
- _____ 17. The virus immediately begins to multiply after entering cell.
- _____ 18. The virus stays inactive for a long time.

Viruses

- a. active virus
- b. hidden virus

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How Viruses Multiply *(continued)*

19. 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. _____

Viruses and the Living World

20. What are two illnesses in humans caused by viruses?

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

22. How are viruses used for gene therapy?
