

# **ICORE Development Award Proposal: Kids Love Scary Topics**

Shirley B Nieto  
Lake Brantley High School

6/27/2006    shirley\_nieto@scps.k12.fl.us

## Abstract:

**How can one increase student engagement and acceptance of responsibility for education? Kids love scary topics and “Kids also love to teach.” (Sudbury Schools) Research by Dr. Jean-Pol Martin at the University of Eichstatt, Germany supports use of “Learning by Teaching” or LdL teaching design. LDL+R is a modified method of LdL with added aspects of literary and laboratory research. In this study Biotech students will be assigned to small groups to explore real world issues related to the scary topic of Emerging Pathogens.**

## Abstract (cont):

**Each small group will subsequently teach their peers enrolled in the same class about the specific Emerging Pathogen they studied. In completing this project, it is expected that both sets of students will demonstrate an increase in awareness and knowledge of Emerging Pathogens, as well as, possibly indicating attitude or perception shifts regarding life issues that affect more than the students themselves.**

# PROJECT MISSION STATEMENT

This initial ICORE Extension Project incorporates current research and hands-on laboratory skills in a high school Biotechnology course module focused on the study of emerging pathogens. This is a dual-based unit focusing on transmission of knowledge and development of student's "soft-skills".

# PROJECT OBJECTIVES

Biotechnology 1 curriculum addresses the Florida Sunshine State Standards for high school students.

The module on Emerging Pathogens correlates to the following Standards:

1. ....

# PROJECT MATERIALS

- ❑ Equipment Bins on loan from ICORE
- ❑ Consumables for labs
- ❑ Paper copies for handouts
- ❑ Student Lab Notebooks (provided by student)

# PROJECT ACTIONS

The first component in this unit serves as an intro to the importance of EPs and lab protocols used to identify, screen, monitor, and prevent the spread of EPs.

The second component of the module encourages students to internalize their skills and knowledge by teaching a group of their peers.

## **DESCRIPTION OF TEACHING MODULE: Introduction and Background Development**

The teacher will present case studies, scenarios, problems or questions related to Emerging Pathogens.



## **DESCRIPTION OF TEACHING MODULE: Laboratory Skills Development Phase**

Students will perform teacher- directed laboratory investigations (wet labs and/or simulations) to study select pathogenic diseases.

## **DESCRIPTION OF TEACHING MODULE: Presentation Development Phase**

Students will be divided into small groups for the purpose of doing research on a particular pathogenic disease. Rubrics or check lists will be developed for evaluation of the group's written report, Power Point Presentation, and oral presentation. Teacher and peer reviews will be contiguous with this development.

## DESCRIPTION OF TEACHING MODULE: Teaching/Learning Phase

Each student group will:

1. Present their Power Point to peers in their class period.
2. Hold a Q&A session after their presentation.
3. Submit a full written report to the Biotech teacher.

## **DESCRIPTION OF TEACHING MODULE: Expected Results**

Student will report an increase in awareness, knowledge and interest in Emerging Pathogens. It is likely that they will also indicate a change in their perception of global events related to Emerging Pathogens.

## PI: Shirley Nieto

- ER&D Train the Trainer, Managing Anti-Social Behavior in the Classroom, NEA, 2005- present
- Masters in Science, NSE, 1989.
- Supervision of Student Interns, 1981- present
- Science Dept. Chair, LBHS, 1977-present.
- Curriculum Representative, LBHS, 1977- present
- Bachelors in Science, Sec. Ed., UCF, 1974.

# LIKELY PROJECT RESOURCES

- ❑ Student Field Trip – UF or extension site
- ❑ Equipment Bin on loan from UF
- ❑ Speakers – Local
- ❑ AV and web sources
- ❑ Assessments – Reports (oral and written, interviews with students); Tests; PPP; other Teacher Eval.
- ❑ Teacher Mentor – Dr. Suzy Behel
- ❑ Student Mentors – TBI

# LITERATURE CITED/References

1. Alan Gartner et al.: Children teach children. Learning by Teaching. Harper & Row, New York 1971
2. Jean-Pol Martin...
3. "Summer Institute Program Book", Interdisciplinary Center for Ongoing research/Education, ICORE A Partnership Program, UF 2008
4. Jody Skinner, " The Koblenz Model", ...2008

# BUDGET AND JUSTIFICATION

- Lab Equipment, Student Investigations:
- Lab Consumables, Student Investigations:
- Paper, copies for handouts
- Student Notebooks, Student Investigations
- ? FT expenses



# LESSON PLAN FOR UNIT

TBD

# TIMELINE FOR UNIT

6/27/08 First Draft of Proposal due

8/18/08 Classes Begin

8/20/08 Begin Module Phase 1

9/1/08 Final Proposal due

11/17/08 Begin Module Phase 2

12/19/08 Winter Break Begins

12/19/09 JEHSW Write-up Begins

2/\_/09 JEHSW Presentation