

# LIVING IN TECH STATE

## Maine is handing out laptops. Will they make its middle school students smarter?

BY CAROLYN KLEINER

The first day of school felt a whole lot like Christmas in September for the bright-eyed seventh and eighth graders at Nobleboro Central School in rural Maine. Along with new teachers, textbooks, and class schedules, they all received their very own \$1,300 Apple iBooks, fully loaded with the latest software. "I was looking forward to getting my laptop all summer long," says seventh grader Lesley Yates, 12.

Welcome to 21st-century Maine. Last year, the state became the first in the nation to provide personal computers for all of its seventh graders; this fall, the \$37.2 million program was expanded to include eighth graders. Currently, some 33,000 students and 3,000 teachers in 241 schools have state-supplied laptops. All this despite a looming \$1 billion state budget deficit over the next two years—and critics who say there's little proof that computers in the classroom help students learn more effectively than traditional teaching methods or will better prepare them for the modern workforce.

**No limit.** Yet middle schoolers across the state are toting their shiny new laptops from class to class, using them for a range of assignments and activities: At King Middle School in Portland, for example, seventh graders produced an interactive CD-ROM for a lesson on "fading footprints" that includes written descriptions and scientifically accurate illustrations of endangered species in Maine, videotaped field trips to coastal nesting grounds, and a narrative film on the learning process. "It is amazingly unlimited what can happen with these machines," says King teacher David Grant.

Artificial-intelligence expert Seymour

Papert agrees. "As long as pencil and paper was the only medium, schooling was a static thing," says Papert, professor emeritus of education and media technology at the Massachusetts Institute of Technology Media Lab and an early proponent of the Maine initiative. "By giving all kids access to a computer, Maine is creating conditions for the development of a radically different way of thinking about education."

insist that such programs are effective. Students "are much more willing to edit because they don't have to write the whole paper over again," says Debbie Jamieson, a seventh- and eighth-grade teacher at Pembroke Elementary School. "And they seem to take more risks in the process." A study conducted by researchers from the University of Southern Maine found that students using the laptops did more homework and misbehaved less than in previous years.

Still, detractors warn that computers in the classroom are not a panacea. Computing "shortcuts the step-by-step process that is really what learning is all about," says Todd Oppenheimer, author of *The Flickering Mind: The False Promise of Technology in the Classroom and How Learning Can Be Saved*. "When



**Laptops speed velocity experiments for eighth grader Nasia Ashkir at King Middle School.**

CARL D. WALSH—AURORA FOR USN&WR

Schools across the country are betting a lot of money that Papert is right. At a time when budget woes have forced music, arts, and physical education programs to be slashed, teachers to be fired, and class sizes increased, states are investing lavishly in technology, including some \$2.7 billion in federal monies this year alone, up from \$81 million in 1996. Programs like Maine's are the current rage. Michigan, for example, is in the pilot phase of a controversial \$22 million initiative, which will provide laptops or hand-held computers to sixth graders across the state, as long as participating schools contribute \$25 per student.

Teachers and administrators in Maine

you've got to pore through a book and take notes by hand, when you've got to ask questions and look at other sources, it forces you to think through what you're doing and to use your brain."

But in Maine, students' biggest fear is being forced to go back to pencil and paper when they enter high school—and phase out of the laptop program. "I've gotten used to having my own computer whenever I need it, and I'm worried that my work isn't going to be as good as it could be without that," says Nobleboro eighth grader August DeLisle, 13, a good student whose grades have shot up even higher in the past year and a half. "I'm also a little worried that school just isn't going to be as interesting anymore." ●