Dr. Emilio A. Kenny, Professor.

Biology, Health & Wellness Department.

Miami Dade College, North Campus.

The Connection between Chemical Elements in the Environment and Pathways to the Food Supply

Lesson Plan

Learning Objective:

1. Identify the connection between chemical elements in the environment, with their roles in the anatomical structure and physiological process of the human body, with society connectivity promoting peace.
2. Describe the direct several pathways between selected chemical elements to food supply, good health, diseases, social conflict, and peace.

General Course Goals for Human Anatomy and Physiology (Both, BSC-2085, and BSC-2086): Both courses course will be addressing the following “MDC- General Education Outcomes”: #1- Communication, #2- Numbers / Data Analysis, #3 Critical Thinking, #4 Information Literacy, #5 Cultural / Global Perspectives, #7 Ethical Thinking, and #8 Computer / Technology Usage. In addition, this course will follow the general goals presented by the course competencies, and specific chapter objectives in each unit.

Methodology:

A- I have selected several students in my current fall semester BSC- 2085, to carry out a pilot-preliminary literature research on one chemical element each, (e.g. calcium, phosphorous, iron). The students would prepare an introductory paper on these elements base on their natural sources of origin in nature, normal port of entry in to the human anatomical system. And the basic roles of each chemical element in the metabolic process within our bodies.

In addition to describing the natural sources of these chemicals elements, they would research on the anthropogenic impact that our current society life style, and economic structure have on the availability of these resources. Also, briefly report on these resources availability and distribution across the social economic structure.

B- I would set up three- students work groups: this would promote team work, collaboration, group discussion of each personal scientific, social, and economic background. Each group would try to establish a connection/ system between the respective chemical element, environment, good health, and diseases.
C- These project would involve two consecutive semesters (fall thru spring). Presented and defended in a public presentation supported by a Power Point slide show to their peers.

**Assessments:**

Students would prepare several papers gradually, and a final public presentation to their peers. This assignment would be an extra credit grade offer at the beginning of each semester only.

Presented by: