**Viruses**

[**https://www.youtube.com/watch?v=7KXHwhTghWI**](https://www.youtube.com/watch?v=7KXHwhTghWI)

The name “virus” comes from the \_\_\_\_\_\_\_\_\_\_ word for \_\_\_\_\_\_\_\_\_\_\_.

1. **What is a Virus?** 
   1. Structure of a virus:
      1. Protective coat made of \_\_\_\_\_\_\_\_\_\_\_\_\_ called a \_\_\_\_\_\_\_\_\_\_\_\_.
      2. Core of \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_ (\_\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_ but not both).
   2. Viruses vary in size from approximately \_\_\_\_\_\_\_\_\_ to \_\_\_\_\_\_\_\_ nm.
   3. Viruses display “specificity,” meaning:
2. **Life Cycle of a Lytic Virus**
   1. **Attachment**
      1. In order to reproduce, viruses must \_\_\_\_\_\_\_\_\_\_ (aka \_\_\_\_\_\_\_\_\_\_) a \_\_\_\_\_\_\_\_\_\_ host cell.
   2. **Entry/Infection:** 
      1. Virus activated by \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_ with right host cell
      2. Tail attaches to the \_\_\_\_\_\_\_\_\_\_ of the bacterium
      3. DNA/RNA \_\_\_\_\_\_\_\_ the bacterium
   3. **Growth/Replication:** 
      1. Virus uses materials of the \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_ to make thousands of copies of its own protein coat and DNA
      2. Host cell becomes filled with \_\_\_\_\_\_\_\_\_\_ of viral DNA molecules.
   4. **Assembly:** 
      1. New \_\_\_\_\_\_\_\_\_\_ particles are assembled
   5. **Release:**
      1. Infected cell \_\_\_\_\_\_\_\_\_\_ (bursts), hence the name “Lytic virus”
      2. \_\_\_\_\_\_\_\_\_\_ of new virus particles are \_\_\_\_\_\_\_\_\_\_ and may now infect \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_



* 1. Bacteriophage:
     1. Definition:
     2. Sketch:

[**https://www.youtube.com/watch?v=d-v8uSG2ewk**](https://www.youtube.com/watch?v=d-v8uSG2ewk)

1. **Lysogenic Infections** 
   1. **Attachment**
   2. **Entry/Infection**
   3. **Prophage**
      1. Viral DNA enters cells and is \_\_\_\_\_\_\_\_\_\_ into the \_\_\_\_\_\_\_\_\_\_ of the host cell
      2. May remain in host DNA for \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_
   4. **Prophage activity** 
      1. Does not stay in \_\_\_\_\_\_\_\_\_\_ form for ever; eventually DNA becomes \_\_\_\_\_\_\_\_\_\_, and removes itself from host DNA
      2. Factors that can activate the virus:
         1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
         2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   5. **Growth/Replication**
   6. **Assembly**
   7. **Release**



1. **Retroviruses:** 
   1. Contain \_\_\_\_\_\_\_\_\_\_ as their genetic material
   2. When infecting a host, make a \_\_\_\_\_\_\_\_\_\_ copy of their \_\_\_\_\_\_\_\_\_\_ genes
   3. This \_\_\_\_\_\_\_\_\_\_ acts like that of a lysogenic virus and is \_\_\_\_\_\_\_\_\_\_ into the host DNA
   4. Name means “\_\_\_\_\_\_\_\_\_\_” and comes from their genes being copied \_\_\_\_\_\_\_\_\_\_ from RNA to \_\_\_\_\_\_\_\_\_\_
   5. Example: \_\_\_\_\_\_\_\_\_\_\_\_\_\_



[**https://www.youtube.com/watch?v=odRyv7V8LAE**](https://www.youtube.com/watch?v=odRyv7V8LAE)

1. **Viruses and Living Cells** 
   1. Viruses are parasites, meaning:
   2. Are viruses living or non-living?
      1. Evidence for “non-living”:
      2. Evidence for “living”: