I'm now reassured that RUN readers are really paying attention to this column every month. In September's Resource Center, I offered to provide a disk of public domain educational programs, and it brought a huge response. I'm wearing out our MSD dual drive making copies, but it's worth it.

By the time you'd read my September offer, I had compiled a doublesided disk full of educational programs. Many of you sent a single-sided disk, which meant I could only give you half the programs. Therefore, I'm renewing my offer. If you'd like to receive a second disk of educational programs that have been donated by Resource Center readers, send me a disk at the address at the end of this article and I'll make you a copy. You might send a doublenotched disk, in case I have even more programs by that time.

I'm also renewing my request for educational program donations. If you've written a program that you think other parents, teachers and students would benefit from, and you don't have an unquenchable thirst for profit, please send your program to The Resource Center. It will be shared with all our readers.

Now, on to the topic for this month: How are schools dealing with the responsibility of implementing computer literacy requirements?

The Problem

Three basic concerns are expressed in the letters I receive: not enough money, not enough computers and not enough computer teachers. The number of school districts that require teaching computer literacy to all students is growing, but in many districts, the funding for computer hardware, software and teaching staff is limited, so the job of implementing computer literacy courses is proceeding slowly.

The Grand Haven, Michigan, public schools faced a budget challenge last year when the school district decided to install a computer literacy program for all students. The specific objectives for the elementary school students were to acquire the ability to select and use software; to generate skills in basic keyboarding, problem-solving and decision-making, and in Basic and Logo programming; and to develop a knowledge of computer terminology, the uses of computers for individual and career choices, and the ethics of computer use. With these objectives established, the district had to figure out how to best equip its nine elementary schools, enrolling 180 to 400 students each, with computers and computer teachers, and not go broke in the process.

Spreading the Money Around

Grand Haven decided to develop a new teaching position: elementary computer teacher/consultant. This person would travel throughout the district to provide computer instruction in all nine elementary schools. The job requirements were a minimum of nine hours of coursework or equivalent experience in computer education, plus teaching or administrative experience.

The job included coordinating all computer activities for grades K-6; providing hands-on experience in a lab setting for grades 3-6; responsibility for the purchase, setup and maintenance of equipment; scheduling lab classes; and other functions related to the computer project. Russell Stanton, a teacher for 16 years, got the job and is now head of a traveling computer lab composed of 15 C-64 computers, each with a 1541 disk drive and 1702 monitor, and a variety of printers.

The choice to buy Commodore equipment was based primarily on cost effectiveness. Stanton is continually asked, "Why not Apples?" His answer is simple: "With Commodore we are able to provide 15 set-ups, and all the goodies; with Apple I would have only six!" The district also wanted computers that would be portable, popular and easily maintained or replaced. In Stanton's words, "Commodore is the best choice; sound educational software is available, the hardware is entirely sufficient, the price is right, and the C-64 is the computer most likely to be in the students' homes."

Stanton decided to do some comparison shopping when equipping his lab, to keep the costs as low as possible. Instead of buying from one dealer, he searched a wide area and...
The Resource Center
came up with a variety of suppliers
who provided different components
for the Commodore systems.
As for software, he relies heavily on
public domain programs. The lab's li-
brary has over 2000 programs that
Stanton can copy for use at
each of the 15 computer sta-
tions. Much of this software
comes from the Toronto Pet
Users Group and from Public
Domain, Inc. Stanton points
out that with public domain
software, "legal questions such
as site licensing, multiple load-
ing and backup copying never
arise. A second benefit is that
these programs are nearly
free—that leaves money in the
budget to buy commercial soft-
ware when necessary."
Even when he's buying soft-
ware, Stanton has been able to
keep costs down. He uses Easy
Script for teaching word pro-
cessing, and was able to get 15
copies for only $12 each from
a liquidator.

Lab Organization
The 15-computer traveling
lab has been in operation
since November of 1985, serv-
ing the 5th and 6th graders in
all nine Grand Haven ele-
mentary schools. The future plan
is to create similar portable
computer labs for grades 3-4,
and ultimately establish a permanent
lab in each school's media center,
with individual computers in the
classrooms as needed.
During the year, Stanton and his
lab spend one month in each of
the nine schools. One week before a
scheduled move, he contacts the next
school's principal, who has the teach-
ers sign up for times when they can
bring their classes into the lab. Every
5th and 6th grade student receives
at least nine class sessions (45-55
minutes each) of formal instruction.
Through the first two years of the
computer literacy program, teachers
are required to attend the computer
lab sessions along with their students,
in the hope that they'll become
familiar with the machines and
start using them for their own class
instruction.
The computer lab is set up in the
media center of each school. The
media center assistant learns along with
the students, and acts as a supervisor
and resource person when the com-
puter teacher and classroom teacher
aren't present. This provides extra
staffing for the lab, and, combined
with the lab's all-day hours, encour-
ges students to use the computers
any time—during recess or free time,
or in small groups when their class-
room teacher gives permission.

Moving Right Along
The logistics of moving an entire
computer lab from one school to an-
other might seem complicated, but
Stanton has worked it out smoothly.
The actual moving of the equipment
is done by two men and a mid-sized
moving truck.
Stanton relates that "the monitors,
power supplies and electrical cords
are permanently attached to 36-inch
wheeled tables. When moving day
comes, I unplug the keyboards and
disk drives and pack sturdy card-
board boxes with about six items
each. Because of their delicate nature,
printers are transported in their orig-
inal cartons.
"The whole setup is then moved to
the next school building. In my most
recent move, it took me less than two
hours to pack up; less than one hour
to load, move and unload; and two
and a half hours to set it up." Accord-
ing to Stanton, there have been no
problems with broken equipment dur-
ning the moves. Actually, there haven't been major
problems with any aspect of the
lab operation. The project is
going smoothly—the perfect
solution to providing each
school with computers and
computer instruction.
A portable computer lab
with a traveling computer
teacher is a unique solution to
a problem that many school
districts share. It enables stu-
dents in all of the schools to
have individual access to a
computer and receive the
same top-quality instruction
from a specialist. It might be a
workable solution for your
school district.
If you would like more in-
formation about the portable
computer lab and Grand Ha-
ven's computer literacy pro-
gram, contact Russell Stanton,
Elementary Computer Instruc-
tor, Grand Haven Public
Schools, Instructional Media
Services, 1415 Beech Tree St.,
Grand Haven, MI 49417.

Grand Haven school children
using the traveling computer lab.

If you're using Commodore com-
pusers for educational purposes (at
home or in school) and would like to share
your experiences through The Resource
Center, write me a letter detailing the equip-
ment you're using, subject areas being
taught, grade level or age of your students,
software you are using and any other in-
formation you feel like including.
If you'd like to donate public domain
educational programs to The Resource
Center for sharing with other educators
and parents, please send along a disk with
a brief description of the programs. Send
correspondence and disks to:

Margaret Morabito
The Resource Center
c/o RUN Editorial
Elm St.
Peterborough, NH 03458

You can also leave mail in my on-line
mail boxes: CompuServe (70616,714) and
Q-Link (MARGM).