

## Security Begins at Home



**W**hen you buy a computer for your school, the salesman tells you that it will save you time and money by computing and maintaining student grades and attendance records. Its word processor will make composing test questions easier. In addition, the same computer will teach students how to program, keep track of tuition payments, and maintain records on disciplinary actions—all at the same time—simply, quickly, and efficiently.

At this point, some skeptical teacher or principal is probably muttering, “This all sounds too good to be true.” Unfortunately, it is.

When the computer says that Johnny got an “A” in your class when you gave him a “D”; when Mary seems to know what questions were going to be on the mid-term even before the copy machine cooled off; and when Bobby’s disciplinary record seems suspiciously clean, you may begin to wonder how much of a help the computer really is. If your records and grades aren’t secure, what good is it?

Don’t despair! Even if someone has cracked your security system, you can still rearm it to prevent future access. Of course, teaching computer ethics would also be a helpful adjunct to resecuring the system. Listed below are some suggestions for ways you can put a

stop—right now—to unauthorized access to your computer system.

### **Add Infinity to Your Routine**

If your password has eight characters, then program the computer to demand the first three characters within the first second and wait at least two seconds before accepting the next character. The final characters, which must be entered within two seconds, follow a three to five second wait. The timing can be adjusted or changed periodically by your security programmer. Most students will be frustrated to find that after they have tried every possible combination of eight characters they still can’t gain access to the computer.

This procedure alone will keep the casual code cracker at bay. But what about the over-the-shoulder “I can’t believe I saw the passcode being entered” threat?

### **Tie Your Password to a Formula**

Most computers maintain an internal clock; some also keep track of the date. If your fixed passcode is 1E7, you could add the military hour in front and the day of the month behind—producing a passcode for 3:30 p.m. February 17 of 151E717. This passcode is only good for one hour, so whoever looked over your shoulder had better hurry.

Still, someone might know your computer’s modem number and randomly stumble across the right combination at the right time of day. Or the principal’s secretary might share the formula with her boyfriend, the computer whiz. To thwart these threats, you might

consider an additional precaution.

### **Don’t Call Me, I’ll Call You**

Most timesharing systems deal with a limited number of terminals which can be identified and authorized prior to their usage by the telephone number from which you will be dialing. When an authorized person wants to get on-line, he or she calls in as usual, enters the assigned passcode, and waits. Your computer checks the passcode and disconnects the phone. If the passcode doesn’t clear, your computer security has not been breached. If the passcode does clear, your computer then calls the authorized terminal. The personnel there may be a little surprised to learn that they called for access to the computer, but no security problem has resulted since the computer did not reconnect to the phone modem at the unauthorized location.

The above suggestions can be incorporated simultaneously. However, they will offer little security protection if you or others on the staff advertise the secret code. That’s exactly what you do when you stick your passcode in your top desk drawer, scribble it on your memo pad, or leave it in some other easy-to-find place. It is better to take the time to memorize your passcode than to jeopardize the entire system.

Timesharing users observe the common courtesy of removing themselves from a line-of-sight to the keyboard whenever a passcode is being entered. If you’re in the company of potential timesharers who have not been well-bred, do

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ships (apprenticeships) associated with work-study programs.

Administrators and teachers arriving in a community should, at their earliest opportunity, visit the personnel of appropriate agencies and reaffirm their commitment to good school-community relations. Thus, the "Elisha message" can be preached in more than one way. □

#### FOOTNOTES

<sup>1</sup> *SDA Bible Commentary* (Washington, D.C.: Review and Herald Publishing Assn., 1954), vol. 2, p. 882.

<sup>2</sup> *Ibid.*, pp. 882, 883.

<sup>3</sup> Roger Hiemstra, *The Educative Community: Linking the Community, School, and Family* (Lincoln, Neb.: Professional Educators Publications, 1972), p. 11.

<sup>4</sup> John B. Whitelaw, *The School and Its Community* (Baltimore: The Johns Hopkins Press, 1951), p. 1.

<sup>5</sup> *Ibid.*, p. 55.

<sup>6</sup> Leslie W. Kindred, et al., *The School and Community Relations* (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1976), pp. 159-160.

<sup>7</sup> *Listen*, February, 1984, p. 22. Copies of this issue may be obtained at a cost of \$2.50 for three. Bulk prices are also available. For additional information, contact Narcotics Education, 6830 Laurel St. NW, Washington, D.C. 20012.

<sup>8</sup> Thomas J. Kelly, et al., editors, *School Community Resources for the Behaviorally Handicapped* (New York: MSS Information Corporation, 1974), pp. 37-53.

## Computing With Class

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not enter your passcode until you are sure that they cannot observe you doing so. This isn't a matter of trust; it's a matter of security.

In addition, it makes good sense to be careful to lock rooms where computers are located and to limit access to areas containing terminals or disk backup. Many computer dealers offer locking mechanisms to prevent theft of equipment and hardware.

Remember, it could be a lot easier to prevent a theft or security breach than to figure out what to do about it after it happens.—  
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## Motivation

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might begin to discriminate against the blue-eyed (or short or left-handed) children in the class, requiring them to do extra homework, sit in the back of the room, be dismissed last, and so on. Or, in preparation for a lesson on the Plains Indians, a teacher might show a slide depicting an Indian and give students one minute to observe everything they can. Afterward, the teacher could ask whether the Indian has a weapon or what markings were on the Indian's left arm. Inference questions could follow, such as "Was the Indian angry? How do you know? What caused him to be angry?" This in turn could lead to reading a chapter in a history book for the purpose of generating additional answers to these questions. Set induction provides structure, direction, and relevance that together pique curiosity and promote motivation to learn.

### Increasing Participation

5. *Interaction.* How can a teacher ask questions and handle responses in ways that increase involvement, participation, interest, and thinking? Teachers who are good motivators know that their interactions and transactions with students are central to a successful lesson. Such teachers enjoy classroom discussion, use humor, draw on personal experiences (theirs and the students'), keep open minds, invite students to teach the teacher, keep a lively pace, and demonstrate genuine enthusiasm. But beyond these general behaviors, they also give special attention to the kinds of questions they ask students and the kinds of strategies they employ when students answer (or don't answer) a question.

Consider questioning tech-

niques. For an invitational teacher, the basic purpose of questioning is to give students every opportunity possible to show what they know, think, and value. Students quickly lose interest when they discover that questions are designed to find out what they do *not* know and call for convergent responses that will be immediately judged. Motivating questions usually involve little risk for the responders and allow many acceptable answers. Some questions—such as "Let's see who forgot to read the homework assignment. Joe, can you define a prime number?"—tend to be high risk, convergent, and threatening. On the other hand, a question such as "I know you found the assignment on prime numbers interesting and difficult. I wonder if anyone can give us one example of a prime number—Joe?" has a much better chance of motivating a response.

One key to handling student responses successfully is "wait time." A teacher who thoughtfully waits three to five seconds (the average wait time is about *one* second) can expect more answers, longer answers, and better-reasoned answers. Another valuable technique is to ask some questions that even the teacher cannot answer. (It is ironic that teachers who *know* answers ask questions of students who do not.) When possible, suspend judgment on responses by securing several responses before commenting or by saying, "Tell me more about that." Always judging responses and giving too much praise—especially in higher-ability classes—have negative effects on interaction and the response rate. Using questions as a means of increasing motivation requires teachers to develop the skills of divergent and higher-order questioning and the skills of redirecting and suspending judgment.