

ENTERPRISE

P R O G R A M S

ANIMAL VEGETABLE MINERAL

Can the computer guess
the object you've thought of?



Bourne Educational Software

- **Provides endless enjoyment as children 'teach the computer'.**
- **Encourages children to find out differences between objects.**
- **Helps encourage the use of reference books.**
- **Introduces the use of computers to store information.**

SPECIAL FEATURES

- **Motivates children through visible count of objects 'taught'.**
- **Information can be built up for over 100 objects.**
- **Stimulates animated discussions as to the difference between an alligator and crocodile, iron and steel, etc.**
- **Features the usual BES Monitor allowing easy access to childrens' actual entries.**
- **Full editing facility allowing easy changes at any time.**
- **Complete with fully explanatory booklet.**
- **Widely used in schools.**

Suitable for all ages of 7 years and upwards.

ANIMAL/VEGETABLE/MINERAL

The child is requested to think of an object that is either animal, vegetable or mineral. The program will now try to guess what the child has thought of. It asks questions about the object and then guesses what the object is.

If the program does not know the object then the child can 'teach the computer' about the object. The child also needs to give the program information to tell the object apart from the other things it knows.

At the start the program knows only a little, so it is easy to teach the computer things. The more it knows the more the need to look things up! The information stored can be saved and reloaded at any point in order to continue to build up what the computer knows at a later date.

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INTRODUCTION

The program has been designed to allow a child to "educate" the computer by entering a series of questions and objects. During this sequence a child is encouraged to think about the origins of objects and to learn about the differences between them. The computer responds by thanking the child for teaching it to tell the difference between the objects entered.

It should be noted that the computer only knows six objects at the start of a new database, so leaving the stimulating task of building the database to the child. As the database grows the computer asks more and more questions about the object. It is best used with children of between the ages 7 and 13 years where it generates interesting discussion and encourages the use of reference books.

LOADING

Ensure the BASIC cartridge is installed in the ROM bay on the left hand side of the machine. It is best to press the red RESET button on the rear of the computer, quickly twice in succession before loading. This will reset the computer which will show the flashing "ENTERPRISE" sign. The cassette should be placed in the cassette recorder with the label upwards/outwards and the tape wound back to the beginning.

Simply press the green ENTER key followed by the blue FUNCTION 1 key. Then press the PLAY key on the cassette recorder. Note that it may be necessary to adjust the volume control of your cassette recorder in accordance with the computer manual recommendations to obtain the right level for loading the program.

Loading of the program takes about three minutes in all.

Having completed loading, the program displays the title and copyright screen for a few seconds. No entries are necessary and the program will automatically move on to the initial screen.

DATABASES

A database is a store of information. It can be read - the information retrieved, or written to - the information stored. In this version of Animal/Vegetable/Mineral the database is stored on tape.

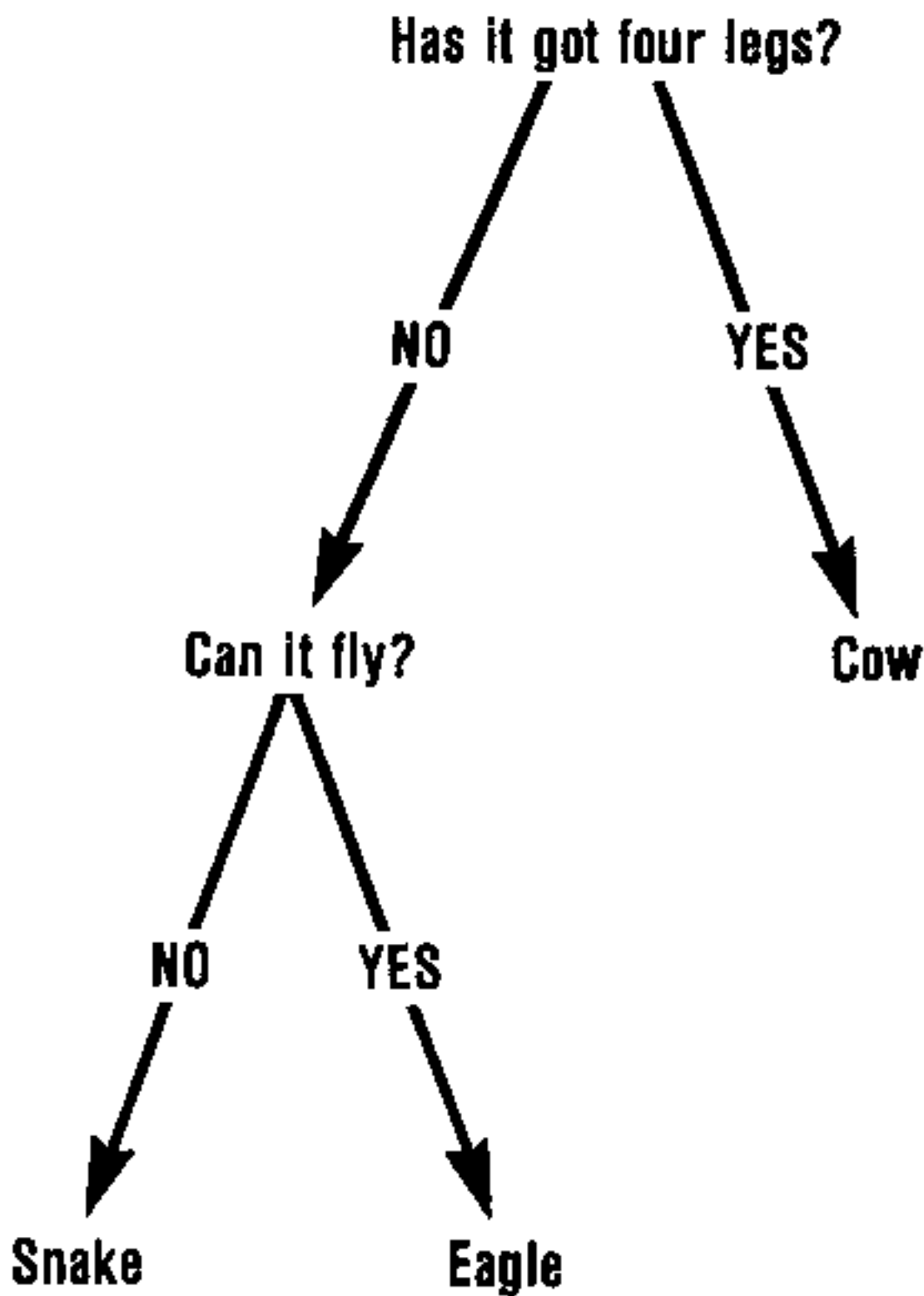
Since the program tape is 'write protected' you cannot write a database to it. Consequently, you will need a separate data tape. It is worth labelling it clearly as an AVM Database tape. Note that several different database files can be on the one tape at any one time.

MENU OPTIONS

1. Start - The Main Program

The fundamental concept of the program is the branching tree. It operates by asking a series of questions and then trying to guess the object that the child has thought of. If the computer gets the object wrong, it then asks the child to enter the object and a question to differentiate between it and the wrong guess. The child therefore 'teaches' the computer some more information.

This is an example of a branching tree:



Try to work out what the tree will look like after using the program, and adding more objects.

In doing so, the child having thought of an object needs to find out or know the difference between it and the computer's guess. This encourages the use of reference books to find out such information. The program thus provides an incentive to learn.

Having started by entering 1 (followed by ENTER), the child will then be asked to enter his/her name. This can be done in upper, lower or mixed case letters. If an error is made it can be corrected before pressing ENTER, by using the ERASE key to work back to eliminate the error. The child is then asked to think of an object. The object needs to be either animal, vegetable or mineral.

After a short pause to give time for thought, the program waits until the child is ready. The sign <SPACE> appears and the SPACE bar must be pressed to move on after an appropriate object has been decided upon.

The computer then asks whether the object is either animal, vegetable or mineral. This question can itself provoke thought and research, e.g. is oil animal, vegetable or mineral?

Having chosen the appropriate category, (followed by ENTER - this operation will be assumed in future), the computer then asks a series of questions in an attempt to guess the object.

The questions and computer guesses are made with appropriate comments to improve the dialogue between child and computer. The computer accepts Y, y, YES, yes, Yes, N, n, NO, no, No as responses. Should the computer fail to guess the object the child has

thought of, then the child is asked to enter it together with a question to differentiate it from the computer's guess and whether the answer for a particular object is yes or no.

It will become apparent early in the program that questions need to be entered which can be answered by either yes or no; for instance, "is it black?" is admissible whilst "which is black?" is not. Neither of the objects should be mentioned in the question.

Upper or lower case letters may be used, the ERASE key may also be used to correct mistakes. After the entries, the child is asked if he/she would like to change any entries. This gives an opportunity to go back and correct them should the ENTER key have been pressed inadvertently. If it is necessary to change an entry, replying "Yes" to the question leads to the original entry appearing on the line. If it is acceptable then just press ENTER, otherwise use the ERASE key and re-enter.

NOTE: the dashes on the entry line are there to provide an idea of how long an entry may be. They do not have to be erased before ENTER is pressed.

At the end of the cycle, the child is shown how many objects the computer knows. As the child enters more the count visibly increases, thus providing additional motivation.

The child is then asked whether he/she would like another go. If the answer is yes the computer thanks the child and then begins the cycle over again. If no, and this should be the case if another child is about to take over, the program reverts to the initial screen. Another child starting the program will then be asked

to enter his/her name and a new monitor record is started (see section 4).

Pressing STOP will usually return the user to the initial screen.

2. Storing Memory to Tape

If at any time you wish to break off a session but would like to continue to build the database at some other point in time, then you will need to save the database to tape. If you are building a large database then it may also be a wise precaution to occasionally save it since if there was a power failure all would be lost. Saving the database occasionally acts as an 'insurance policy', and in fact develops in the child good computer practice.

The database must be recorded on a separate data tape since the program tape is 'write protected' - you cannot record on it. When the storage option is chosen the computer operates to catalogue the tape in the cassette recorder when PLAY is pressed.

If a new cassette is being used, or if you are sure that the tape is correctly positioned press the computer STOP key. This takes you back into the storage option. If you are using a tape with existing files which you want to avoid overwriting, use the PLAY together with, if necessary, the FAST FORWARD and REWIND buttons on the cassette recorder. The names of the files on the tape will appear on the top line of the screen. Here again, it may be necessary to adjust the volume control of the cassette recorder to obtain the optimum conditions. This gives you the ability to position the tape exactly where you want to record the file. Normally this would be after the end of the last

recorded file. Beware of overwriting files if there is another recorded after it on the tape since if the database is much larger, it will use up more tape and there is a risk of overwriting the beginning of the next file.

Having found the correct position press the computer STOP key. A file name is requested. Spaces in file names should be avoided since it can be confusing, especially if the space key is at the beginning or end. For this reason, a file name with a space in it will be rejected. It is suggested that if two words are used then separate with a hyphen or slash. It is recommended that each time a file is recorded that its name is written on the cassette card together with the tape counter number for the start and finish - e.g. FILE 160 195

Type in the file name (followed by pressing ENTER). Press the RECORD and PLAY keys on the cassette recorder - then press ENTER. The database will then be recorded onto the tape.

When the computer has finished recording, press STOP on the cassette recorder. Pressing space will then return you to the initial screen.

3. Loading Memory from Tape

Place your data cassette in the cassette recorder and then enter the file name (exactly as was used when recording the database) - followed by ENTER.

This function operates similarly to the store option in that it first gives an opportunity to position the tape correctly before attempting to load.

Use the PLAY, REWIND and FAST forward keys to position the tape in front of the file you wish to load.

When PLAY is pressed, the names of the files stored on the cassette will appear at the top of the screen as they are found. When the tape is correctly positioned, press PLAY to load the database.

The program will indicate when the file has been successfully loaded. If the list is not loaded, then this will be shown on the screen. Common causes for this are trying to load a BASIC program when the computer is expecting a database file. In this case, ensure that you only try to load an Animal/Vegetable/Mineral database that you have previously recorded. Again, don't forget that you may have to adjust the volume control to load successfully. Pressing SPACE leads back to the initial screen, whereupon a further attempt can be made.

4. The Monitor

All BES programs which are interactive contain a performance recording system or monitor. Using this, parents, teachers or the child can see how well a task is being performed.

Each time a new name is entered after starting the program from the initial screen a new monitor record is created. The facility will hold the record of the last six children (after number six, number seven will be recorded over number one, eight over two, etc.). The information recorded is the time taken, the number of questions answered and the number of entries made. As each record is displayed, there is the option of moving to the next record or to examine a child's entries. These record the category, the two objects and the question entered. The two objects are those that the

child was asked to differentiate between when entering the question. Thus it is possible to review the entries in detail.

However, in the event that the memory has been erased (see next section) the monitor records will also be erased. Similarly, if a new database is loaded then the monitor is erased along with the present data in memory.

5. Erase Memory

Should you at any time wish to clear memory and start afresh, simply choose menu option 5. Note that in doing so, you will lose all information that has been entered into the database.

To prevent inadvertently erasing you are required to confirm erasure by replying YES.

6. Review and Edit

Since the program uses the branching tree approach there is a danger that a badly chosen question could block branches of the tree. For example, if a child entered a question that did not have a yes or no answer, then it would make a nonsense of all that followed. Both the computer and child would get confused! In order to overcome this, there is a review and editing option. Care should be exercised in use since alteration of the subject matter of the question could invalidate the tree.

For example, if the question "does it have stripes?" had "yes" for an answer leading to a zebra and "no" leading to a cow, then changing the question to "does it have four legs?" is obviously incorrect and destroys the logic. This is an extreme example but illustrates the

need for care.

As a consequence of this problem, when reviewing questions in a particular category, there is also the facility to review all the objects that would be effected by a change to the displayed question. They are in two columns, those that lead from a "yes" answer and those that lead from a "no" answer. Thus, a question can be constructed to keep these answers valid should the displayed question be invalid. The more objects that are dependent on the question the harder it is to find a new question without having to edit dependant objects.

menu a choice of category is made. Having made your choice, the first question in the appropriate category is displayed. The following options are then available:

- N - to move on to the Next entry which is then displayed.
- E - Edit the question or object shown. Simply use the ERASE key to work back and then re-enter. Press ENTER to indicate completion.
- R - to Review the branching tree nature of the program, listing the objects that lead from the displayed question.

(Note that when an ITEM is displayed then only the first two of the above options exist).

It is more important to review the questions at an early stage in the building of a database since a question that occurs in the first five has a greater chance of being encountered whereas one that occurs as the fifteenth is relatively unlikely to be asked!

Note that as the database grows the chance of

encountering a specific object also grows less and less.

The combination of the monitoring facility and the review and edit option is extremely powerful. Using the monitor you can see all entries made during the last session and see if any objects or questions need to be altered. It allows you to watch and assist children should they be having difficulty. As a result, a child who is less able than others can join in the exercise without destroying other childrens' work.

7. Set Sound or Tape Level

1. Set Sound Level - choice of this option allows the user to adjust the level of sound on a scale of 0-10 according to the situation and user's requirements. Note that selecting 0 turns the sound off altogether.

2. Set Tape Level - this option allows the user to adjust the recording level to suit the "aux" socket of a portable cassette recorder or the "line-in" connection on a stereo cassette deck. Experiment with the recording level (VU) meters on your cassette deck if fitted to get the best results.

BES PROGRAMS

Animal/Vegetable/Mineral is one of a series of Microcomputer programs produced by Bourne Educational Software with the aim of making learning both easy and enjoyable. The programs are aimed at both home and school use, and are designed to enable children of the appropriate age range to operate them readily through common use of such items as the STOP key to return to starting choices; SPACE to move on to a next screen and so on.

BES programs are designed to be largely self explanatory, and follow similar styles. Children rapidly familiarise themselves with new programs, and can use them if required with the minimum of help.

Happy Numbers

A program to help children learn their numbers and count without need of reading skills. Attractive graphics and scoring make this a favourite with 3 to 5 year olds.

Happy Letters

The program to teach children to match small and capital letters both on the screen and on the keyboard. They love trying to stop the crocodile eating the fishes. Features attractive use of sound and colour as well as easy identification of problem letters for further practice. (Age 3-6 years).

Wordhang

This version of the traditional "Hangman" spelling game has been described as "...the Rolls-Royce of them all"! Features over 250 words plus the ability to enter your own words - either individually or as a group (ideal for that weekly spelling list!). Improves spelling at all ages of 5 years and upwards.

A common feature of most BES programs is the BES MONITOR system, which allows the teacher, parent or child access to entries made, so allowing identification of achievements or problem areas. This does not preclude the use in appropriate programs of a more simple and visible scoring system, which is designed to aid motivation.

THIS BOOKLET

BES programs always include explanatory booklets of this type to satisfy several aims. Firstly, to identify the objectives of the program, and to give guidance as to some possible uses of the program based on experiences during the extensive in-classroom and in-house testing period. Secondly, they are designed to give an understanding of the sequences encountered in the programs, since in many situations the time of access to the micro may be at a premium. Thirdly, the booklet will assist in using the substantial content of BES programs to the full, through reference to it before, during and after use of them on the micro.

In the event of any problems with the use of this program, or ideas as to improvements which could be incorporated, please do not hesitate to contact BES at the address on the back cover.

If the computer seems to have jammed, try pressing the LOCK key. This turns off the SHIFT LOCK and other locks. If this does not work, then try pressing the HOLD key. If all else fails, press the STOP key. This will return you to the initial screen.

Please note: Minor variations in specification may occur due to characteristics of different microcomputers and operating systems.



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