



Yale-New Haven  
Teachers Institute®

Curriculum Units by Fellows of the Yale-New Haven Teachers Institute  
2009 Volume V: Evolutionary Medicine

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## **Human Population's Response to Re-emerging and Emerging Infectious Diseases**

Guide for Curriculum Unit 09.05.02  
by Fallon Lorraine Daniels

This unit discusses: What is an infectious disease? How do infectious diseases impact humans? Why is evolutionary biology important in the treatment of infectious diseases?

The unit's content will cover transmission, replication process of bacteria and viruses, genetic variability, human immunity defense and evolutionary defense mechanisms, and medical treatment. The unit will be useful in comparing bacteria and viruses, demonstrating the importance of evolution, displaying the relationships between humans and microbes, and illustrating the importance of genetic variability.

Students will be engaged in a hands-on approach to learning through student-driven discussions, laboratories, debates, and independent research projects. The strategies for teaching this unit must coincide with the 5 E's of learning: Engage, Explore, Explain, Elaborate, and Evaluate. The unit also seeks to teach science by incorporating other subjects such as history, reading and literacy, and math.

(Developed for Biology, grade 10; recommended for Biology, Evolution, and Infectious Disease, grade 10)

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