

RESOURCE CENTER

This month: the nation's schools are gearing up for Computer Learning Month, and a teacher shares a program he wrote.

By MARGARET MORABITO

October has been designated National Computer Learning Month by the U.S. Congress. During this month, education and computer industry leaders will focus on encouraging students, teachers and parents to explore computers as tools for learning in the home and in the school. This type of focus is nothing new for many readers of the Resource Center, but it's significant to see a national movement to promote awareness of computers in education.

Here are some of the activities that will occur during this month-long event. Perhaps you can get involved in your hometown.

NATIONAL CONTESTS

The month will be highlighted by five national contests that are open to students and teachers in grades K-12, with participants classified according to primary, middle and secondary level. The prizes will include Apple IIGs computer systems (where are you, Commodore?) and educational software; certificates of participation will also be awarded. Entries must be received by the project's coordinating group no later than October 20, and the winners will be announced in November.

There will be a student essay contest for the three age groups. The essays must be less than 750 words long, and the winning entries will be published in Computer Learning Month '88 press materials.

Following are some sample essay starters for this contest.

Primary:

- "In 2001, I'll use my computer to . . ."
- "If my computer could talk, it would say . . ."

Middle:

- "If I invented a computer, it would . . ."
- "Computers can help a person understand . . ."

Secondary:

- "In 2087, I'll use my computer to . . ."

• "One thing I've always wanted to do with a computer, but never have, is . . ."

You can get other essay topics by contacting the Computer Learning Month group at the address mentioned below in this article.

Two of the contests are devoted to student art. In one, the art must be completely computer-generated. In the other, the work is to be done in any medium *other* than a computer, but its theme must address computer learning or computer use.

Another contest involves teacher's ideas for lessons. Here, teachers will submit lesson plans or ideas they've had for integrating computers into the classroom in an interesting way. The lesson plans may not exceed 1000 words, and the ideas must include objectives, materials, class time required, students' prerequisite skills, procedures, follow-up activities and references.

The fifth contest is for group projects where four or more students and a teacher have used a computer in an interesting learning situation in any subject area. The entries must include two parts: a project report of 1000 words or less and a document that demonstrates the work done for the project.

PARENT BOOKLETS AND BACK-TO-SCHOOL NIGHTS

In another Computer Learning Month project, the EPIE Institute is putting out a 16-page booklet called *What Every Parent Should Know About Educational Computing*. It suggests how computers can be used as learning tools in the school and at home, and how parents can work with schools to further their children's education. Walden Bookstores will distribute the booklet, beginning in September.

Many schools will be sponsoring "back-to-school computing nights" for parents. These events will highlight local school technology programs and offer parents a chance to use computers. They will also serve to promote com-

munity participation in funding and carrying out computer projects in the schools. To plan a back-to-school night in your community, contact the Computer Learning Month group for suggestions on how to get started.

INTERESTING STATISTICS

Among the Computer Learning Month materials that I've received (and that you can get by writing or phoning the group) is a fact sheet on computers in education in the U.S. I mention some of the facts here as food for thought. They suggest how far we've come and how far we have yet to go in spreading the effective use of computers in our schools.

Fact: Between 1981 and 1986, the proportion of American schools using computers in the classroom grew from 18 to 96 percent.

Fact: There are more than a million computers in public schools, and over 15 million students and 500,000 teachers in public and private schools use computers.

On the other hand . . .

Fact: On average, there are 37 students per computer, which means less than one per classroom.

Fact: Less than a third of all U.S. teachers (but more than half of all computer-using teachers) have had at least ten hours of computer training.

FURTHER INFORMATION

To receive the Computer Learning Month reading materials on how parents and schools can work together to promote computers in education, contact Katherine Borsecnik, Project Director, Computer Learning Month, PO Box 19763, Washington, DC 20036-0763; 202-223-4338.

LEARNING ABOUT MONEY

This month, I've decided to include a program listing in my column. The program, called Money, works on the C-64 and was written and donated by

W
SUPP
PER
NE

GRAPHIC
Anti-Glare Scte
Banner Machr
BASIC 8 (Patec
SCREEN F/X (C
Billboard Make
CAD 3D (IHT)
Cadpak-64 (At
Cadpak-128 (F
Coloraz 128 (E
Cybervideo (T
Doodle (Crysta
Flexidraw 5.5
Lightpen 17
Lightpen 1E
FlexiFont
Galleries -
Holiday/
Borders/
NewDeig
Graphics Inter
Graphics Label
Graphics Tran
Home Designe
Icon Factory (C
Moving Pictur
Perspectives I
Picaso's Rev
Photo Finish (C
Pop-Up Greeti
Printmaster P
Art Gallery

AIDS/UTI
1541/1571 D
40/80 Colum
Assembler/M
Basic 8 (Pute
BASIC Compl
BASIC Compl
BBS Construc
Big Blue Reac
Big Blue Reac
Bobstarm Pro
Bobstarm Pro
Gnome Kit 64
Gnome Speec
Gnome Mac 1
How To Get N
How To Get N
Kracker Jaz 1
K Jaz Shetgu
K Jaz Loaded
K Jaz C128 C
K Jaz MSD C
K Jaz Bull's E
Kyan Pascal I

Gnome Kit
Photo Finis
Billboard N
Synitech Bf
Flexidraw !
Flexidraw !
Graphics Ir
Transforme
Doodle +
KFS Accou
Galleries W
Basic 8 +

DISCERNING
SHOOTING US
MONEY
AND BY THE
SHOOTER

RESOURCE CENTER

Michael McKellips of the Lexington School, 1130 W. Co. Rd. B, Roseville, Minnesota. McKellips has been using C-64s in his special-education classroom for the past four years, but he's had difficulty locating software for moderately retarded students. To solve this problem, he started writing his own.

He's also written programs to assist teachers in managing student data and generating reports. In the future, he hopes to market a program called IEP Writer, which helps teachers generate individual educational plans (IEPs).

His Money program provides prac-

tice in recognizing coins and counting change. It's appropriate for elementary-age students and foreign-born adults who are trying to learn our currency, as well as for its intended audience, the moderately retarded. ☐

If you're using Commodore computers 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 equipment you're using, subject areas you teach, grade level or age of your students, software you're using and any other information you feel like including.

Also, if you'd like to donate public domain educational programs to the Resource Center for sharing with other educators or parents, please send along a disk with a brief description of the program. Send correspondence and disks to:

Margaret Morabito
Resource Center
c/o RUN Magazine
80 Elm St.
Peterborough, NH 03458

You can also leave mail in my online mailboxes: CompuServe (70616,714) and QuantumLink (MARGM).

LISTING 1. The Money program.

```

10 REM PROGRAM WRITTEN AND DONA
   TED BY MICHAEL MCKELLIPS ROS
   EVILLE{2 SPACES}MINN.:REM*56
20 PRINTCHR$(142):POKE53281,0
   :REM*218
30 PRINT" {SHFT CLR}":POKE53281,
   0:POKE53280,0 :REM*102
40 PRINT" {COMD 7} {8 CRSR DNS} {1
   3 CRSR RTs} PLEASE WAIT."
   :REM*100
50 FORL=54272TO54296:POKEL,0:NE
   XT :REM*74
60 POKE52,48:POKE56,48:CLR
   :REM*24
70 POKE56334,PEEK(56334)AND254
   :REM*234
80 POKE1,PEEK(1)AND251 :REM*4
90 FORI=0TO695:POKEI+12288,PEEK
   (I+53248):POKEI+49152,PEEK(I
   +53248):NEXT :REM*140
100 POKE1,PEEK(1)OR4 :REM*100
110 POKE56334,PEEK(56334)OR1
   :REM*34
120 POKE53272,(PEEK(53272)AND24
   0)+12 :REM*226
130 FORI=12288TO12295:READA:POK
   EI,A:NEXT :REM*146
140 DATA 1,7,15,31,63,126,126,1
   26 :REM*250
150 FORI=12552TO12559:READB:POK
   EI,B:NEXT :REM*0
160 DATA 128,224,240,248,252,25
   4,126,126 :REM*128
170 FORI=12568TO12575:READC:POK
   EI,C:NEXT :REM*34
180 DATA 126,126,126,63,31,15,7
   ,1 :REM*70
190 FORI=12576TO12583:READD:POK
   EI,D:NEXT :REM*248
200 DATA 126,126,254,252,248,24
   0,224,128 :REM*226
210 FORI=12584TO12591:READE:POK
   EI,E:NEXT :REM*202
220 DATA 255,255,255,255,255,24
   0,239,239 :REM*158
230 FORI=12592TO12599:READF:POK
   EI,F:NEXT :REM*102
240 DATA 239,239,240,255,255,25
   5,255,255 :REM*14
250 FORI=12600TO12607:READG:POK

```

```

   EI,G:NEXT :REM*80
260 DATA 15,63,127,127,255,255,
   255,255 :REM*187
270 FORI=12608TO12615:READA:POK
   EI,A:NEXT :REM*151
280 DATA 1,7,15,31,63,127,127,1
   27 :REM*207
290 FORI=12616TO12623:READB:POK
   EI,B:NEXT :REM*111
300 DATA 128,224,240,248,252,25
   4,254,254 :REM*135
310 FORI=12624TO12631:READC:POK
   EI,C:NEXT :REM*65
320 DATA 127,127,127,63,31,15,7
   ,1 :REM*21
330 FORI=12632TO12639:READD:POK
   EI,D:NEXT :REM*219
340 DATA 255,255,255,255,255,24
   7,247,247 :REM*239
350 FORI=12640TO12647:READE:POK
   EI,E:NEXT :REM*177
360 DATA 247,247,247,255,255,25
   5,255,255 :REM*49
370 FORI=12648TO12655:READF:POK
   EI,F:NEXT :REM*153
380 DATA 254,254,254,252,248,24
   0,224,128 :REM*17
390 FORI=12808TO12815:READG:POK
   EI,G:NEXT :REM*109
400 DATA 240,252,254,254,255,25
   5,255,255 :REM*31
410 FORI=12816TO12823:READH:POK
   EI,H:NEXT :REM*67
420 DATA 255,255,255,255,127,12
   7,63,15 :REM*145
430 FORI=12824TO12831:READJ:POK
   EI,J:NEXT :REM*155
440 DATA 255,255,255,255,254,25
   4,252,240 :REM*145
450 FORI=12832TO12839:READD:POK
   EI,D:NEXT :REM*149
460 DATA 255,255,255,255,255,0,
   127,127 :REM*175
470 FORI=12840TO12847:READE:POK
   EI,E:NEXT :REM*107
480 DATA 1,254,254,1,255,255,25
   5,255 :REM*219
490 FORI=12848TO12855:READF:POK
   EI,F:NEXT :REM*83
500 DATA 0,0,0,0,0,1,1,1:REM*73

```

```

510 FORI=12856TO12863:READG:POK
   EI,G:NEXT :REM*41
520 DATA 1,1,1,0,0,0,0,0
   :REM*100
530 FORI=12864TO12871:READH:POK
   EI,H:NEXT :REM*252
540 DATA 0,0,0,0,0,0,0,3
   :REM*214
550 FORI=12872TO12879:READJ:POK
   EI,J:NEXT :REM*28
560 DATA 0,0,0,0,0,0,0,255
   :REM*102
570 FORI=12880TO12887:READK:POK
   EI,K:NEXT :REM*240
580 DATA 0,0,0,0,0,0,0,192
   :REM*112
590 FORI=12888TO12895:READL:POK
   EI,L:NEXT :REM*214
600 DATA 0,0,0,0,128,128,128
   :REM*204
610 FORI=12896TO12903:READM:POK
   EI,M:NEXT :REM*74
620 DATA 128,128,128,0,0,0,0,0
   :REM*172
630 FORI=12904TO12911:READN:POK
   EI,N:NEXT :REM*148
640 DATA 3,0,0,0,0,0,0,0:REM*76
650 FORI=12912TO12919:READO:POK
   EI,O:NEXT :REM*46
660 DATA 255,0,0,0,0,0,0,0
   :REM*188
670 FORI=12920TO12927:READP:POK
   EI,P:NEXT :REM*2
680 DATA 192,0,0,0,0,0,0,0
   :REM*168
690 FORI=12928TO12935:READQ:POK
   EI,Q:NEXT :REM*232
700 DATA 0,0,0,0,0,31,255,255
   :REM*100
710 FORI=12936TO12943:READR:POK
   EI,R:NEXT :REM*194
720 DATA 255,255,31,0,0,0,0,0
   :REM*120
730 FORI=12944TO12951:READS:POK
   EI,S:NEXT :REM*148
740 DATA 63,0,0,0,0,0,0,0
   :REM*32
750 FORI=12952TO12959:READT:POK
   EI,T:NEXT :REM*46
760 DATA 255,255,248,0,0,0,0,0

```

```

770 FORI=
   EI,U:
780 DATA
790 FORI=
   EI,V:
800 DATA
   253,2
810 FORI=
   EI,W:
820 DATA
   255,2
830 D$="({
   SR DN
   UP)"
840 P$="({
   SR DN
   UP)"
850 N$="({
   8)}(
   {CRSI
   F}'(
   {CRSI
   G}{SI
   SHFT
   ){SHI
   CRSI
860 Q$="({
   8)}(
   ){SHI
   5 CR
   )}{SHI
   RSR
   {SHF
   FT C
   SR L
   T S)
870 PRIN
   OMD
880 PRIN
   :
890 PRIN
   CEs)
900 PRIN
   :
910 PRIN
   #1#
920 C$(1
   " :C$
   ER"
930 PRIN
   )"P$
   1510
940 PRIN
   )"N$
   2):(C
950 PRIN
   )"D$
   510
960 PRI
   R DI
   510
970 POKI
980 PRI
   R DI
990 GETI

```


RESOURCE CENTER

```

:REM*182
770 FORI=12960TO12967:READU:POK 1000 IFPEEK(653)=4ANDPEEK(197)=
EI,U:NEXT :REM*3 57THEN1600 :REM*183
780 DATA 0,0,0,0,0,248,255,255 1010 GOTO1020 :REM*181 1265 L 5)CENTS":R=R+1 :REM*18
:REM*121 1020 PRINT"SHFT CLR)"SPC(15)"( :REM*251 1270 PRINT"(HOME){11 CRSR Dns){
790 FORI=12968TO12975:READV:POK {10 CRSR LFs){COMD 2}{10 S :REM*188
EI,V:NEXT :REM*235 {10 CRSR LFs){COMD 2}{2 CRSR Dns) :REM*221
800 DATA 255,255,255,255,255,3, :REM*89 1280 PRINT"(COMD 2){2 CRSR Dns){
253,253 :REM*85 1030 PRINT"{2 CRSR Dns){COMD 2} :REM*227
810 FORI=12976TO12983:READW:POK DIRECTIONS: {COMD 8}YOU WI :REM*27
EI,W:NEXT :REM*193 LL BE SHOWN A GROUP OF{12 :REM*188
820 DATA 129,127,127,1,255,255, :REM*130 1300 IFPEEK(653)=4ANDPEEK(197)=
255,255 :REM*67 1040 PRINT" ENTER HOW MUCH THEY :REM*227
830 D$="{COMD 8}{CRSR RT}@!{CR :REM*188 1310 CO=0:AV=0:TC=TC+1:IFTC=10T
SR DN}{3 CRSR LFs)#&$(CRSR :REM*217 :REM*35
UP)" :REM*61 1050 PRINT"(CRSR DN){COMD 2}CHO :REM*45
840 P$="{COMD 2}{CRSR RT}{+}{CR :REM*210 1320 GOTO1110 :REM*35
SR DN}{3 CRSR LFs)*,-{CRSR :REM*130 1330 PRINT"{SHFT CLR)" :REM*45
UP)" :REM*167 1060 PRINT"(CRSR DN){5 CRSR RTs :REM*188
850 N$="{CRSR UP}{CRSR RT){COMD :REM*58 1340 IFR>8THENPRINT"(HOME){3 CR
8}{SHFT H){SHFT I){SHFT J} :REM*210 :REM*227
(CRSR DN){4 CRSR LFs){SHFT :REM*237 :REM*227
F}{SHFT D){SHFT A){SHFT K} :REM*58 1350 IFR>5THENPRINT"(HOME){3 CR
(CRSR DN){5 CRSR LFs){SHFT :REM*249 :REM*249
G){SHFT B){SHFT E){SHFT C){ :REM*8 :REM*249
SHFT L}{CRSR DN){4 CRSR LFs :REM*8 :REM*249
}{SHFT M){SHFT N){SHFT O}{2 :REM*8 :REM*249
CRSR Ups)" :REM*187 1080 PRINT"(CRSR DN){5 CRSR RTs :REM*8 :REM*249
860 Q$="{CRSR UP}{CRSR RT){COMD :REM*205 :REM*161
8}{CRSR RT){SHFT H){SHFT P} :REM*161 :REM*161
}{SHFT T){SHFT J}{CRSR DN){ :REM*161 :REM*161
5 CRSR LFs){SHFT F}{SHFT U} :REM*161 :REM*161
}{SHFT D){SHFT A){SHFT K){C :REM*161 :REM*161
RSR DN){6 CRSR LFs){SHFT G} :REM*161 :REM*161
{SHFT B){SHFT V){SHFT E){SH :REM*161 :REM*161
FT C){SHFT L}{CRSR DN){5 CR :REM*161 :REM*161
SR LFs){SHFT M){SHFT Q){SHF :REM*161 :REM*161
T S){SHFT O}{2 CRSR Ups)" :REM*161 :REM*161
870 PRINT"(SHFT CLR)"SPC(11)"(C :REM*15 :REM*161
OMD 2)#!#!#!#!#!#!#!#!#!#! :REM*139 :REM*161
880 PRINTSPC(11)"#!{14 SPACES)# :REM*153 :REM*161
!" :REM*153 :REM*161
890 PRINTSPC(11)"#! MONEY{2 SPA :REM*145 :REM*161
CES)GAMES #!" :REM*145 :REM*161
900 PRINTSPC(11)"#!{14 SPACES)# :REM*173 :REM*161
!" :REM*173 :REM*161
910 PRINTSPC(11)"(COMD 2)#!#!#! :REM*225 :REM*161
#!#!#!#!#!#!#!#!#!#! :REM*225 :REM*161
920 C$(1)="PENNY":C$(2)="NICKEL :REM*219 :REM*161
":C$(3)="DIME":C$(4)="QUART :REM*219 :REM*161
ER" :REM*219 :REM*161
930 PRINT"{2 CRSR Dns){2 SPACES :REM*93 :REM*161
}"P$"CRSR DN)"C$(1):GOSUB :REM*93 :REM*161
1510 :REM*93 :REM*161
940 PRINT"{2 CRSR Dns){2 SPACES :REM*7 :REM*161
}"N$"CRSR DN){CRSR RT)"C$( :REM*7 :REM*161
2):GOSUB1510 :REM*7 :REM*161
950 PRINT"{2 CRSR Dns){2 SPACES :REM*1 :REM*161
}"D$"CRSR DN){CRSR RT)"C$( :REM*1 :REM*161
3):GOSUB1510 :REM*1 :REM*161
960 PRINT"{2 CRSR Dns)"Q$"CRS :REM*69 :REM*161
R DN){CRSR RT)"C$(4):GOSUB :REM*69 :REM*161
510 :REM*85 :REM*161
970 POKE54296,0 :REM*85 :REM*161
980 PRINT"(COMD 8){HOME}{13 CRS :REM*239 :REM*161
R Dns)"SPC(25)"HIT ANY KEY" :REM*239 :REM*161
990 GETANS:IFAN$=""THEN990 :REM*239 :REM*161

:REM*183
HT "NA$" (CTRL 2)"AV" (CTR
L 5)CENTS":R=R+1 :REM*18
GOTO1280 :REM*181
PRINT"(HOME){11 CRSR Dns){
COMD 6}NO "NA$" IT IS (CTR
L 2)"AV" (CTRL 6)CENTS":W=
W+1 :REM*188
PRINT"(COMD 2){2 CRSR Dns)
HIT ANY KEY" :REM*27
GETANS:IFAN$=""THEN1290
:REM*171
IFPEEK(653)=4ANDPEEK(197)=
57THEN1600 :REM*130
CO=0:AV=0:TC=TC+1:IFTC=10T
HEN1330 :REM*217
GOTO1110 :REM*35
PRINT"{SHFT CLR)" :REM*45
IFR>8THENPRINT"(HOME){3 CR
SR Dns){CTRL 5}GREAT JOB {
CTRL 2}"NA$" (CTRL 5)YOU G
OT (CTRL 2)"R" (CTRL 5)RIG
HT.":GOTO1550 :REM*237
IFR>5THENPRINT"(HOME){3 CR
SR Dns){CTRL 5}WAY TO GO {
CTRL 2}"NA$" (CTRL 5)YOU G
OT (CTRL 2)"R" (CTRL 5)RIG
HT.":GOTO1550 :REM*249
PRINT"(HOME){3 CRSR Dns){C
TRL 5}YOU GOT (CTRL 2)"R"
(CTRL 5)RIGHT.":GOTO1550
:REM*205
STOP :REM*161
PRINT"(HOME){8 CRSR Dns)"S
PC(24)"(COMD 8)?{CRSR LF)"
:POKE204,0 :REM*93
GETANS:POKE207,0:IFAN$=""T
HEN1390 :REM*107
POKE204,1:PRINT" :REM*181
IFPEEK(653)=4ANDPEEK(197)=
57THEN1600 :REM*81
V=VAL(ANS) :REM*209
IFV<1ORV>6THENPRINT"{3 CRS
R Ups)":GOTO1380 :REM*203
IFV=1THENTV=10:FL=1
:REM*249
IFV=2THENTV=20:FL=2:REM*39
IFV=3THENTV=30 :REM*73
IFV=4THENTV=50 :REM*123
IFV=5THENTV=75 :REM*213
IFV=6THENTV=100 :REM*195
RETURN :REM*27
POKE54296,15:POKE54277,9:P
OKE54273,110:POKE54278,9
:REM*59
POKE54276,17:FORT=1TO150:N
EXT :REM*227
POKE54276,16:FORT=1TO500:N
EXT:RETURN :REM*179
G=VAL(G$) :REM*46
PRINT"(3 CRSR Dns)WANT TO
PLAY AGAIN <Y/N>?" :REM*190
GETANS:IFAN$=""THEN1560
:REM*184
IFAN$="Y"THENCLR:GOTO830
:REM*84
IFAN$="N"THEN1600 :REM*192
GOTO1560 :REM*18
1600 END :REM*72

```