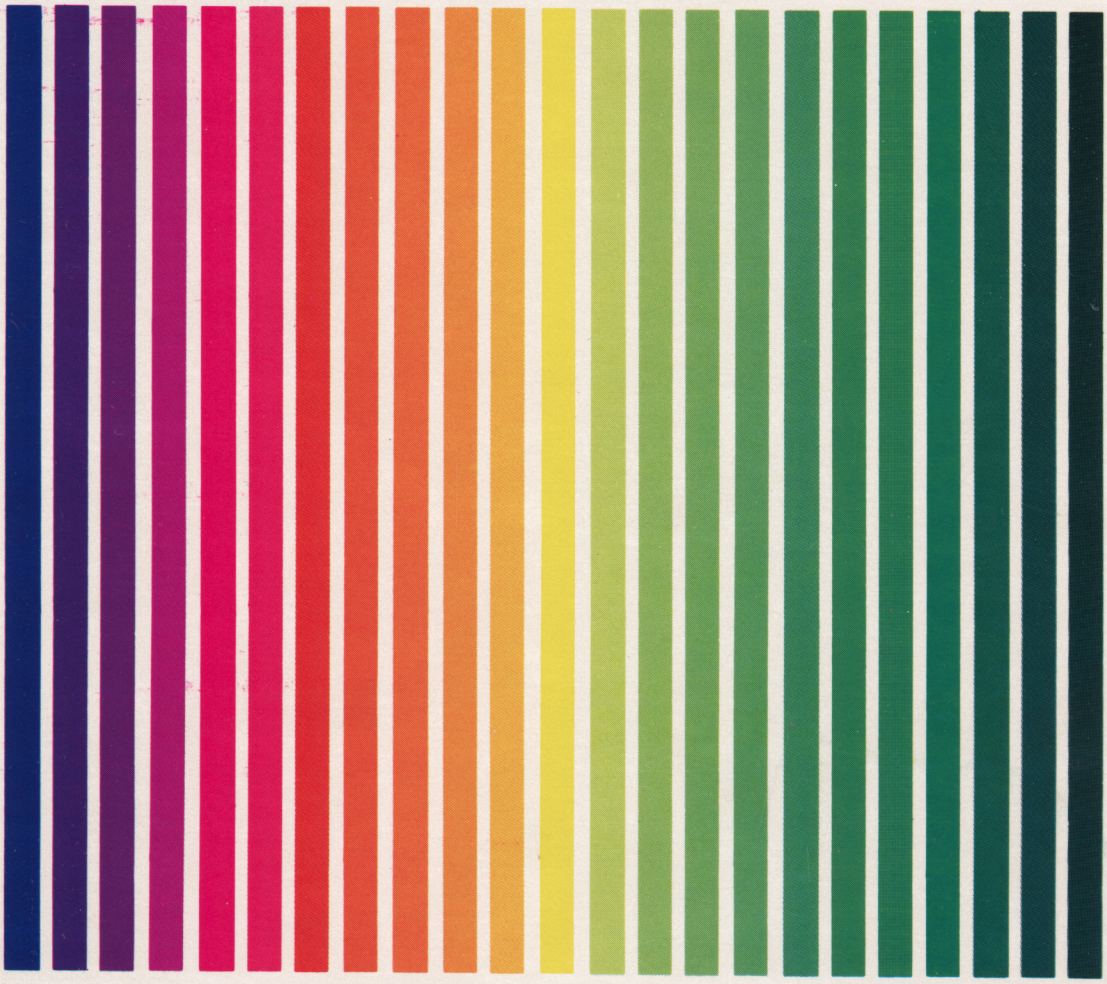
APX ATARI® PROGRAM EXCHANGE



Kathleen and Philip Bergh

I'M DIFFERENT!

Colorful workbook-style exercises for preschoolers

Diskette: 32K (APX-20183)

User-Written Software for ATARI Home Computers

Kathleen and Philip Bergh

I'M DIFFERENT!

Colorful workbook-style exercises for preschoolers

Diskette: 32K (APX-20183)

I'M DIFFERENT!

by

Kathleen and Philip Bergh

Program and Manual Contents ©1982 Kathleen and Philip Bergh

Copyright notice On receipt of this computer program and associated documentation (the software), the author grants you a nonexclusive license to execute the enclosed software. This software is copyrighted. You are prohibited from reproducing, translating, or distributing this software in any unauthorized manner.

Distributed By

The ATARI Program Exchange
P.O. Box 3705
Santa Clara, CA 95055

To request an APX Product Catalog, write to the address above, or call toll-free:

800/538-1862 (outside California)
800/672-1850 (within California)

Or call our Sales number, 408/727-5603

Trademarks of Atari

The following are trademarks of Atari, Inc.

ATARI®
ATARI 400™ Home Computer
ATARI 800™ Home Computer
ATARI 410™ Program Recorder
ATARI 810™ Disk Drive
ATARI 820™ 40-Column Printer
ATARI 822™ Thermal Printer
ATARI 825™ 80-Column Printer
ATARI 830™ Acoustic Modem
ATARI 850™ Interface Module

Printed in U.S.A.

CONTENTS

Introduction.....1

Required accessories 1

Contacting the authors.....1

Loading I'M DIFFERENT! into computer memory 2

Selection menu 3

Using I'M DIFFERENT!.....4

The control keys 4

The program in action.....5

Helpful information.....6

Suggestions 6

Advanced technical information 7

Quick reference sheet.....9

INTRODUCTION

OVERVIEW

I'M DIFFERENT! is an easily used, entertaining, one-player game designed to teach the concepts of "same" and "different" to preschool children. Using a joystick, the child draws a line to the one design that's not like the other three and then presses the red joystick button to check the answer. The program rewards correct responses by flashing colors and playing merry musical notes before it draws a a new set of pictures.

Programs in five difficulty levels range from differences in color or shape to classifying objects. With I'M DIFFERENT!, children from age three upward can practice hand-eye coordination, observation, classification, concentration, and other skills they'll need in a school setting.

This program is easy for children to use because it loads automatically. They can't damage it if they press any keys, including the BREAK key. If they press the SYSTEM RESET button, the program reruns itself.

REQUIRED ACCESSORIES

32K RAM
ATARI PILOT Programming Language Cartridge (CXL4018)
ATARI 810 Disk Drive
One ATARI Joystick Controller

CONTACTING THE AUTHORS

Users wishing to contact the authors about I'M DIFFERENT! may write to them at:

8723 104th St. E.
Puyallup, Wa. 98373

GETTING STARTED

LOADING I'M DIFFERENT! INTO COMPUTER MEMORY

1. Insert the ATARI PILOT Programming Language Cartridge into the left cartridge slot of your computer.

2. Plug your Joystick Controller into the first (leftmost) controller jack at the front of your computer console.

3. Turn on your TV set.

4. Have your computer turned OFF.

5. Turn on your disk drive.

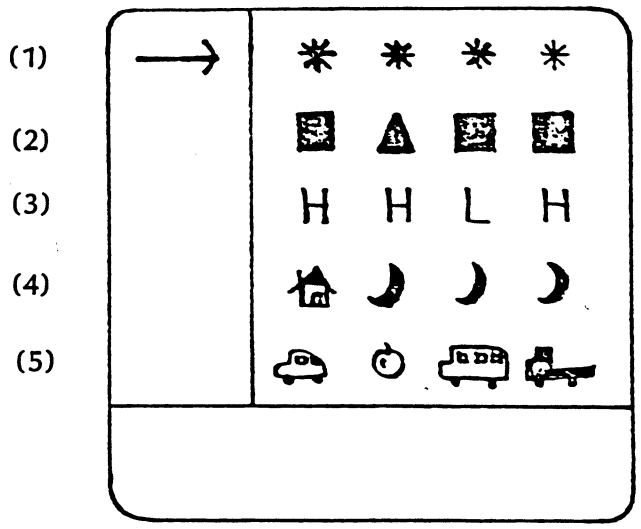
6. When the BUSY light goes out, open the disk drive door and insert the I'M DIFFERENT! diskette with the label in the lower right-hand corner nearest to you. (Use disk drive one if you have more than one drive.)

7. Turn on your computer. The program will load into computer memory and start automatically.

SELECTION MENU

After the program displays the title screen and plays a tune, two joysticks are drawn on the screen with a prompting message in the text window. If your child prefers to use his or her left hand, type "L". Then he can hold the joystick with the trigger button in the upper right-hand corner and press it with his right thumb. Typing "R" gives you the standard (right-hand) joystick position.

Next, I'M DIFFERENT! draws a menu. It looks like this:



The menu lists these program selections:

(1) COLORS - uses eight colors

(2) SHAPES - has eight shapes

(3) LETTERS - contains all 26 uppercase letters

(4) OBJECTS - draws 15 objects

(5) CLASSIFICATION - uses 24 designs in six categories

USING I'M DIFFERENT!

THE CONTROL KEYS

OPTION - to check color and hue settings

Pressing OPTION displays all the colors used in the program selections. Use this to option to make sure that the colors and hues are set properly. Then your child won't get confused, as he might when two colors look too much alike. The COLOR routine (the first selection on the menu) is the only level that requires you to adjust the TV set or monitor.

SELECT - to return to program menu

Use the SELECT button to return to the menu from the color test pattern or from a program selection. You must wait until the text prompt appears to make a selection.

On the menu, press the SELECT key or use the joystick to move the arrow to select the program you want. Push the joystick forward to move the arrow up, and pull it back to move the arrow down.

START - to load the program

Press the START button or the red joystick button when you've made your choice. A train drives across the screen on its way to load the selected program. Please be patient while the routine is loading into computer memory; the process is slow. If you select the same program again, it will simply rerun and it won't take as long.

THE PROGRAM IN ACTION

As soon as the loading is complete, the first group of four objects displays, and the program asks for a response. The child uses the joystick to draw a line to the design that's different. The line follows the player's command wherever he draws it. If the line touches the visible screen boundary, a beep sounds. You can tell from the lines how well children understand the concept. Older children also enjoy tracing their own lines over the designs . With the LETTERS routine, this can be a unique and enjoyable way to practice the alphabet.

Press the red joystick button to check for the right answer. It's not necessary for the line actually to touch the design. Just reaching the proper quadrant is enough to get a correct response. If the line leads to the proper quadrant, colors flash and a musical tune plays. If the line leads to the wrong quadrant, a two-note response sounds.

Next, a new set of objects displays. This pattern repeats until you press the SELECT key to return to the Menu, or press the SYSTEM RESET key to start the program over, or turn off the computer.

HELPFUL INFORMATION

SUGGESTIONS

Even very young children quickly learn to select, start, steer and check their answers unattended. However, they have a greater opportunity to learn characteristics and what those characteristics are called (for example, red, round, or square) if they can interact with a more experienced guide.

It's a good idea to discuss the color, shape, size, similarities, and differences of the designs while the child is playing the game. An increase in vocabulary, concentration, and observation skills will reward these efforts.

In the classification program, two similar groups – fruit and flora – are deliberately included. This opens the area of multiple criteria. The apple, pear, banana, and orange belong together because they're all fruit, they're all edible, and they all grow on trees. Yes, the mushroom may be edible, but in some ways it's more like the flower and the tulip.

In I'M DIFFERENT!, there's no score, no time limit, no competition, and no rush. The program is set at a slow speed so it's more compatible with preschoolers' motor skills.

ADVANCED TECHNICAL INFORMATION

None of the programs on the diskette can be run without storing the machine code routines properly in computer memory. To do this, the AUTORUN.SYS file executes the program named DIFFEREN.T, which reads the machine code in DIFRTN.DAT and sets the lower half of page six. PILOT uses the top half of page six to store various pointers and variables. DIFFEREN.T then loads the main program, TITLEPG.DIF. The loading occurs as a run-time instruction which clears the program storage area before loading in and running the main program.

Because of the size of I'M DIFFERENT!,we used an overlay structure. The static portion of the program has line numbers from 0 to 889 and line numbers greater than 4000. The lines from 890 to 4000 are sequenced by 10. The routine overlays these to correspond to the difficulty level selected. PILOT doesn't have a merge command in immediate mode (which effectively merges the program being loaded with the program in memory). That's why the program writes to the screen and then forces the Operating System to read commands from the screen. Several popular computer magazines as well as De Re Atari (APX-90008) document this technique.

Since a preschool program doesn't require speed, most of the program uses pauses to slow down the selection arrow, the speed of the turtle, and the random music.

To keep the text window from flashing when a correct answer manipulates the color registers, the program uses a display list interrupt routine. It's stored in the lower half of page six, along with the subroutine that displays the eight colors used in the program.

A program intended for children should prevent any kind of premature program end. The keyboard isn't normally a problem. If you require a typed response, you can either interrogate the keyboard directly or edit the response after pressing the RETURN key. The handedness selection is the only place you need a typed response in I'M DIFFERENT! We chose to get the value directly from the keyboard. The program disables the BREAK key by poking two memory locations. PILOT seems to reset these locations whenever it reads from diskette or changes graphics modes, so the locations had to be re-poked frequently. Changing the RESET vector redirected the SYSTEM RESET key to point to the cold-start routine. This lets you reload the program from diskette using the AUTORUN.SYS file. This is also why you have to turn the computer off and on again after you play this game. If you happen to break out of the program

and start working on a program of your own, SYSTEM RESET causes a cold-start and you'll lose your code.

The AUTORUN.SYS file was a challenge to create. PILOT doesn't contain a run-from-diskette command as BASIC does. We came across a helpful hint that any unnumbered line you encounter while loading a program will be immediately executed. Unfortunately, RUN is an exception. We finally accomplished the task by creating an AUTORUN.SYS file to issue the command:

```
LOAD D:DIFFEREN.T
```

To this command, we appended an unnumbered line that issues a command to jump to the label of the first line in the program.

We experimented with several different colors for background. We finally chose black because it causes the least color bleeding or "artifacting". This might not be a severe problem on a color monitor, but it was on our television set.

QUICK REFERENCE SHEET

I'M DIFFERENT! loads and runs automatically from diskette.

When the drawing of two joysticks appears, type "R" for right-handed or "L" for left-handed. You don't need to press RETURN.

Press SELECT or use the joystick to move the menu arrow to the difficulty level desired. Press START or the red joystick button to load the routine. The first set of objects is drawn then.

From the menu, OPTION displays all the colors used in the program. SELECT returns you to the menu.

During play, SELECT returns you to the menu.

The keyboard is disabled and pressing keys will not harm the program.

Pressing SYSTEM RESET causes the program to reload and run from the beginning.

Always turn the computer off after playing I'M DIFFERENT! to clear all the special settings and the machine language routines before you use another program or enter your own.

Limited Warranty on Media and Hardware Accessories. Atari, Inc. ("Atari") warrants to the original consumer purchaser that the media on which APX Computer Programs are recorded and any hardware accessories sold by APX shall be free from defects in material or workmanship for a period of thirty (30) days from the date of purchase. If you discover such a defect within the 30-day period, call APX for a return authorization number, and then return the product to APX along with proof of purchase date. We will repair or replace the product at our option. If you ship an APX product for in-warranty service, we suggest you package it securely with the problem indicated in writing and insure it for value, as Atari assumes no liability for loss or damage incurred during shipment.

This warranty shall not apply if the APX product has been damaged by accident, unreasonable use, use with any non-ATARI products, unauthorized service, or by other causes unrelated to defective materials or workmanship.

Any applicable implied warranties, including warranties of merchantability and fitness for a particular purpose, are also limited to thirty (30) days from the date of purchase. Consequential or incidental damages resulting from a breach of any applicable express or implied warranties are hereby excluded.

The provisions of the foregoing warranty are valid in the U.S. only. This warranty gives you specific legal rights and you may also have other rights which vary from state to state. Some states do not allow limitations on how long an implied warranty lasts, and/or do not allow the exclusion of incidental or consequential damages, so the above limitations and exclusions may not apply to you.

Disclaimer of Warranty on APX Computer Programs. Most APX Computer Programs have been written by people not employed by Atari. The programs we select for APX offer something of value that we want to make available to ATARI Home Computer owners. In order to economically offer these programs to the widest number of people, APX Computer Programs are not rigorously tested by Atari and are sold on an "as is" basis without warranty of any kind. Any statements concerning the capabilities or utility of APX Computer Programs are not to be construed as express or implied warranties.

Atari shall have no liability or responsibility to the original consumer purchaser or any other person or entity with respect to any claim, loss, liability, or damage caused or alleged to be caused directly or indirectly by APX Computer Programs. This disclaimer includes, but is not limited to, any interruption of services, loss of business or anticipatory profits, and/or incidental or consequential damages resulting from the purchase, use, or operation of APX Computer Programs.

Some states do not allow the limitation or exclusion of implied warranties or of incidental or consequential damages, so the above limitations or exclusions concerning APX Computer Programs may not apply to you.

For the complete list of current APX programs, ask your ATARI retailer for the APX Product Catalog

APX ATARI® PROGRAM EXCHANGE
P.O. Box 3705
Santa Clara, CA 95055

Review Form

We're interested in your experiences with APX programs and documentation, both favorable and unfavorable. Many of our authors are eager to improve their programs if they know what you want. And, of course, we want to know about any bugs that slipped by us, so that the author can fix them. We also want to know whether our instructions are meeting your needs. You are our best source for suggesting improvements! Please help us by taking a moment to fill in this review sheet. Fold the sheet in thirds and seal it so that the address on the bottom of the back becomes the envelope front. Thank you for helping us!

1. Name and APX number of program.

2. If you have problems using the program, please describe them here.

3. What do you especially like about this program?

4. What do you think the program's weaknesses are?

5. How can the catalog description be more accurate or comprehensive?

6. On a scale of 1 to 10, 1 being "poor" and 10 being "excellent", please rate the following aspects of this program:.

_____ Easy to use
_____ User-oriented (e.g., menus, prompts, clear language)
_____ Enjoyable
_____ Self-instructive
_____ Useful (non-game programs)
_____ Imaginative graphics and sound

7. Describe any technical errors you found in the user instructions (please give page numbers).

8. What did you especially like about the user instructions?

9. What revisions or additions would improve these instructions?

10. On a scale of 1 to 10, 1 representing "poor" and 10 representing "excellent", how would you rate the user instructions and why?

11. Other comments about the program or user instructions:

From

STAMP

ATARI Program Exchange
P.O. Box 3705
Santa Clara, CA 95055

[seal here]