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Jack Burke
University of Wisconsin

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PROFESSOR GEORGE M. MAXWELL MAKES MAGIC—AND LEARNING ENGINEERING BECOMES FUN

Jack Burke
University of Wisconsin
Madison, Wisconsin

The University of Wisconsin-Madison associate professor of metallurgical and mining engineering teaches materials science both on the campus and around Wisconsin, talking and putting on demonstrations before high school and college students, bankers, businessmen, dentists, doctors, secretaries and others.

Give him five minutes or a college semester, and he will try to convert you into a knowledgeable user of materials. His approach starts off with familiar basic processes of chemistry and physics and builds from there.

His presentation, replete with feats of legerdemain, shows why and how some materials fail, how some succeed, how a piece of steel can be made to behave in a variety of ways, or how a wire will spell out names when it is sprinkled with hot water or electrical current.

The bit of magic with wires always makes a hit. A unique demonstration of atomic movement, Professor Maxwell starts it out by spelling the name of a person or a school with the wire at a dull red heat.

Then the wire is cooled down and pulled out so that it appears to be just like any ordinary straight piece of wire. The next step calls for the wire to be hooked up to a voltage source and heated quickly. At once, the wire spells out the word which had been programmed in earlier.

Maxwell said the atoms in nitinol or "memory" wire have the rare property of returning to positions that are determined earlier at a relatively high temperature.

More than 5,000 members of his audiences in the past several years can attest to his finding that with somewhat different approaches, non-technical minded persons can grasp technical matter as well as engineering students do.

During the past academic year, Professors Maxwell and Joel S. Hirschhorn taught a class on campus for non-engineering students with little or no background in science, students "who wanted some real feeling for the materials-based world around them."

Students called the course one "For Strangers in a Strange Land."

They learned answers to such questions as these: What is teflon? What is energy? What is a transistor? How do materials affect world politics? What is stainless steel? Why is it possible to recycle some materials, and not others?

Professor Maxwell commented:

"Our world is made up of solid materials. We can live more fruitfully if we understand how, what for, and what will happen after, demanding relevant answers. This is related to consumerism. There is reality in technological literacy."

And you can be sure, he will make it entertaining and clear by use of magic occasionally to show how it all happens.

SCHOLARSHIP WINNERS— HAWKEYE SCIENCE FAIR—1974

First place winner in the biological sciences category was Dean Loven, Senior High School, Newton, for "A Study of the Ehrlich Ascites Carcinoma in CF-1 Mice." He received a \$400 college scholarship and an expense-paid trip to the International Science and Engineering Fair at South Bend, Indiana.

First place winner in the physical sciences category was Randy Stalzer, Garrigan High School, Algona, for "The CO₂ Laser." He received the same scholarship amount and expense-paid trip as Dean Loven.

Second place winner in biological science, Patricia Strautman, Kuemper High School, Carroll. Second place winner in physical science, Marc Johnson, Community High School, St. Ansgar. These pupils each received a \$300 college scholarship.

Third place winner in biological science was Diane M. Rusley, Community High School, Lake Mills. Third place winner in physical science, Tim Hanusa, Abraham Lincoln High School, Council Bluffs. These pupils each received a \$200 college scholarship.