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Curriculum Units by Fellows of the National Initiative
2011 Volume V: Chemistry of Everyday Things

Trash – Seriously!

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This unit is intended for students in grades 4-6. It can supplement students who study ecosystems or other physical science programs that introduce pollution; or it can adequately address the topic of pollution and recycling, independently. The unit focuses on three particular products, plastic water bottles, plastic bags, and paper that students use daily, so that students will make personal connections, and, as a result, be motivated to make meaningful decisions about them. Students will be introduced to chemistry in the unit in an elementary way, in order to present the objectives effectively. One purpose of the unit is that the students will obtain a better understanding of the composition of polymers and paper. From this understanding, the students will explore the problems of pollution with these products. Then, the students will explore and evaluate recycling and reducing the use of the products. The culminating intent of the unit is that students will initiate a recycling program in their school or community, as a result of the unit. The unit should take 2-3 weeks, depending on how many science classes are scheduled each week. It will not only address science standards, but also math (volume) and English language arts (persuasive writing) standards. The activities can be addressed by regular students as well as those with disabilities, since most activities are hands-on in the context of cooperative groups.

(Developed for Science, grade 5; recommended for Science, grades 4-5)

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