YALE NATIONAL INITIATIVE
to strengthen teaching in public schools®

Curriculum Units by Fellows of the National Initiative
2008 Volume VI: Nutrition, Metabolism, and Diabetes

The Way Food Works: Analyzing the Short and Long Term Effects of What We Eat

Guide for Curriculum Unit 08.06.08, published September 2008
by Kristin Nissa Peterson

Why eat? Every day we must feed our bodies, yet many of us pay little attention to the food we put in our mouths. With rates of obesity and diabetes on the rise, nutrition is becoming an increasingly large concern in today's society, especially amongst our youth. This unit, designed for an advanced-level high school biology course, examines nutrition on a molecular and somatic scale. Students will start by learning about the short-term effects of food: what the food molecules are, their role in the body, how they are digested and metabolized, and the body's energy needs, balance, and storage. In the second part of the unit, students will examine the long-term effects of food: the way that nutrition affects our bodies over the course of a year or a lifetime, the effects of too much food, or deficiencies or excess in certain nutrients or types of food. In addition to learning the biology of eating, students will also gain an understanding of nutrition that will empower them to make better food choices and educate those around them.

(Developed for IB Biology I, grade 11; recommended for Biology, grades 10-12)