



YALE NATIONAL INITIATIVE

to strengthen teaching in public schools®

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

Toxic Effects of Mercury, Alcohol, and Cannabis on Human Cellular Function

Guide for Curriculum Unit 12.05.06, published September 2012
by John Miklaszewski

My unit, designed for use in my 8th grade science class, focuses on chemistry and biology and how toxins can affect the people who ingest them. I believe that students can better understand chemical and biological concepts if the illustrative examples are more relevant to their experience and environment. There are recreational drugs and pollution risks in our community and our students are interested in affects of illegal drugs, and toxic substances.

The focus of the unit will be on four chemicals—alcohol, marijuana, lead and mercury—that affect the cell and organism in general. In presenting this material, I will begin with a review of living things, including the cell, and discuss how cells process and use chemicals. A culminating activity involves work in collaborative student groups, with each group preparing presentations to explain various impacts of the toxic substances. The unit will include differentiated collaborative groups, small non-fiction lit circles, and hands on activities.

(Developed for General Science, grade 8; recommended for General Science, grades 7-8)

<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