



Hands - On Plastics:

A Scientific Investigation Kit



IN A NUTSHELL

Written by: American Plastics
Council & National Middle
Level Science Teachers
Association

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Cost: No Charge

SUBJECTS

Science

This kit, which comes in a carrying case made of recycled plastic, includes a text as well as recycled pellets, products in various stages of the recycling process, and a preform bottle for use in the unit's chemical experiments. The text is divided into four chapters and contains a variety of exercises, laboratory experiments and extension activities. The emphasis of the laboratory experiments is on enabling students to understand various types of plastics, to identify and recognize their characteristics, and to become familiar with the chemistry and processes behind their production and recycling. Activities for younger learners include developing an awareness of the prevalence of plastics in their world. The text includes background information for teachers and students, slides, worksheets, diagrams of chemical equations, a color brochure on developing a school recycling program, and a directory of state recycling offices. A supplemental videotape is available for rental and copying but is not included in the kit itself.

Grade Level
middle school

Length
50 pages + kit

Date Published
1995

THE BOTTOM
LINE

"Subtly pro-plastic because you study plastic. However, it doesn't say that plastics are great; it just explains and describes them."

What the REVIEWERS Said !	Key Characteristics	Strengths Noted	Other Considerations
	Fairness and Accuracy	Very factual. Presents informative background on the history and significance of polymers.	Focuses on benefits of recycling but does not address pitfalls.
	Depth	Thorough explanation of chemistry of plastics.	Fails to address economic impact (e.g. jobs), energy costs, or pollution risks.
	Emphasis on Skills Building	Addresses critical thinking, problem solving and scientific method.	
	Action Orientation	Provides instructions for setting up a recycling program at school. Directly states that individuals can make a difference.	Does not address recycling in other settings, such as home. Fails to mention reducing or reusing as alternatives.
	Instructional Soundness	Information is connected to everyday life. Reflects different learning styles.	Some activities are potentially dangerous and do not include safety instructions.
	Usability	Materials are well organized and labeled and are easy to use. Provides list of sources for further information.	Supplies must be replaced when exhausted.

"Limited in scope and therefore should be used with other materials."

"Children are not 'hit over the head' with why they should recycle."