

Overview

This unit will cover the topic of human diseases in a biology 30S class. It consists of a series of activities on human disease that will culminate in the production of an online community where students can share their stories. This plan is developed so that students gain an idea of the effects of disease and additionally gain an understanding of the fact that they are not alone in dealing with their experiences of disease.

Context

The students involved attend a vocational school that has approximately 1000 students. This unit would be presented approximately half way through the semester, and would tie into the curricular outcomes.

Objectives

The unit would be part of the Biology 30S class of which there are approximately four per semester. The class size ranges from 24 to 35 students. There are many students that have experienced disease, either directly or through someone close to them. Their experience with disease may be dealt with at home but it is rarely dealt with in the school. As a result students often go through the experience alone. The main objective of this plan is to create an online community through the school where my students, and others, can share their stories and gain the support of others as they move through their healing process.

The outcomes that will be explored as stated in the Senior 3 Biology 30S Student Specific Learning Outcomes Manitoba Education Citizenship and Youth (2004) through this topic are:

- Investigate and describe conditions/disorders that affect the digestive process.
- Investigate and describe factors/disorders associated with transportation and/or respiration in the human body.
- Investigate and describe conditions/disorders that affect protection and/or control in the human body.
- Describe how technology has allowed us to control our wellness and the ethical dilemmas that the use of technology can create.
- Identify and analyze social issues related to the process of dying.
- Recognize the difficulties faced in defining “death” and identify some of the different definitions in use today.

- Demonstrate an understanding of and respect for a diversity of cultural perspectives and approaches to maintaining health and treating illness.

In addition to curricular outcome the students would also:

- Develop a sense of empathy and compassion for those dealing with disease.
- Clarify their beliefs on various topics surrounding disease
- Share their stories.
- Be exposed to others in similar situations reducing feelings of isolation
- Experience positive emotional support
- Create a sense of community

Rationale

Students in a high school biology class are expected to study a variety of diseases of the human body. Typically students only research the causes, symptoms and treatments of various diseases. With the outcomes being stated as they are, there is an opportunity to explore disease from a different perspective. Many students have had personal experiences with disease. Their stories are a valuable tool that can be used to help them gain a greater understanding of disease and connect with others in similar situations.

By having students write their own story, it helps them to clarify their thoughts on the subject, further increasing their understanding of the experience. Story writing, especially the process that I will use, will give the students the chance to explore their feelings in a less threatening manner. I will help them break down disease into four parts. We will then work as a group to get a deeper understanding of each of those parts. This will enable the students to deal with the topic one step at a time instead of dealing with an overwhelmingly emotional topic. We will try to examine each question in a different manner in order to draw in as many students as possible. In the end the students will produce a story to share with others.

Often in a school setting, students that are experiencing difficult events in their lives outside of school feel isolated. Teachers may be completely unaware of what goes on in their student's lives outside of school. It is very important for these students to realize that many others have gone through similar experiences and that the school community is one that can help them through their struggle. The chance to share their story with others helps them to validate and honor the experience and develop a support community.

The Plan

Pre-prep

Throughout the course of the school year I will be telling the students various stories/poems that deal with disease. They will be stories that either deal directly with disease or look at how individuals needed to overcome struggles. Since the students are probably not accustomed to storytelling in biology, this process will serve to catch their attention and then I can later refer to these stories as I go through the activities. Up to now I have collected the following stories:

- *The Fall of Freddy the Leaf: A Story of Life for All Ages* by Leo Buscalgia
- Poem by Barrie R. Pettipas
- *Singing with Momma Lou* by Linda Jacobs Altman
- *The Tale of A Parkie Princess* by Annie Konopka
- *Germ*s by Ross Collins
- The rewrite of my friends illness

Introduction

This will be the first day, after which we will be working through the plan. The pace that we go through the activities will greatly depend on student involvement.

- Students will complete a human bingo activity. (See attached)
- We will discuss the answers of the human bingo and use the last box to begin the discussion on disease.
- I will tell the students the story of my friend and his experience fighting cancer.

Investigation

- **Who is the person?**
 - I will ask students to select an individual that they know that has experienced disease. If the student has gone through a disease they can use themselves or anyone else that they know. They will then need to visualize that person healthy. Once they have a clear picture of that person, they will need to write down as many things about that person as they can remember. The focus should be on a detailed physical description of the person from head to toe.
- **What is the disease?**
 - Students will then be asked to imagine the disease in their mind. They will then need to write a description of what the disease would look like if it was an actual object. The object does not need to currently exist (i.e. can be a monster, ghost etc.). They need to give

it as much detail as possible. They should be prompted to look at the shape, size, colour, texture, temperature, voice and any other identifying characteristics that come to mind.

- Students will then need to give their disease creation a new name.
- **What does it do?**
 - Students will split into groups and look at the effect that disease has on the individual living with it:
 - Activity 1
 - Students will identify the effects that disease has on an individual by placing descriptive words, like vomiting, suffering, pain, fever etc. on a piece of paper.
 - They will place each word on a pre-prepared little sand bag and throw all the words into a backpack.
 - Students will attempt to jog through the hall carrying the backpack.
 - Students will write about their experience.
 - Activity 2
 - Students will identify the effects that disease has on an individual by placing descriptive words, like vomiting, suffering, pain, fever etc. on a piece of paper.
 - They will place each word on a balloon.
 - They will then need to juggle the balloons and keep them all up off the ground.
 - Students will write about their experience.
 - Activity 3
 - Students will group into groups of 3
 - One student will be assigned a section of the textbook and will need to read the section and then answer 2 simple questions.
 - The other two students will be talking into the ears of the student that is trying to read.
 - They will then switch places till all 3 have had a chance to read.
 - Students will write about their experience.

- Students will either complete one activity or rotate through all three activities and then come together as a class to share their experiences.
- They will need to identify which of these effects are caused by their particular disease
- **What does it mean to overcome disease?**
 - Students will look at the meaning of overcoming disease.
 - In this section, the students will select the activities. I will give them some suggestions but they will need to figure out the best way to go about discovering their answers to the question. Some suggestions are:
 - Identify the characteristics of the hero in stories and apply them to individuals that have a disease.
 - Identify characteristics of individuals that we know that have conquered disease.
 - Each student throws in their initial thoughts on the question into a paper bag and then class is split into group and each group gets a few papers from the bag to discuss.
 - The key here is to get students to take some responsibility over the process of finding their answer to the question.

Story writing

- Student will create their story by piecing together the four questions from above.
 - They will have the option of writing their story as they experienced it or using the descriptions they used above to create a fictional story that is representative of the experience.

Story telling

- Students will need to post their story on the following wiki www.diseasethroughachildseye.wetpaint.com. This will be a site that will be advertised through the biology classes and to parents.
- The students will also be given the opportunity to present their story if they feel comfortable doing so.

Conclusion

The connections that students form with others during their high school experience help them develop a community of friends. Every student has or will experience disease and using the biology 30S curriculum we can help these students gain a greater understanding of their experience. By giving them the ability to create and share their stories we help them honour their experience and create a community of support that they can turn to in times of need.

References

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Outcomes. Retrieved August 25 2008 from

<http://www.edu.gov.mb.ca/k12/cur/science/found/bio30s/outcomes.pdf>

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Biology 30S

Introduce Yourself

Find someone who:

Knows his/her blood type	Has had stitches	Has taken a first aid course
Has never been a patient in a hospital except when they were born	Wears safety gear when participating in sports	Is excited about taking Biology 30S
Has had an operation	Can identify 2 foods high in carbohydrates	Can name 3 organ systems in the body
Has been for an eye test in the last 3 years	Wears sunscreen regularly	Can give one detail about the story of his/her birth

Has worn a cast	Has been vaccinated	Can identify one specific thing that a doctor can find with a urine test
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