work provides similar miscues, Goodman maintains. For example, when public health and medical professionals list race as a risk factor in osteoporosis (a progressive loss of bone mass), which disproportionately afflicts whites, they are encouraging the mistaken assumption that blacks do not get the disease—and therefore are not in need of preventive care or other help.

The way for scientists and others to avoid the confusion and false leads—and the encouragement to racism that race thinking provides—is simple, says Goodman: stop using racial classifications and refer to specific traits instead. Why say black or white when "darkly complected" are the truest words?

The Mask of the Machine

"Seeing through Computers" by Sherry Turkle, in *The American Prospect* (Mar.–Apr. 1997), P.O. Box 383080, Cambridge, Mass. 02238.

When the personal computer burst on the world in the 1970s and early '80s, educators believed that a "computer literate" student would need to learn to look "inside" the powerful calculators and understand how they worked, at least in principle. No longer, writes Turkle, a science sociologist at the Massachusetts Institute of Technology. Today, the young learn only how to use the PC as "an information appliance," becoming marvelously adept, but prey to new information-age illusions.

Before the mid-1980s, computers were not very user-friendly, she notes, and to get them to work, it helped to know something about programming. But increased processing power made it possible to build graphical user interfaces (GUI), "which hid the bare machine from its user." Apple's Macintosh desktop computer, introduced in 1984, represented "a way of thinking about the computer that put a premium on the manipulation of a surface simulation." Then came Windows software. Soon, "people did not so much command machines as enter into conversations with them." Computer users began to take things "at (inter)face value."

Computer education in schools now tends to involve learning how to run word processors, spreadsheets, databases, Internet search engines, and other programs. Nothing wrong with that, Turkle writes. But that narrowly practical aim should not be the main goal. Students should be taught how to critically "read" what their computers do and to ferret out hidden assumptions. By playing *SimCity*, for instance, students may find out more about the difficult tradeoffs involved in governing a city than they would from a textbook. But simulations can also be misleading. One young *SimCity* player informed Turkle that "raising taxes always leads to riots," not realizing that a game based on other assumptions might yield a very different result. In subtle ways, Turkle suggests, the computers we play are beginning to play us.

Do students see beneath the surface of scenes such as this from the computer game SimCity?

ARTS & LETTERS

And Not a Drop to Drink

"The Crushing Power of Big Publishing" by Mark Crispin Miller, and "Gutenberg Unbound" by Tom Engelhardt, in *The Nation* (Mar. 17, 1997), 72 Fifth Ave., New York, N.Y. 10011.

A visitor to a Borders or Barnes & Noble superstore, marveling at the thousands of volumes on view and at all the people busily browsing and buying, might conclude that