"EMERGING STUDENTS CONQUERING EMERGING PATHOGENS"

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Mission Statement

* Enable students to gain an understanding on how emerging pathogens affect us on a global scale.

* To motivate students to learn about emerging pathogens and have students become active participants in relating this information to the community.

Background information: www.epi.ufl.edu

Description of Module:

I. Viral Basics

A. What is a virus?
B. What are the different types?
C. General features

II. How do virus affect the host

A. Canine -CPV
B. Filial - FPV
C. Humans
1. Three types

III. Pandemic timeline

A. From the 1890- Present

IV. Visualization methods
A. Cryo-Electron Microscopy (at the FAU Campus)
1. Purpose of this technique

2. What techniques are utilized in this method

Literature cited

Biotechnology Textbook

www.bumc.bu.edu/Dept/Home.aspx?DepartmentID

Dr. McKenna's notes

This is a list of things that I will do to make this project a success:

1. Take courses that will allow me to not only become familiar with latest technologies but to increase my confidence to teach various techniques.

2. Have speakers discuss various topics ranging from viral diseases and careers

3. Teaching tools- diagrams, computers, practice various techniques that will be used in this project

4. Frequent assessments

5. Make new contacts to help fund our programs and to provide information

Proposed Budget

Supply	Price	Quantity	
Crayola markers	3.99/pk	4	
Copy paper	36.99/case	2	
Glue	7.99/pk	1	
Composition notebooks	2.99/2pk	50	
Construction Paper	6.49/pk	5	
Nasco Virus model	61.15	1	
		Total	$338.03

Emerging Students Conquering Emerging Pathogens

Lesson Plan

School: Arthur Ashe Magnet School

Grades 6-12 Gifted

Number of Students: 80

Sunshine State standards: S.C.F.1.4.8
S.C.G.1.4.1

Objective: Students will learn about emerging pathogens and their potential threats.
Students will inform others of what they have learned
Students will gain a hands approach in biotechnology using the scientific method to the scientific method

Day 1

Students will be placed in groups that will research different types of viruses.
Students will view different viruses using a microslide viewer and/or microscope.

Day 2

Students will draw, color, label their virus on construction paper according to their shapes.

Day 3

Students will then cut their structures and place them on the wall.

Day 4

Students will conduct an extensive research on the CPV virus and what species does it affect.

Day 5

Students will conduct research on the FPV virus and its host.

Day 6

Students will be placed in groups. Each group will be assigned a virus that affects plants.
Students will research on the cause/ preventive measures/ and latest scientific breakthroughs.

Day 7
Guest speaker--Guest speaker will come in and discuss emerging pathogens in veternary medicine.

Day 8

Students will conduct a web quest to create a pandemic timeline from the 1890's -present. This time line will be placed on the wall..

Day 9

Students will research on Cryo-Electron Microscopy and the purpose of this procedure and what techniques are involved.

Day 10

Students will be given the opportunity to gain some hands on experience in Cryo-Electron microscopy at the Florida Atlantic University campus.

Day 11-13

Students will gather all of the information they have gathered along with techniques an create an informative video on these topics that will broadcasted on Beacon TV. This is a great way for students to not only encourage other students but inform the general public on these important issues.