

Mr. Silluzio
Biology Lesson Plan



Course: Biomedical Science

Topic: Virology Poster Project

Corresponding Curriculum

Summary:

Working from specific guidelines, student will research a high profile human virus. These viruses include ebola, rabies, zika, influenza and measles. Each of these viruses use replications strategies that are quite different than HIV, the virus used as the basis for instruction.

Goals/Objectives:

Students will be able to

- Use advanced vocabulary to understand and discuss the life cycles and corresponding treatments of a specific high profile human virus.
- Understand that challenges and setbacks while developing treatments and vaccines to treat viruses is due in large part to high mutation rates during viral genome replication.
- Understand that viruses do not meet the criteria for life and require host cells in order to replicate.
- Understand that viruses are comprised of nothing more than nucleic acids proteins and that any associated membrane material is derived only from previously infected host cells.

Prerequisite Knowledge: Advanced understanding of gene transcription, gene regulation, protein synthesis and protein structure and function.

Time Required: ~ Several periods

Sequence of Events: Students will both independently and with close supervision and direction of the instructor, who assists in finding relevant sources, sorting what information is relevant and what information goes beyond the scope of the course and helping to determine what salient information should be included in the poster.

Time	Teacher activity	Student activity
45 Mins	Whole class instruction – viruses general and HIV Life cycle	Refer to vocabulary sheet for note taking

10 mins	Alert students to and discuss a list of viruses for research project.	Consider research topics.
20 Mins	Discuss with students individually – Research topics.	
Several Periods	Work with students while developing research poster -	Find and organize information on a high profile human virus.

Homework: Continue to read Chapter 17 (Campbell in focus 2nd ed)

Lesson evaluation: Students should be engaged in the activity for the duration of the project. Questions will be asked that are relevant to their prior studies in genetics and protein structure/function.

Student assessment:

- [Rubrics for both research and poster](#)

Accommodations: All class notes exist online in ppt and Adobe.

Materials, equipment and supplies: Vocabulary list

Safety concerns: None