

# Sec. 1.3 Study Guide

**BIG IDEA** Bacteria and protists have the characteristics of living things, while viruses are not alive.

**KEY CONCEPT** Viruses are not alive but affect living things.

## Review

Viruses are not living things.

## Take Notes

### I. Viruses share some characteristics with living things. (p. 24)

1. Will the experimental setup shown—using a filter with holes a millionth of a meter in size—be able to remove bacteria from the liquid? How about viruses? Why or why not?

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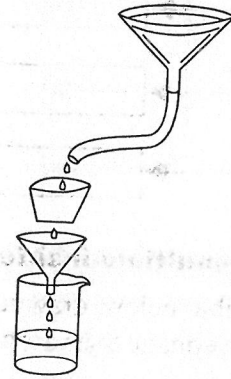
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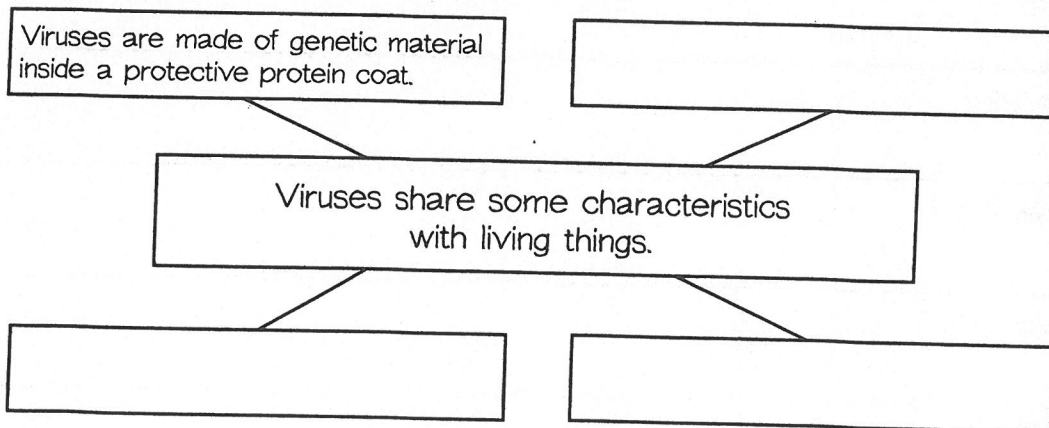
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2. Fill in the main idea web for the main idea shown.



3. In the space below, draw a sketch of the smallpox virus. Be sure to label both the capsid and the genetic material.

4. Fill in the main idea chart for the main idea shown.

Viruses do not share all the characteristics of living things.

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**II. Viruses multiply inside living cells. (p. 26)**

5. In the table below, draw an illustration for each stage of the process by which a bacteriophage uses a bacterial cell to make new viruses.

	Illustration
Attachment	
Injection	
Production	
Assembly	
Release	

**III. Viruses may harm host cells. (p. 28)**

6. List some of the diseases that are caused by viruses.

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