

Virus Web Quest

The purpose of this Web Quest is for you to gain knowledge about viruses. You will review the components of a typical cell and compare this to viruses. You will learn about how viruses replicate.

Finally, you will learn about the difference between antibiotics and vaccines.

Task I: Use the following suggested websites (or other sites from your teacher) to review the typical cell. Then, answer the question below.

<http://learn.genetics.utah.edu/content/begin/cells/insideacell/>

http://www.cellsalive.com/cells/cell_model.htm

<http://www.wisc-online.com/objects/ViewObject.aspx?ID=AP11403>

Question: What is the job of each of the following major components of the cell?

nucleus:

mitochondria:

endoplasmic reticulum:

golgi apparatus:

cell membrane:

ribosomes:

cytoskeleton:

Task II: Use the suggested websites (or other sites from your teacher) to learn about the structure of viruses. Then, answer the questions below.

<http://wshsscience.edublogs.org/files/2010/11/Viral-Types-22jshqj.jpg>

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

<http://www.ucmp.berkeley.edu/allife/virus.html>

http://www.cliffsnotes.com/study_guide/Viral-Structure-and-Replication.topicArticleId-8524,articleId-8448.html

<http://bioweb.wku.edu/courses/biol115/wyatt/HIV/Virus1.htm>

Questions:

1. Why aren't viruses considered living organisms? Explain.
2. What are the main components common to all viruses?
3. Draw and label the main parts of the following viral structures: tobacco mosaic virus, adenovirus, influenza, and bacteriophage T4.

Task III: Using the knowledge gained in Tasks I and II, draw a graphic organizer to show the similarities and differences between cells and viruses.

Task IV: Use the suggested websites (or other sites from your teacher) and videos to learn about how viruses reproduce. You may also search for other websites if needed. Then, answer the questions below.

<http://www.schooltube.com/video/ed73acab46dccbe036a1/Viral-replication-lifecycle>

<http://video.nationalgeographic.com/video/news/history-archaeology-news/swine-flu-overview-vin/>

<http://www.npr.org/blogs/krulwich/2011/06/01/114075029/flu-attack-how-a-virus-invades-your-body>

<http://pathmicro.med.sc.edu/mhunt/replicat.htm>

<http://faculty.ccbcmd.edu/courses/bio141/lecguide/unit3/viruses/u2fig17a.html>

<http://faculty.clintoncc.suny.edu/faculty/michael.gregory/files/bio%20102/bio%20102%20lectures/viruses/viruses.htm>

Questions:

1. Describe, in general, how viruses replicate.
2. Describe the lytic cycle of virus reproduction.
3. Describe the lysogenic cycle of virus reproduction.
4. How is viral reproduction different than cellular reproduction?

Task V: Use the suggested websites (or other sites from your teacher) to learn about vaccines and antibiotics. Then, answer the questions below.

<http://www.nlm.nih.gov/medlineplus/antibiotics.html>

<http://health.howstuffworks.com/medicine/medication/question88.htm>

<http://www.cdc.gov/vaccines/vpd-vac/vpd-vac-basics.htm>

<http://www.news-medical.net/health/What-are-Vaccines.aspx>

<http://www.cdc.gov/vaccines/who/teens/for-parents.html>

Questions:

1. What are antibiotics, and what are they used for?
2. What are vaccines, and what are they used for?
3. List at least four vaccines that you have received.
4. What are the main differences between antibiotics and vaccines?