



Curriculum Units by Fellows of the Yale-New Haven Teachers Institute
2012 Volume III: Anatomy, Health, and Disease: From the Skeletal System to Cardiovascular Fitness

Introduction

The human body fascinates people of all ages. Anatomy is appealing to many because it is highly visual and can be understood by people who don't consider themselves to be scientists. This seminar sought to exploit the student's natural interest in his or her own body to teach the lessons of health and general biology. Study of the skeletal system forms the basis for much of what we know of the function of our bodies and the manner that these functions are altered by disease. Examination of fossilized remains provides us with most of the information about the evolution of man as well as the changes in life over time of our planet. The seminar also examined diseases such as obesity, diabetes and heart disease that are epidemic in our communities. Fellows have developed curriculum units to examine the relationships among healthy habits, disease and the body.

Shaunquetta Johnson has created a unit for second-graders that uses yoga to teach muscle control and self-discipline. The unit uses yoga poses that are linked to fables. The students are encouraged to analyze their own body positions and to discuss the moral lesson. Melissa Ugolik teaches second grade at the same school. Her unit examines the connections among eating, thinking, exercise and mood. Her students will chart their food intake, amount of sleep and "screen time" and mood. These graphical exercises will enable the students to see the links that influence their ability to perform. Ronald Coleman teaches sixth grade at the same school. His unit explores the links among diet, exercise, weight and fitness. Algebraic and graphical assignments show his students how these four factors are related. Larissa Spreng also teaches at this school, in the seventh grade. She has designed a unit to teach about puberty. Since most of her students will be in the midst of pubertal changes, they have a natural curiosity and concern about the changes in their bodies. These four units could be used as focal points to tie together health education across the primary education years.

Laura Carroll-Koch has written a unit on the brain for her fourth-grade class. Her activities include modeling the brain from the inside out, showing the evolutionary advance of the nervous system. Julia Biagiarelli has developed unit for her fifth-grade class that focuses on factors such as diet and stress that may adversely impact health. Jaclyn Maler Ryan's unit for her second-grade class exploits children's interest in animals. She concentrates on the skeletons of man, birds, snakes, bats and pterosaurs. The unit also introduces concepts of evolution. Jane Hosen's unit uses the unifying concepts of elemental composition to show that the atoms that make up the universe are the same atoms that make up life. Her ambitious unit spans topics from the composition of the sun to the structure of the skeleton to the basics of nutrition. Kathleen Rooney uses topics in forensic medicine to teach high-school students lessons in statistical inference. She covers techniques such as fingerprinting, blood typing and DNA fingerprinting. Chris Willems' unit uses the digestive system to introduce students to the structure and function of proteins, carbohydrates and lipids.

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