

Birds, Bees and STDs:

Courtney Cage
Grades: 6-9
Science
50 minutes

OVERVIEW

The purpose of this lesson is to educate middle-school aged students about sexually transmitted diseases. This includes information about causes, symptoms, treatments, and prevention.

PURPOSE

Implementing this lesson is valuable because it educates students about the health of their bodies, who to talk to if a disease is contracted, and how to prevent catching sexually transmitted diseases. In addition, it allows students to understand the spread of disease. Even though this lesson focuses on sexually transmitted diseases, the application of this knowledge to other viruses, colds, and blood-borne pathogens will prove to be important in the future.

OBJECTIVES & STANDARDS MET

Students will be able to understand what a sexually transmitted diseases are and how they are spread. In addition, they will find common trends in preventing STDs. They will also learn how to use important resources such as the Center for Disease and Control website.

BACKGROUND INFORMATION & REFERENCES

Background: Students will have a good understanding of the anatomy of both male and female reproductive parts. They will understand how intercourse is accomplished and how pregnancy occurs. The students will comprehend what puberty is and how hormones play a role in inducing puberty and controlling the menstrual cycle and sperm production. They will also have a working foundation of disease, viruses, and bacteria.

References:

http://www.cdc.gov/std/healthcomm/fact_sheets.htm

<http://www.cdc.gov/std/default.htm>

<http://std.about.com/od/overviewofstds/tp/toptenstds.htm>

VOCABULARY, MATERIALS, PREPARATION, SAFETY

Vocabulary: STD is a sexually transmitted disease. Symptoms are physical or mental features that are regarded as indicating a disease.

Materials Required: White paper and 1 green, blue and red piece of paper. Computers with internet connection to the CDC webpage are needed. Science journals are needed to record their findings and answers to questions that are asked.

Preparation: Educator must have a working understanding of the 10 STDs studied by the students. In addition, computers should be set up and on the CDC webpage prior to students' arrival to class. The white and colored pieces of paper should be cut into strips for the Engage activity. Note cards with causes and symptoms of each STD should be prepared and ready for each group.

Safety: There are no safety concerns involved with this lesson plan.

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METHOD: 5 E'S MODEL

Describe the step-by-step procedures for each E of the 5 E's model:

Engage:

STD activity. Each student will be given a piece of paper. Three students will be given colored pieces of paper with varying length representing different diseases. Those colors and diseases are listed below:

1. Green = Trichomoniasis or HPV (large piece)
2. Blue = Chlamydia, Gonorrhea, or Genital Herpes (medium piece)
3. Red = HIV or Syphilis (very small piece, can only be torn 1x)

With the paper, the students will be told to mingle for 3 minutes. Each time the student mingles with a new student, they must tear off a piece of their paper and give it to that student. Once 3 minutes are up, the students will be seated and asked to raise their hand if they have a certain color of paper in their hand. From this it can be seen how STDs are spread in a population. Additionally, a chart will be shown with annual cases of STDs (See supplemental information).

Explore:

Students will be put into groups of two. Each group will receive a card with information regarding an STDs' symptoms and general information about that STD. Using a provided resource, the students will need to determine what STD they have. Once this is determined, they will go to the CDC website to determine how that STD is treated and prevented.

The websites given include:

http://www.cdc.gov/std/healthcomm/fact_sheets.htm

<http://www.cdc.gov/std/default.htm>

<http://std.about.com/od/overviewofstds/tp/toptenstds.htm>

10 different types of STDs

1. Syphilis
2. Herpes
3. Chlamydia
4. Gonorrhea
5. Mycoplasma Genitalium
6. Trichomoniasis
7. Crabs/Pubic Lice
8. Scabies
9. Human Papillomavirus/HPV
10. HIV/AIDS

Explain:

Students will explain and give symptoms of their studied STD to the rest of the class. They will present treatment options and preventative measures to their peers found on the CDC website. Leading questions will be asked during their presentations, such as, "Is this STD life-threatening," "Is it a virus or a bacterium or neither," and "Is it curable?"

Elaborate:

After listening to their classmates, the students will be asked the following questions. What are some trends that you found or heard about today to prevent STDs? If you suspect that you are infected with an STD, whom should you talk to? How are STDs treated and is it the same for every STD?

Evaluation:

The students will be asked to write ideas in their science journals regarding the following prompt: Come up with a plan on how you would educate your community and other teens about STDs and their prevention.

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ADAPTATIONS OR DIFFERENTIATED LEARNING

Parental consent was given prior to this lesson plan in order to be sensitive to moral and ethical differences in sexual education.

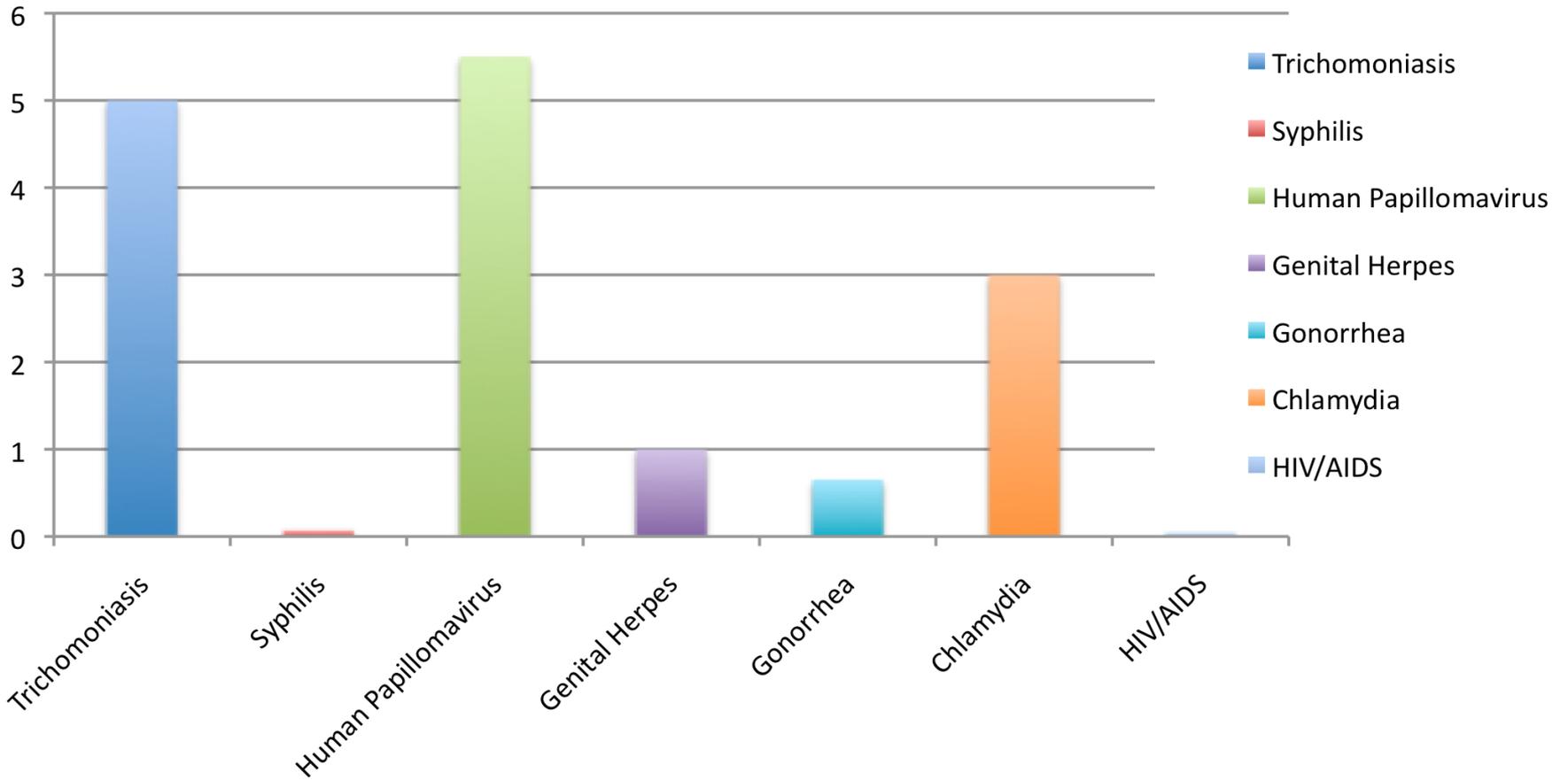
EXTENSIONS & CONNECTIONS

Gifted students may be asked to complete a project that discusses how the spread of HIV/AIDS has affected the economy of the United States compared to Sudan. This provides a connection to humanities and current events.

HANDOUTS & PRESENTATIONS

See attached PowerPoint.

New Cases Annually x 10⁶



STD #1

- Description:
 - I am caused by the bacteria *Treponema pallidum*. I am passed to others by direct contact through sores on the genitals and mouth.
 - If you are infected with me, I cause:

| | |
|-----------|---------------------|
| sores | painless rash |
| blindness | personality changes |
| death | |
- How am I treated?
- How am I prevented?

STD #2

- Description:
 - I am a viral STD. I have two forms and am linked with cold sores. I can be passed from mouth to genitals. I cannot be cured. I can be passed from person to person even when there are no sores or symptoms.
 - If you are infected with me, I cause:
 - cold sores
 - genital sores
- How am I treated?
- How am I prevented?

STD #3

- Description:
 - I am the most common curable STD. I infect the cervix and penile urethra.
 - If you are infected with me, I cause:
 - pain during sex
 - discharge from penis and vagina
 - or...no symptoms for weeks, months, or years
- How am I treated?
- How am I prevented?

STD #4

- Description:
 - I am a bacterial STD also known as “the clap.” There are more than 700,000 new cases of me a year. I can infect the throat.
 - If you are infected with me, I cause:
 - burning upon urination
 - white/green/yellow discharge from men
 - some show no symptoms
- How am I treated?
- How am I prevented?

STD #5

- Description:
 - I am a little known STD. I have surpassed gonorrhea in prevalence. I may be connected to long-term consequences like infertility from pelvic inflammatory disease.
 - I generally don't cause symptoms and I have been hard to identify in the past.
- How am I treated?
- How am I prevented?

STD #6

- Description:
 - I am the most common STD in sexually active young women. Women mistake me for a yeast infection. Men can get me, but do not have symptoms.
 - If you are infected with me, I cause:

| | |
|------------------------------|---------------------|
| frothy discharge | strong vaginal odor |
| pain with sexual intercourse | irritation |
| itching | |
- How am I treated?
- How am I prevented?

STD #7

- Description:
 - I am a form of lice that lives on eyebrows, armpit hair, and genital hair. I am spread by sexual contact or clothing/linens.
 - If you are infested with me, I cause itching. You may see me or my eggs in the hair if you look closely.
- How am I treated?
- How am I prevented?

STD #8

- Description:
 - I am a very contagious skin disease. I am not always an STD. I am caused by the parasite *Sarcoptes scabiei*. I am spread by close personal contact and shared clothing, towels and bedding.
 - If you are infected with me, I cause:
 - itchy rash that is worse at night in skin folds (such as between fingers)
- How am I treated?
- How am I prevented?

STD #9

- Description:

- I am probably the most common STD. I am known as “the cervical cancer virus.” I cannot be cured.
- If you are infected with me, I may cause:

warts

cervical cancer

- How am I treated?
- How am I prevented?

STD #10

- Description:
 - I am the virus linked to AIDS. I can be passed to other people through body fluid such as blood. I cannot be cured.
 - If you are infected with me, I cause:

| | |
|----------------------------|--------------|
| weight loss | diarrhea |
| white spots on your tongue | night sweats |
| sleepiness | fever |
- How am I treated?
- How am I prevented?