

Did you know that HIV has no cure?

Length of Lesson:

Two class periods

Grade Level:

9-12

Subject Area:

Infectious diseases

Standard:

Read and comprehend complex text about prevention and control of disease.

Objectives:

Students will understand the following:

1. HIV (human immunodeficiency virus) is a virus that causes AIDS.
2. AIDS (acquired immunodeficiency syndrome) is an incurable disease that decreases the body's ability to fight infection and multiplication of abnormal cells.
3. How HIV is transmitted.
4. Why HIV and AIDS are incurable.
5. Some social/cultural barriers that make it difficult to change sexual activities in developing countries, particularly the Sub Sahara.
6. The impact on the community when family members develop AIDS.
7. Community awareness campaigns are an effective way of preventing the spread of AIDS.

Materials:

For this lesson, you will need:

- Handouts
- Computer with Internet access

Procedure:

1. Have the students read the handouts: *“What is HIV?”*, *“Top 10 Top 10 Factors Why HIV Vaccine or Cure is Very Difficult for Medical Researchers to Create”*, and *“Impact of HIV and AIDS in Sub-Saharan Africa.”* You may want to have the students take the handouts and read them at home as there is a lot of information in each of these articles.

2. After having read the handouts, have a discussion about the material in the 3 articles and include the following facts:
 - A virus is only able to replicate within the living cells of a host.
 - HIV, or human immunodeficiency virus, is a certain virus that can only infect humans.
 - HIV weakens your immune system by destroying those cells that fight against disease and infection.
 - AIDS, or acquired immunodeficiency syndrome, is resultant disease from HIV.
 - AIDS decreases the body's ability to fight infection and suppress multiplication of abnormal cells.
 - HIV can be transmitted by sexual contact, injection drug use, occupational hazard, blood transfusion, birth of a fetus from an infected mother.
 - HIV/AIDS is considered incurable – what are the reasons?
 - HIV/AIDS is extremely prevalent in the Sub Sahara – Why?
 - What impact does HIV/AIDS have on the community? In America? In Africa?
3. Continue your class discussion by asking students to suggest ways of convincing young adults of the seriousness of HIV/AIDS and the need to protect themselves; discuss the problems of cultural barriers that approve of early sexual activities; discuss various methods of educating youth in developing countries.
4. Divide the class into groups, and have each group develop one of the following activities: 1. a community awareness campaign that specifically targets teens both in America and Africa, or 2. An instructional module that informs families how certain viruses are passed and the dangers for the infected person.
5. For the group activities listed above, students may design posters, advertisements, PowerPoint presentations, video or some other method for their campaigns/presentations.

Discussion Questions:

1. How does a virus work?
2. Since HIV is a virus, is it similar to other viruses, such as influenza? Why or why not?
3. How does HIV cause harm to the person infected?
4. Discuss AIDS as a worldwide epidemic. How is it similar to or different from past epidemics such as influenza, smallpox, or polio?
5. As educators, how can we slow the spread of HIV and AIDS?
6. What are some of the difficulties people with AIDS face? Is it different for Americans than those who live in Africa or developing countries?
7. Why is HIV considered an incurable disease?
8. How can an individual reduce his risk of becoming infected with HIV? Are there cultural barriers to using protection?
9. How would you inform a group of young adults from Africa about HIV and AIDS? And would your presentation be different for a similar group of young people in America? Why or why not?

Activities:

Have students pair up with partners to design models or create illustrations that explain how a virus invades a cell and how the immune system then responds.

Community Awareness Campaign

Have your students imagine that they are part of a team of educators working to inform the public in the Sub Sahara about HIV/AIDS and to impress upon them the seriousness of the disease. Have students work in groups of three to develop their educational campaign. To prepare for the activity, students may use the Internet to find out about previous teaching models used to inform illiterate communities about diseases, prevention and treatments.

Evaluation:

You can evaluate your students on their campaign plans by using the following three-point rubric:

Three points: campaign well planned and convincing.

Two points: campaign planned adequately, convincing in some respects, but too general in its direction

One point: campaign poorly planned, unconvincing, and lacking in direction

WEB LINKS:

- HIV InSite provides a comprehensive guide to HIV/AIDS Treatment, Prevention and Social Issues. Developed by the University of California San Francisco. <http://hivinsite.ucsf.edu>
- A Kenyan handbook regarding "HOME BASED-CARE FOR PEOPLE LIVING WITH HIV/AIDS": http://www.policyproject.com/pubs/policyplan/KEN_HBCPS.pdf
- Information about AIDS, how it is diagnosed and its treatment. <http://www.thebody.com/index.html?ic=3001>
- Multimedia presentations that show how a virus invades and infects a cell. <http://www.cellsalive.com>
- "What is HIV?" U.S. Dept. of Health and Human Services; <http://www.aids.gov/hiv-aids-basics/hiv-aids-101/how-you-get-hiv-aids/index.html> , November, 2014.
- Avert has created a comprehensive educational model to inform the public about HIV/AIDS: <http://www.avert.org>.