



YALE NATIONAL INITIATIVE

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

Caution! Drug Diffusion Underway: Using Inquiry to Understand How Drugs and the Body Interact

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This curriculum unit is designed to engage fourth grade students in scientific investigations around the theme, "How Drugs Work." The unit uses hands on activities and experiments to explore how people get medicine inside their body, how the medicine is distributed, metabolized and excreted. Many drugs are assembled into pills that are composed of layers: this layering plays a role in the absorption, distribution and metabolism of the drug. The crux of the unit will be the ongoing investigation to gather data to help students hypothesize and make decisions. In the end, the students are charged with designing a medicine that is coated, so that the coating dissolves in 15 minutes. Along the way the unit will teach principles of diffusion, equilibrium, scientific inquiry, scientific investigation, measurement, and aspects of how the human body works. This unit could be used or adapted for 5th -9th grade general science and anatomy courses.

(Developed for Science/Mathematics, grade 4; recommended for Science/Mathematics, grades 4-5, and adaptable for General Science/Anatomy, grades 6-9)

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