What's All the Fuss About Labels

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Standard Statement(s):
4.5.10B - Identify health risks associated with chemicals used in common pesticides
4.5.7B - Explain how pest management affects the environment

Content Objective(s):
The students will be able to:

1. Identify several aspects of common pesticides
2. Accurately read and interpret chemical labels
3. Assess risks in using common pesticides
4. Generally identify environmental effects of pesticide use

Assessment Strategies:
Written tests, discussion, student product

Procedures:
Introduction:

As part of a general chemistry unit that culminates in a study or organic and biochemistry, students, as consumers, have a need to recognize the ingredients of various commercial products which find their way into daily use. Pesticides of various types, including those presently thought to be relatively non-toxic, are a part of these materials. This lesson encourages students to be more critical of the chemicals in their personal environment.

Procedure:

At some point in the study of chemistry have students bring in to class labels from personal care products, or the products themselves, to analyze ingredients and the function of each in the product. Look for similar chemicals found in dissimilar products. Have students also submit names of pesticides found in the home environment (as a safety concern, don not have students bring the pesticides to school) or the name and ingredients from the label. Perform an on-line and book search to identify the biological effects of the ingredients. Classify the active ingredients as to purposes, actions, concentrations, etc. Publish the data as student designed posters.

References:
PSU Integrated Pest Management
USGS
PSU College of Agriculture

Related Web Sites:
Oregon State University www.ace.orst.edu/info/nptn/
www.google.com
EPA Office of Pesticide Programs: http://www.epa.gov/pesticides/biopesticides
Penn State Pesticide Education Program: http://www.pested.edu
ATTRA: http://www.attra.org/attra-pub/

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Suggested Level:
Grade 8
Oct. – Jan.

Standard Category:
Science as Inquiry
Life Science
Science and Technology
IPM

Materials:
Merck Index
PDR
Merck Manual
Internet
IPM Materials
Agrichemical Fact Sheet #3,7,8

Instructional Strategies:
Direct Instruction
Project Based
Small Groups
Large Group
Research
Thinking skills