

macy. As evidence, he points to a National Cancer Institute conference held last year on vitamin C and cancer, which pointed up some positive findings from research.

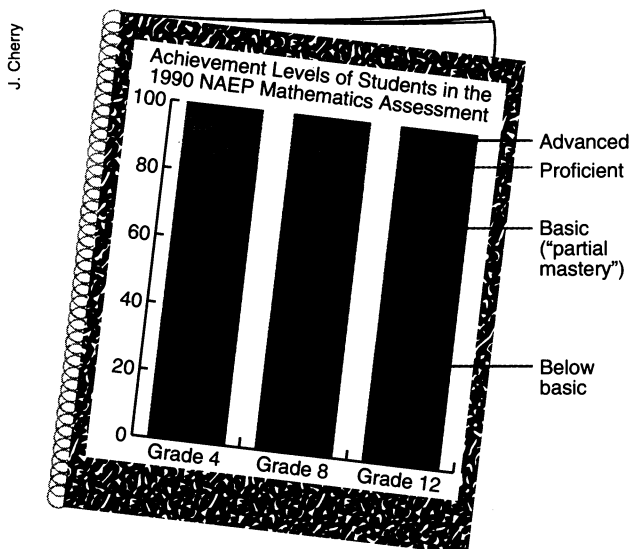
## Draper Awards for WWII Foes

An Englishman and a German who independently developed the jet engine during World War II have been awarded the 1991 Charles Stark Draper Prize, the world's largest engineering award.

Sir Frank Whittle, 84, and Hans J.P. von Ohain, 79, are sharing the \$375,000 award from the National Academy of Engineering. Whittle, who spent 25 years in the Royal Air Force, has been on the faculty of the U.S. Naval Academy in Annapolis, Maryland, since 1977. Von Ohain, whose early work was supported by aircraft manufacturer Ernst Heinkel, has lived in Ohio since 1947, when he came to work at Wright-Patterson Air Force base.

Asked at a press conference how the country could stimulate the development of more brains like theirs, both jet-age pioneers—who are now chums—stressed the need for simplicity. Said Whittle: “Things are getting so damn complicated that individuals don’t have the chance to do big things.” Von Ohain added that while improvements in existing inventions require complex technol-

## Achievement levels of students in the 1990 NAEP Math Assessment



**More sorry math news.** Fewer than 20% of elementary and high school students in the United States are “proficient” in math, and considerably more than one-third fail to meet minimum standards of performance, according to a newly established analysis of the results of the 1990 National Assessment of Educational Progress (NAEP). The analysis was conducted by the National Assessment Governing Board, authorized last year by Congress, which has set performance standards for grades 4, 8, and 12, based primarily on recommendations of classroom teachers. The board found large differences among ethnic groups: Among 8th-graders, for example, 4.2% of blacks, 22.3% of whites, and 38.9% of Asians were proficient in math. Boys come out ahead, especially in the “advanced” category where they outnumber females by more than 2 to 1.

ogy and teamwork, “break-through ideas are not from teams....Radical innovations are usually created in a simple way.”

The Draper prize is a biennial award established in 1989. The first winners were Jack Kilby and Robert Noyce, inventors of the integrated circuit.



**Birth of jet age.** Frank Whittle shakes hands with test pilot after Britain's first jet flight on 15 May, 1941.

## Name Games at DOE

Wordsmiths at the Department of Energy (DOE) have been sprucing up some of the department's stodgier programs with a fresh paint job and some unwieldy acronyms. On 23 August, for instance, the agency held an “inauguration” ceremony to rechristen its old, polluted Feed Materials Production Center in Fernald, Ohio—a former production facility for fissionables used in nuclear warhead production—as a showcase effort called the Fernald Environmental Management Project (FEMP). Cleanup of toxics at FEMP is expected to cost at least \$5 billion and take up to 20 years.

DOE also recently announced it would give the Solar Energy Research Institute (SERI) a resonant new name: the National

Renewable Energy Laboratory (NREL). The change won't do much beyond giving the lab a line item in the DOE budget, but a spokesman explained that the ponderous new designation (which staffers pronounce “un-real”) will put it on an “equal footing” with other national labs—even though the Bush Administration has been treating SERI “like a national lab already.” How so? The spokesman wouldn't elaborate, but he may have been referring to DOE's boast in a recent press release that its funding for renewable energy technology research has increased from \$138 million to \$246 million over the past 2 years. What the release doesn't mention is that in fiscal year 1981, the last budget controlled by the Carter Administration, DOE devoted nearly \$800 million (in 1981 dollars) to such research.

## Fusion Panel Lowers Its Sights

Facing actual growth of no more than 5% in the fusion budget, the Energy Department's Fusion Energy Advisory Committee last month reluctantly concluded that it's time to bail out of the Burning Plasma Experiment (BPX). A \$1.9-billion fusion reactor, the BPX would have doubled the department's fusion budget over the next 5 years.

The reactor was to have been the first to allow study of self-heating, or “burning,” plasmas. Self-heating occurs when a fusion reaction begins to produce about five times as much energy as it takes in, thus producing enough alpha particles in the plasma to sustain the reaction. That goal will now probably have to await construction of the International Thermonuclear Experimental Reactor, which is just beginning a 6-year design phase. In the interim, the fusion panel wants to build a smaller facility for the study of long-lived, “steady-state” plasmas, which could be done for perhaps a third of the cost of BPX.