

# Cancer Education Project Abstracts



## Human Papillomavirus (HPV) and Cancer

This series of lessons centers on content related to HPV and cervical cancer. This content includes, but is not limited to, topics such as immune responses to pathogens and vaccines, virus life cycle, the Pap test, clinical testing for cancer and ethical, legal, and social implications of mandatory vaccination policies for the HPV vaccine, Gardasil.

- **Part 1: “One Less” and “Tell Someone”**

This activity is an introductory “hook” for the HPV lesson series. It is a short, Problem Based Learning (PBL) activity based on two television commercials about Gardasil, the HPV vaccine. Students work individually and in teams to gather information about the HPV virus, the HPV vaccine, and the ethical, legal, and social issues related to the vaccine.

- **Part 2: HPV Vaccine and the Immune System**

This activity provides some of the science behind how HPV causes cancer and how the HPV vaccine works to prevent cancer. Class starts with a viewing of the short TV commercial made by the University of Rochester’s Wilmot Cancer Center about their research that led to the discovery of Gardasil. Students then view a 12-slide PowerPoint presentation produced by the National Cancer Institute and “make notes” by creating answers to questions on the slides.

- **Part 3: HPV Vaccine and Cervical Cancer**

In this “Jigsaw” cooperative learning activity, students work in teams to read and exchange information about four Internet resources related to the HPV vaccine and cervical cancer topics. Each student then completes a Personal Reflection about HPV and cervical cancer.

- **Part 4: The Pap Test**

This activity provides details and medical background information about the Pap test, a screening test for cervical cancer. The activity uses the cooperative learning reading strategy known as “Save the Last Word for Me.” Students use critical reading, writing, listening and speaking skills to learn about Pap test procedures, recommended frequency of testing depending on age, risk factors for cervical cancer, and medical descriptions of 5 courses of action depending on the results.

- **Part 5: Cancer Detection: A Laboratory Simulation**

Students mimic three kinds of cancer detection techniques by performing visual, radiation, and chemical tests on paper images of biopsy samples. Most of the cells in the tissue samples are normal, but some have been treated to test as abnormal (cancerous). At the end of the lab, students figure out a way to use data from the lab to predict the chances that a biopsy sample will be cancerous.

- **Part 6: Why Not the Boys?**

This activity uses an 8-step ethical decision-making process to provide a forum for discussion about a gender bias question related to HPV and the HPV vaccine. Teams of students work through a fictitious scenario in which a local school board is considering a resolution to require Gardasil vaccination for all students in middle school, both girls and boys.