



YALE NATIONAL INITIATIVE

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Curriculum Units by Fellows of the National Initiative
2012 Volume VII: Energy, Environment, and Health

Quantifying Solutions to Reduce Our Food's Environmental Impact

Guide for Curriculum Unit 12.07.01, published September 2012

by Anne Agostinelli

This unit will be the first of the eighth grade algebra year for students I taught last year in seventh grade pre-algebra. Their understanding of linear algebra will be a solid foundation from which to build their knowledge of functions, statistics, and how data is communicated along with why being critical consumers of data is a vital life skill. To address my students' dissatisfaction with the relevance of math to their lives, I will focus heavily on the problem-solving process and how it can be applied across disciplines to solve problems, and then how math can be used to strengthen those solutions by quantifying impact and communicating clearly with numerical evidence. This unit plays directly into the curiosity of my students about the world we live in, the problems they will inherit, and the challenges they must learn to address. While we will all focus on the large topic of food and the environment, students will break off into more focused interest groups to pinpoint problems that relate directly to their diets and quantify solutions that will be meaningful in their own lives and the lives of their families.

(Developed for Pre-Algebra, grade 8, and High School Algebra I; recommended for Mathematics and Science, grades 6-8)

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