Stuff
Rose Stough is shlepping shoeboxes and bags full of junk from her basement to her car.

What is it?

"Oh, stuff like nails, crayons, shells, ashtrays, crushed soda pop cans, clothespins, beans, plastic cups, scraps of fake fur, paint rollers, candles . . ."

Why is Rose hauling this massive collection to school?

Hurrying around her classroom, Rose organizes "my five study-stations." On each table in each station, she sets a shoebox of junk accompanied by clearly printed instructions, challenges, and suggestions.

Rose's 3rd and 4th graders and Marilyn Nelson's 4th and 5th graders, in small science groups, take turns "researching" in the five stations. For weeks, these peripatetic scholars compare properties of matter. They count, measure, weigh, order, question, sniff, touch. They discover grams, centimeters, cubic units, volume, metrics. They learn about solids and liquids. They learn how to make observations and inquiries. They turn "Twenty Questions" into an extension of their studies, guessing objects by asking pertinent questions about their properties.

Rose turns herself into Ms. Wizard and fascinates the kids with simple experiments. They find out about the movement of molecules by dabbing cologne on tissues and breathing in the sweetness of the room. Or the kids combine baking soda and vinegar and produce carbon dioxide.

For weeks, Rose's room is churning with the energy of kids looking, labeling, comparing, illustrating, reading, sharing, sorting, talking, and learning. As an extra bonus, they (of course) do great on their science test!

Don't try to phone Rose. She's already busy gathering more junk to start a study of simple machines for her next turn at sharing science experiences with the two classes. "Got any old wheels, clocks, or gears?" she asks as she drops stuff into boxes and bags.

According to popular myth, only our very youngest children learn effectively through hands-on, manipulative, concrete, direct experiences related to meaningful tasks. But creative teachers of all grade levels know that such activity is the stuff of effective education. It's not enough to study swimming from a chapter in a textbook or from ditto sheets. We need to see, feel, dangle our toes, splash in water! Make waves!

Ask the kids. They'll urge you to give them paper, scissors, tape, cameras, maps, yardsticks, blueprints, compasses, poster board, globes, shoe boxes. "Challenge us," they say. "Invite us into the process. Watch us learn!" Observe teenage students managing school stores, organizing field trips, publishing newspapers, building stage sets, and initiating their own research projects! No matter what our age, our achievement—and enjoyment—are multiplied when we are given an active role in our own learning.

Rose had no trouble understanding Marilyn Cohen's devastation when she (Marilyn) discovered that her car had been stolen. "Even worse," Marilyn wailed, "all my stuff for Thanksgiving was in it! All my books and junk for my kindergarten!"

A few days later, Marilyn was ecstatic. "The best thing happened! The best thing!" she shouted. "What?" I asked. "They found your car?"

"No," Marilyn bubbled joyfully, "They found my stuff!"

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Author's note: Rose Stough and Marilyn Nelson teach at the Moler Elementary School, Columbus, Ohio. Marilyn Cohen teaches at the Bet Shraga Hebrew Academy in Albany, New York.

Mimi Brodsky Chenfeld is a teacher and consultant and the author of Creative Activities for Young Children and Teaching Language Arts Creatively (2nd ed.), both published by Harcourt Brace Jovanovich. She can be reached at 2670 Halleck Dr., Columbus, OH 43209.