FINAL TEST
COMPUTERS IN THE CLASSROOM
U.A.S.

Name.....MARTIN BALESTLE.....
Date.....SEAT 5TH 1985.....

A+ Paper!

A+ Cool

Answer the following questions on a separate sheet of paper. Staple this cover sheet onto them, and submit the completed test to Bill Johnston by the end of next week.

1. ✓ Make a program using LOGO that can be used to explain, reinforce or teach some concept to your class. If you feel that the grade you teach limits your ability to fully explain the question, pick any grade level that can apply.

2. ✓ Pick a program that you have evaluated and explain how you could use it for or in your class. Include such things as:
a) what concepts does it teach or reinforce?

b) how much teacher interaction is necessary?

c) what age level would you use it for?

d) what are the strong characteristics of the program?

e) what motivational factors are built into the program?

f) does it have any weaknesses and if so how would you correct them if you could (how would you make it better?)

3. ✓ Pick one bad program and explain why you came to that conclusion. You may wish to use some of the criteria in question number 2, to answer your question.

4. ✓ Demonstrate your ability to use the BANK STREET WRITER by answering this question using the word processor.

--Explain how you could incorporate the BANK STREET WRITER into some part of your curriculum.

A Note Concerning Software Evaluations

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The following considerations should be taken into account since they will let place the reviews in the correct, or at least more information-complete, context:

1. The programs were reviewed used a Monitor II screen, thus ruling out all advantages the programs might profit from the use of color.

2. The selection for review of both programs was done on a basis of limited time availability and not to a particular observed success or rejection rating from any given population, either student or faculty. However, it was felt that one of the programs was found more appealing than the other to a majority of users. Both programs have worthful aspects and both have - to differing degrees - weaknesses. However, it was judged unfair to brand anyone of them as completely 'bad' or competely 'good'.

3. All the suggested improvements do assume that it might have been the original designer's desire to produce a better program but incorporating the mentioned enhancements would make the program either too large to fit into a microcomputer or too expensive to produce. In other words, that it might not be economically/technically feasible as of 1985 to produce a super program that advantageously uses technological resources, configures remarkable educational feats and at the same time is able to produce a careful list of students's performance, all within a school-marketable price framework.

Software Evaluation

PROGRAM: Data Pursuits/Countries of the World

COMPANY: Grolier

REVIEWER: Martin Balestie

PROGRAM ABSTRACT: The Countries of the World disk contains a file with 168 records and challenge questions including all the independent countries of the world. You can search the file to find information about the different countries and to answer the challenge questions included in the disk. You will need a notebook or "log" to record your answers to the challenges. The program does include a certain amount of on-line instruction, but finally directs you to the Friendly Filer program and tutorial. According to this, you should learn how to use the database program before you go on to use this data file. Since it's completely menu-driven there shouldn't be too much trouble attempting to use the program without actually resorting to the Friendly Filer disk. You can either search the file in two ways: sorting or selecting. Sorting means all records are arranged in either alphabetical or numerical order, for example, sorting by area will get you a list of countries ranging from the smallest to the largest. Selecting records means singling out certain records according to given criteria, i.e., a given language, a given religion. Records can then be displayed and/or printed using all or part of the record's fields.

A. CONCEPTS AND TOPICS

Countries of the World can be used to teach and reinforce the following concepts:

Use and Applicability of a electronic database: select, sort, search, etc.

Reference Skills (information look-up)

Geography

It could be used in conjunction with other programs such as those contained in MECC's Social Studies Series (re: States and States1 programs) to offer a computer lab on Geography. Additional Geography-related files - as well as any other subject - can be created using the Friendly Filer program and querying them in a similar fashion.

B. TEACHER INTERACTION

Let us picture how the program might work and fit into a classroom format. Students will be handed a copy of the Countries program, initiate the program, start accepting Challenges and using a note-pad or better still the subject's notebook, start writing down the answers they derive from using the database. A possible utilization scheme would be to ask the students to solve a minimum of ten Challenges and hand-in the answer sheets. This paper could be then graded, and later returned to students. However the program by itself doesn't contain enough built-in standalone characteristics to provide a guided or stuctured walkthrough. The tree of screens isn't actually a genuine tree and some sub-menu cycling is present. Therefore, some teacher supervision is needed.

C. GRADE LEVEL PLACEMENT

This program can be dually used from Middle School up to High School, whenever the Social Studies teacher wants to stage a computer lab, or when the Computer Science teacher wants to present file handling concepts. Further development can be made in conjunction with the Friendly Filer program. For example, the Friendly Filer disk contains a sample file of 58 U.S. presidents and this could be also used for similar purposes. The Friendly Filer is a typical example of a piece of software that can be particularly customised to suit any subject: Geology, Chemistry, Spelling, etc.

D. STRONG CHARACTERISTICS

The main idea behind this program is one of the best implementations of coordinating several subject into a single educational package and by itself makes the evaluation worthful. The integrated approach does help both teachers and curricula developers to integrate software pieces into the 'traditional' curriculum. It does provide an introduction - preview - of what database searching might be and it shows a very suitable illustration. It is indeed very easy to use and the fact that there is a coordinated file handler (Friendly Filer) that can be used for any purpose, makes this program very interesting. Once

the student is familiar with both the fundamentals and applications of data management she/he can apply the filing concepts and set up similar databases on any other subject (Geology, Spelling, etc.) A reasonable amount of user control is included, for example to escape out or back up upon mistakes (the programs prompts the user to confirm her/his choices). Selection and display by full and/or partial fields allow for elementary information control and query flexibility. You must keep in mind that this isn't Dbase II.

E. MOTIVATIONAL FACTORS

This program as is, includes a very meager portion of motivational features. The appealing level - rating - of the different Challenges varies greatly, some of them are successfully conceived and some of them are not very sophisticated.

Simulating a situation just by making a brief narration - about ten lines - doesn't help trigger students' interest. Besides, the DO YOU KNOW portion should be reviewed to either include more striking facts and/or enhance the current contents.

It is worth noting that the program includes two levels of difficulty. In particular, the Super Challenge section presents the student the need to recur to a more 'intelligent' file searching technique - sorting - in order to efficiently answer the questions.

F. IMPROVEMENTS

Countries of the World presents an excellent idea but, I guess, does not exploit it to its full potential. In other words, the idea to combine geography with reference skills and database represents a considerable - as well as commendable - attempt to integrate several subjects (topics) into a single product. However, there are certain aspects that make this product fail to attain the highest marks. Among them, it can be pointed out the following:

No use of the full graphics capabilities of microcomputers is done at all. In an area - Geography - where other competitive

teaching media - such as maps, and charts is very often presented Countries even fails to incorporate a single picture. This would consideraly boost the program's appeal.

Doesn't exploit the possibility of 'immediate-feedback' by checking on the spot the student's answer and therefore reinforcing the actual learning process. Therefore no 'reward-offering' learning strategy is ever used.

The program doesn't provide any means to keep track of how students fared (record-keeping).

No use of sound capabilities is ever employed.

The program cannot be used on several computers at the same time without buying multiple copies. Documentation consists of a thin booklet but contains most relevant facts, in order to use the disk without major inconviniences.

Finally, some remarks about the program's actual performance. Whenever analysing either searching or sorting programs, it is always a good idea to try out some speed 'benchmarks' to see whether this might somehow unbalance the uniform flow of instruction. The program was not found to be a real speedster. This however, cannot be wholly attributed to the software but to the hardware as well. Searching the 168-record file by languages (= Dutch) took about 1 min 20 secs. The combined search of languages (= French) and religion (= Catholic) took employed similar timings. Sorting the file by name took 10 secs, but sorting by population took about 2 min. (that means twelve times slower!!). If sorting has to be frequently performed this 'slack' time might invite younger minds to do something else in the meantime, not necessarily related to the subject. Thus, potential disruption might surface. Amen! (it well!)

This is a super evaluation which demonstrates that you have an excellent understanding of the makings of a good or not so good piece of software.

SOFTWARE EVALUATION

PROGRAM: The Secrets of Science Island

COMPANY: Grolier

REVIEWER: Martin Balestie

PROGRAM ABSTRACT: The Science Island disk consists of a very atractive program that combines several features. The objective of the program, embedded in a game format, is to make students provide the answers to a series of questions concerning General Science knowledge, ranging from Astronomy topics to Biology and History. The student has to drive a car, using the IJKM keys on the Apple II+ and the arrow keys on the IIe (this selection is done automatically by the program) and stops at roadside signs to get his/her questions. Solving these correctly enables him/her to earn points and build a sheltering country shack before an approaching hurricane arrives. This level either ends in failure to meet the deadline (hurricane destroys half-built shack) or success, in which case the player is presented the option to continue playing by trading in his/her country shack for a half-built townhouse. Care must be taken to avoid crashing onto sidewalks as well as dodging the anger of irascible trolls. There's a timing element going on at all times which adds to the game's excitement.

A. CONCEPTS AND TOPICS

This program touches a variety of topics and subjects to a varying degree of depth. It helps reinforce and review several little known or peculiar aspects of General Science. Among them several Astronomy questions are featured (i.e. What is the distance in miles between Earth and Moon? Which is the biggest planet? etc.) as well as other themes (Evolution Theory, Photosynthesis, etc). It is a good program to sharpen up student's reference skills when using encylopediae and reference material. Since it covers a wide assortment of disciplines it is not easy to focus the program onto a particular subject. In other words, the questions posed far exceed the contents of a regular single subject book. Therefore, use of the matching documentation greatly helps the student to quickly find the answers to the questions to be found throughout.

B. TEACHER INTERACTION

Let us describe how this program might fit in a regular classroom situation. Student is handed a copy of the Science Island disk and either the Resource booklet or enough reference material to be able to answer questions - instructor should revise/provide adequate references - ; tries to make his/her way thru the program and hopefully completes the first of the two stages, after providing correct answers to the Memstone questions. If students do have the proper reference information (the booklet or a very complete encyclopedia) it seems that little or no supervision at all is needed in order to run thru the program successfully. The program however doesn't keep track of which questions were completed successfully by a 'pass'-earning student. The number of successful hits can be derived though from the known fact that in order to build the shack more than ten correct answers have to be supplied. However, this makes grading -if applicable - a little bit hard.

C. GRADE LEVEL PLACEMENT

This program can be flexibly used from Middle School up to High School whenever there is a need to reinforce/instil good library habits and reference skills.

D. STRONG CHARACTERISTICS

Science Island is an highly educational program that provides instruction while maintaining on a very high attention rate. It not only uses graphics effectively but movement as well to catch your attention. In addition, it scores good in the fact that instead of actually ignoring other information 'carriers' such as traditional paper (textbooks, encyclopediae, etc.) it actually directs the students to efficiently use them. Besides, at any given time the student can take a break from the activity and later resume under his/her name. This is a good point in situations where there are not enough computers and turns must be taken to use the keyboards. A nice technical feature of this

program is to automatically adjust to the keyboards of different models of Apple IIs. The use of either the IJKM keys or the IIe's arrow keys provides a strategic opportunity to exercise a good deal of eye-hand coordination.

E. MOTIVATIONAL FACTORS

Science Island does use a reasonably good portion of graphics and motion. The factor that instruction is framed within a game-like format keeps many students - as well as teachers - glued. The use of either the IJKM keys or the IIe's arrow keys for moving the small car greatly provides a strategic opportunity to exercise a good deal of eye-hand coordination. The timing element also contributes to steadily propel the program's pace.

F. IMPROVEMENTS

Although the selection is quite good, the irregular stating some of the questions make the program loose some points. For example, the following question is posed:

"Hello. My name is Eratostenes. How many years ago did I prove the Earth is round?"

It seems that the answer to this question depends on the particular YEAR the program is run. This problem surfaces again in the second level, when a similar question is posed regarding Darwin's statement of his Evolution Theory.

Since no record of students' performance is kept no precise knowledge of which were the questions that were successfully completed and which constituted 'hard' ones. Thus, unanswered questions maybe worth explaining, are missed.

The fact that several different subjects are touched throughout doesn't provide a thorough exploration of a particular topic. It would be a good idea to develop a similar piece of software but covering narrower boundaries but maybe delving a little bit deeper into that particular discipline.

Great! With your understanding of what makes a program better - you should start your own software production!

The Bank Street Writer

According to (1), "word-processing is generally thought of in the context of administrative uses but there are good reasons for believing that some pupils should be encouraged to use word-processing as a way of building up their writing skills. A major difference between creating a document with pen or pencil and creating a document with electronic word-processing facilities is the ease with which a first attempt can be edited and improved. The improvement is immediate and the process of improvement does not introduce new errors (which is what frequently happens when pupils with poor writing skills are asked by their teacher to produce a new and improved version of a first attempt at an essay). Word-processing is now available on microcomputer for a - reasonable - price. "

There are several sources that indicate that the teaching of keyboarding and word processing skills is something that has to be outrightly included and the earlier the better. According to (2), "schools should consider teaching keyboarding in elementary school. ... By obtaining this 'basic skill' early, students will learn from the beginning to write with word processors".

We could distinguish two aspects of the use of word processing programs in the school environment:

CATEGORY	APPLICATIONS
faculty use	lesson plans letters reports research papers curricula development contributions to the School's newsletter
student use	Language Arts papers (ESL, regular English) Literature reports and essays students' newsletter Spelling and Composition papers etc.

Since these involve different needs: lengths, styles and formats, etc. as well as different proficiency levels, maybe also more information control needed, the same word processing program may not address or suit evenly all categories. Furthermore,

even in the last category there might be room for advanced users such as Seniors and first-steps users in Elementary level, leaving an array of intermediate users. Therefore the choice of a single all-around word processing program does involve several trouble spots. The BSW program is a elementary word processing program that is both very easy to learn and to use. However, this is achieved at a certain cost: it doesn't allow the achievable data control other more sophisticated programs offer. For example, the amount of information that can be displayed is restricted by the big lettering used. Serious text processing often has to deal with a great deal of information that has to be organized, and re-organized several times, using different formats, punctuation, etc. Besides, it is desirable to be able to replicate in the screen what is going to show up in the printer. The use of eighty column lines is not something that is included for the sake of the user's fancy. Another flaw is the need to switch back and forth between the writing mode and the cursor moving mode (at least in the version tried). In my opinion whereas the Bank Street Writer can be used advantageously to introduce students to elementary word processing, it falls short when it comes to systematically deal with large amounts of text. There are several programs, that are not that hard to use and that do maintain several features of 'professional' word processors.

that has been revised --

At the Middle School level Bank Street Writer could be used in conjunction with Bank Street Speller to enhance Language Arts courses. A highly integrated offering might also include keyboarding sections using Typing Tutor II and III, or the KEYSTROKES keyboarding program, spelling tools such as MECC's Spelling Series (Vol. 1 and 2), and composition activities using BSW.

I used Typing Tutor for the past 6 weeks - 2 periods per class per week, and the kids stuck to the task like glue! It worked great!

At the High School level, probably a better bet would be the use of a more sophisticated word processing program such as AppleWorks or Wordstar. In this case the offering would be presented as a combination of modern office tools covering both keyboarding and word processing. Being this a standard offering and therefore guaranteeing a continuous flow of word processing assignments, the rest of the departments (English, Social Studies, etc.) could increasingly request students to profit from the acquired proficiency by requiring them to hand-in reports and research papers using the word processors. Traditional subjects like for example English, might also gradually add computer-based courseware such as The English Grammar Examiner and MECC's Parts of Speech to offer computer labs on pertinent topics.

References

(1) Iain Smith "Computers in the Classroom" IS Journal

(2) Interview with David Moursund School TechNews (October '84)

(3) "Keyboarding Instruction" Business Exchange

(4) Jean Roger "Computer Use in PreCollege Education" IEEE Computer

(5) Dr. Gary Bitter "The Road to Computer Literacy" Electronic Learning's Computer Literacy Article Series

(6) Rogers, Moursund & Engel "Preparing PreCollege Teachers for the Computer Age" Communications of the ACM March '84

You have a deep understanding of computers and the related software and technology. The future is indeed promising for someone with a talent such as yours. Keep up the excellent work in your pursuits and continue to share in an ever meaningful way, your knowledge of the subject.

This is a superior paper!

Have a great future!

Tore