

**Association of Community Health Nursing Educators
Teaching Strategy Submission**

Name: Barbara Battin Little
Title: Associate Professor
Credentials: DNP, MPH, RN, APHN-BC
Co-Authors:
Organization: Florida State University
Email Address: blittle@fsu.edu
Office Phone: 941-961-7042
Address: 535 Pine Ranch E. Rd
City: Osprey
State: FL
Zip: 34229

Title of Teaching Plan/Strategy: Environmental Health

**Association of Community Health Nursing Educators
Teaching Strategy Submission Form**

1. Title of Teaching Plan/Strategy: Environmental Health

2. Date of Submission

April 19, 2010

3. Relevance to Public Health Nursing competencies

Environmental health

Health promotion and risk reduction

Communication skills

4. Topical Area

Environmental Health

5. Learner Level(s)

RN to BSN

Undergraduate

6. Learner Setting

Classroom, could be adapted for online

7. Strategy Type

problem-based learning

8. Learning Goals/Objectives:

1. Identify the relationship between the environment and human health status.
2. Explain the nursing role in environmental health.
3. Describe legislative and regulatory policies that have influenced the effect of the environment on health and disease patterns in communities.
4. Use the "I Prepare" Mnemonic to take an environmental health history.
5. Describe ways to incorporate environmental principles in planning environmental interventions.
6. Describe global issues related to environmental health.

9. Estimated time for the student to complete the activity:

2 hours prior to class, 2 hours in class for group presentations

10. Strategy Overview

This lesson uses a problem-based learning approach using a small group process to facilitate learning about environmental health. Students will be assigned to one of four groups to study an environmental health topic (water, air, lead or mercury) and prepare a presentation to the class. This strategy is designed for 4 groups of 4-5 students and can be adapted for different group sizes. For an online class, groups may prepare powerpoint presentations with audio and post on the discussion board. Larger classes may be accommodated by dividing them

into learning communities with separate meeting times or discussion board. For example, an online class with 30 students could be divided into two learning communities with 15 students in each community. These communities could then be divided into 4 groups to study each of the 4 topics. Alternatively, faculty could create additional topics for more groups.

11. Resources Needed

Student directions/worksheet (attached)

Text book reading: Sattler, B., Afzal, B. & Mood, L. (2010) Environmental health. In M. Stanhope & J. Lancaster (Eds.), Foundations of nursing in the community, 3rd ed (pp. 85-107). St. Louis: Mosby Elsevier. The lesson could be adapted for other text books by changing the page numbers on the student directions.

12. File(s)

Student directions/worksheet

13. Website Links

These are included on the student directions. The website for the Florida Department of Health could be changed to the local state health department.

14. Methods for evaluating student learning

The student presentations are evaluated on accuracy, depth and creativity. The material was also evaluated on a test.

15. Please comment on overall success of this teaching strategy

This strategy teaches students how to use critical thinking skills to find information and synthesize it into a presentation. Students reported learning from the websites and creating the presentations. They created informative and attractive presentations and enjoyed the interactive presentations.

16. References

Sattler, B., Afzal, B. & Mood, L. (2010) Environmental health. In M. Stanhope & J. Lancaster (Eds.), Foundations of nursing in the community, 3rd ed (pp. 85-107). St. Louis: Mosby Elsevier.

Environmental Health Student Directions

Introduction: The air is polluted, the water is polluted, and the soil in which our food is grown is polluted. What is the impact on human health? How can nurses help maintain a safe and healthy environment? You have been called upon to help assess the issues and recommend interventions including policy changes.

In this module, we will learn more about our human dependence upon the environment, ways to protect the environment, our ethical/legal and historical heritage as advocates for policy change. Environmental health competencies for nurses to effectively assess, refer, advocate, educate and influence public policy will be explored.

Objectives:

1. Identify the relationship between the environment and human health status.
2. Explain the nursing role in environmental health.
3. Describe legislative and regulatory policies that have influenced the effect of the environment on health and disease patterns in communities.
4. Use the “I Prepare” Mnemonic to take an environmental health history.
5. Describe ways to incorporate environmental principles in planning environmental interventions.

Reading Assignment:

1. Read Chapter 6 Environmental Health (Stanhope, M & Lancaster, J (2010). Foundations of nursing in the community, 3rd ed. St. Louis: Mosby Elsevier.)
 - Memorize the “I Prepare” Mnemonic for taking an environmental exposure history - also available at: <http://www.cphp.pitt.edu/en/IPREPARE.pdf>
 - Practice taking an environmental exposure history using “I Prepare”
2. Surf the internet:
 - Visit the E.P.A. web site <http://www.epa.gov>,
 - Select "About E.P.A."
 - Read “EPA’s Mission” and select “Learn More...” Read about EPA’s purpose.
 - From the top menu bar, select “Learn the Issues” and scan the list of issues and note the human health topics.
 - Visit the Health Care Without Harm Organization website at: <http://www.noharm.org/>
 - Under Issues, scan the list of issues related to environmental health. Select one issue to briefly review.
 - Visit the Florida Department of Health, Division of Environmental Health website at: <http://www.doh.state.fl.us/environment/index.html>
 - Scan the programs along the menu bar (EH home, about us, and communities) to learn more about the role and programs.

In-Class Activities:

- Class 1 - students will be assigned to a small group of four or five to study an environmental health issue and prepare a 10 minute presentation to present in class
- Class 2 - students will make presentations on their assigned topic.

Group 1: Lead Poisoning

Learn about Lead Poisoning and Prevention and answer the following questions below in your presentation.

Resources:

- <http://www.cdc.gov/nceh/lead/>
- <http://www.atsdr.cdc.gov/tfacts13.html>

- 1) What are the most common sources of lead poisoning?
- 2) Who is most at risk?
- 3) What effect might lead poisoning have on a child's development, learning, and behavior?
- 4) What can be done to prevent exposure to lead?
- 5) What is the role of nurses in addressing these issues?
- 6) How do the 4 environmental principles discussed in the text (p. 90-91) relate to this issue?
- 7) What are the global issues with lead poisoning?

Group 2: Mercury

Learn about mercury and its effects on health and answer the following questions below in your presentation.

Resources:

- Agency for Toxic Substances & Disease Registry: <http://www.atsdr.cdc.gov/tfacts46.html>
- EPA:
 - <http://www.epa.gov/mercury/about.htm>
 - <http://www.epa.gov/mercury/about.htm>

- 1) What are the most common sources of mercury poisoning?
- 2) Who is most at risk? What effect could mercury have on fetuses and children?
- 3) What is the role of nurses in addressing these issues? What teaching should be given to pregnant women and families reduce the risk for exposure to mercury?
- 4) How do the 4 environmental principles discussed in the text (p. 90-91) relate to this issue?
- 5) What are the global issues related to mercury?

Group 3: Water

Learn about global water issues and potential effects on human health. Answer the following questions below in your presentation.

Resources:

- <http://www.who.int/topics/water/en/>
- <http://www.globalwater.org/>
- <http://www.epa.gov/ow/>
- <http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTWAT/0,,menuPK:4602384~pagePK:149018~piPK:149093~theSitePK:4602123,00.html>
- <http://www.nlm.nih.gov/medlineplus/waterpollution.html>
- <http://www.nlm.nih.gov/medlineplus/drinkingwater.html>

- 1) What are the main issues with water quality and access?
- 2) What are the main effects of poor/polluted water quality on health?
- 3) Who is most at risk for health problems due to water quality? (e.g., ages, preexisting health conditions, income levels)
- 4) What is the global scale of water issues?
- 5) What is the role of nurses in addressing these issues?
- 6) How do the 4 environmental principles discussed in the text (p. 90-91) relate to this issue?

Group 4: Air

Learn about air quality issues and potential effects on human health. Answer the following questions below in your presentation.

Resources:

- <http://www.epa.gov/airtrends/>
- <http://www.airnow.gov/>
- <http://www.nlm.nih.gov/medlineplus/airpollution.html>
- http://www.who.int/topics/air_pollution/en/

- 1) What are the main issues with air quality?
- 2) What are the main effects of poor/polluted air quality on health?
- 3) What is the air quality for Tallahassee?
- 4) What are the global issues with air quality?
- 5) Who is most at risk for health problems due to air quality? (e.g., ages, preexisting health conditions, income levels)?
- 6) What is the role of nurses in addressing these issues?
- 7) How do the 4 environmental principles discussed in the text (p. 90-91) relate to this issue?