



YALE NATIONAL INITIATIVE

to strengthen teaching in public schools®

Curriculum Units by Fellows of the National Initiative
2012 Volume V: How Drugs Work

A, C, E Detective: Calculating Percentages

Guide for Curriculum Unit 12.05.05, published September 2012

by Aimée MacSween

A, C, E, Detective: Calculating Percentages is a curriculum unit written for a 7th grade Pre-Algebra class. With some modifications, it could be taught to a sixth grade math class as well. The goal of the unit is to teach math in context. Middle school math students struggle with the idea of a "reasonable answer." Students need to be able to apply meaning to numbers in order to develop a sense of what is reasonable. The unit begins by giving students background knowledge about the body. It looks at the percent of elements that make up the body. Students are given an opportunity to calculate the weight of each element in their bodies. Students learn about drug administration and calculate the surface area and volume of the lungs. The unit gives a substantial amount of background information on vitamins and recommended dosages. Students use this knowledge to calculate servings necessary to meet the recommendations. There are charts that show how the recommendations have changed over the years. Using these charts students will calculate percent increase and decrease. The unit ties in other math skills as well, including order of operations, exponents, and formulas to solve surface area and volume. I believe this unit provides an excellent opportunity for students to see how math is used outside the math classroom!

(Developed for Pre-Algebra, grade 7; recommended for Pre-Algebra, grade 7)

<https://teachers.yale.edu>

©2023 by the Yale-New Haven Teachers Institute, Yale University, All Rights Reserved. Yale National Initiative®, Yale-New Haven Teachers Institute®, On Common Ground®, and League of Teachers Institutes® are registered trademarks of Yale University.

For terms of use visit https://teachers.yale.edu/terms_of_use