



Yale-New Haven
Teachers Institute®

Curriculum Units by Fellows of the Yale-New Haven Teachers Institute
2013 Volume IV: Asking Questions in Biology: Discovery versus Knowledge

Cell Biology: From HeLa Cells to the Polio Vaccine

Guide for Curriculum Unit 13.04.03
by Lindsey Flanick

This is a unit designed for high school biology students. It utilizes Rebecca Skloot's *The Immortal Life of Henrietta Lacks* and the groundbreaking discovery of HeLa cells to teach students about cell biology, pathogens and infectious diseases. The story of Henrietta Lacks and significance of HeLa cells provide a case study to engage students in the material and to teach them about the importance of asking questions in scientific discovery. HeLa cells are the oldest and most commonly used immortal cell line in scientific research. When cervical cancer cells were taken from Henrietta Lacks in 1951, doctors, researchers and scientists had no idea of the impact they would have on cell biology and health. HeLa cells have been used to develop vaccines, in cancer and AIDS research and in numerous genetic studies.

Students will use the discovery of HeLa cells and their use in research to study cell biology topics such as cell growth, cell division, viruses and vaccine development. This unit addresses both inquiry and content standards for New Haven Public Schools and focuses on identifying and developing scientific questions that can be answered through scientific investigation.

(Recommended for Biology, grade 10)

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