

VIRUS WEB QUEST

Name _____ Date _____ Period _____ Score _____

Introduction: Viruses are both fascinating and a bit scary. This web study will give you a brief introduction to viruses in general and a particular virus that has been in the news throughout the spring and summer months. Explore, learn, enjoy!

Part 1 Virus Introduction

Go to http://www.biology4kids.com/files/micro_virus.html

1. What can't viruses do?

- a.
- b.
- c.

2. What are the basic parts of a virus?

- a. Small piece of _____ (never both). That strand of **nucleic acid** is considered the core of the virus.
- b. The second big part is a _____ to protect the nucleic acid. That coat is called the _____. The capsid protects the core but also helps the virus infect new cells.
- c. Some viruses have another coat or shell called the _____. The envelope is made of lipids and proteins in the way a regular cell membrane is structured. The envelope can help a virus get into systems unnoticed and help them invade new host cells.

3. What are the three basic structures of viruses?

- a.
- b.
- c.

Go to <http://library.thinkquest.org/13373/work/what.htm>

1. Who is credited with discovering the virus?

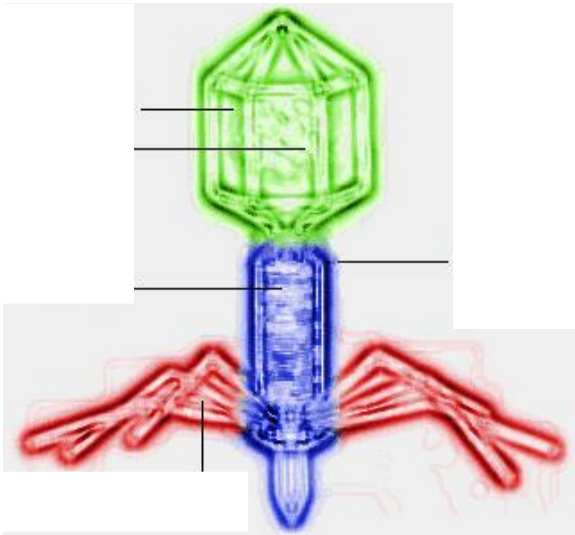
2. Is a virus a living thing?

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3. **Viruses are incredibly small. Why are we not able to see viruses with the compound light microscopes we use in the science lab?**

4. **Click on Next**
Label the bacteriophage.



Go to <http://www.etymonline.com/index.php?term=virus>

1. **Virus is derived from the Latin word for what?**

Go to <http://micro.magnet.fsu.edu/cells/virus.html>

2. **Currently, they are considered as _____ because they are not made up of cells and they are not able to live independently.**

3. **Viruses that attack bacteria are called _____**

4. **Viruses reproduce via the _____ or _____ cycle**

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5. Go to the “livescience” link below. Then, record 5 “famous” or “common, well known” viruses in the chart below. Make sure to tell which organism is the host, the reproductive process/life cycle used (either lytic or lysogenic), and the level of danger (indicate if it is fatal or treatable

<http://www.livescience.com/topics/virus/>

Name of virus	Host Cell – who it attacks	Lytic/Lysogenic (or both)	Danger Level

Click here for answers to Lytic Cycle and Lysogenic Cycle Questions:

<http://www.brighthub.com/science/genetics/articles/30611.aspx>

The Lytic Cycle

Click here for great diagram of Lytic Cycle:

<http://science.howstuffworks.com/environmental/life/cellular-microscopic/virus-human2.htm>

6. In a lytic infection, a virus will...

Step 1) It first _____ the cell DNA

Step 2) Then, it makes _____ of itself

Step 3) Then, it fills cell with 100-200 new _____ and liquid.

Step 4) When it gets crowded, it releases _____ to break the _____ .

Step 5) It then _____ out of the cell!

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The Lysogenic Cycle

7. In a lysogenic infection, a virus will...

Step 1) _____ the host cell

Step 2) The virus DNA is _____ into host cell DNA.

Step 3) The viral DNA then _____ with the host cell's DNA.

Step 4) The host cell makes _____ of the virus indefinitely

Step 5) Some viruses will eventually switch to the _____ cycle.

Go to: http://archives.microbeworld.org/microbes/virus_bacterium.aspx

1. Complete the following table comparing viruses and bacteria

Characteristic	Bacteria	Virus
Larger or smaller?		
More or less complex?		
Cell membrane and/or cell wall?		
DNA?		
Reproduce independently?		
Cause disease?		

