CHOICE Tool Match is an Apple computer concentration-type activity in which learners select two numbered windows in an attempt to match the tools displayed, reinforcing job and role information presented in the CHOICE Basic Job and Role activity folders and workbooks for migrant students. In place of written directions, the learner is provided with a visual sample of the game screen and player options are depicted graphically as well as in writing throughout the program, facilitating independent disk use after a brief teacher introduction. Program learning objectives include reinforcing career concepts, identifying tools related to particular workers, reinforcing tool and worker vocabulary, practicing basic computer keyboard manipulation, developing/increasing computer assisted instruction and awareness, recognizing symbols as representations of concepts, recognizing graphic representations of objects, and improving visual memory. This teacher software manual details hardware requirements, backup copy procedures, student learning objectives, use of the program as a tutorial or in a classroom setting, step-by-step directions for using the program, instructions for turning the sound on or off, and a program outline and flow chart. (NEC)
This manual was prepared by Ilse M. Pitts and the Project CHOICE staff to accompany disk software. The CHOICE Tool Match program was developed for the CHOICE project by Liz Kahl and Fred Podolski. The contents are based on the CHOICE Basic level materials. Reproduction without permission of CHOICE is expressly forbidden. The following utilities have been used in creation of this program: ProntoDos (c) 1982 Tom Weishaar Beagle Bros. Inc. (Licensed), Hi-Res Character Generator (HRCG) (c) 1980 by APPLE Computer Inc. 10260 Bandley Drive, Cupertino, CA 95014 (Licensed), and CELESTE by Leo Christopherson from 3/82 Creative Computing (used with permission of author). Work on this project has been performed using funds received from the US Department of Education. The opinions expressed do not necessarily reflect the position or policy of the US Department of Education.

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BEST COPY AVAILABLE
In addition to the Spanish materials and new versions of *Occupational Resources* (English), CHOICE now has software available to accompany its other curriculum materials. All of the software is available in both English and Spanish and is programmed for Apple computers. The software manuals are included here on ERIC microfiche and are available, along with the disks, from CHOICE. The software is designed to reinforce and enhance CHOICE information.

**TOOL-MATCH, WORD-TOOL MATCH, TOOL SCHOOL (Level 1), and TOOL SCHOOL (Level 2/3)** are all designed to accompany the Basic clusters for levels Bl - B4. There is one program disk for each cluster in Spanish and English (i.e. 16 disks per activity or a total of 64 disks for a complete set). Each disk presents the occupations covered by one cluster of the Basic materials (e.g. the Bl Arts and Humanities disk presents the Teacher, Artist, Musician, Dancer, Actor, and Puppeteer). One or two students may use a disk at the same time. The programs keep track of the number of successful tries by each student and the total number of turns. When the activity is complete, the screen displays the winner and a breakdown of the score. Each disk contains two levels of difficulty. Graphic and musical rewards are liberally spread throughout the programs to help maintain user interest. The sound option may be turned on or off by the teacher on any disk.

**TOOL MATCH** presents a concentration-type activity in which the users are required to match tool pictures of the occupation they have chosen. The program randomly sorts out six of the eight graphics provided for the occupation and randomly situates
those six graphics behind twelve numbered windows on the screen. The users then choose window numbers in turn attempting to make matched pairs. Each time the activity is used, the random selection and placing of the pictures ensure a new challenge. In the easy version, the tool pictures remain on the screen once they have been matched. In the difficult version, the matched pictures disappear again and a user loses a turn if he or she selects a previously matched tool picture.
INTRODUCTION

**CHOICE Tool Match** provides the opportunity for youth to use the computer in self-directed ways while reinforcing job and role information presented in the CHOICE Basic Job and Role (J&R) folders and workbooks. After using the folders and workbooks, the learner is able to use the Tool Match disk independently to reinforce the information studied.

In place of written directions the learner is provided with a visual sample of the game screen, and player options are depicted graphically as well as in writing throughout the program. The objective of the designers is that, given a short teacher introduction, the learner will be able to use the disk independently.

The learner(s) select(s): (1) the number of players (one or two), (2) the career that will provide the theme for the game and (3) the Easy or Hard version of the game.

Tool Match is a concentration-type activity in which the learner(s) select(s) two numbered windows in an attempt to match the tools displayed. When six matches have been made, a winner is declared and a summary of each learner's attempts is provided. Each time the disk is used, random arrangement of the tools behind the numbered windows creates a new challenge.
HARDWARE REQUIREMENTS

Computer: Apple // Plus (minimum 48K)
   or
Apple //e
   or
Apple //c

One disk drive

MAKING BACKUP COPIES OF THIS PROGRAM

This CHOICE Tool Match Program Disk may be copied for your professional use. CHOICE requests that you do not further distribute copies without permission. Copyrighted materials have been used in developing this program. All interested parties may write or call CHOICE to obtain a copy at minimal cost.

CHOICE
P.O. Box 250
New Paltz, NY 12561
(914) 257-2185

LEARNING OBJECTIVES

1. To reinforce career concepts
2. To identify tools related to particular workers
3. To reinforce tool and worker vocabulary
4. To practice basic computer keyboard manipulation
5. To develop and increase computer assisted instruction and awareness
6. To recognize symbols as representations of concepts
7. To recognize graphic representations of objects
8. To improve visual memory

USE: TUTORIAL OR CLASSROOM SETTING

It is the goal of CHOICE Tool Match to reinforce the job and role information presented in the CHOICE Basic J&R Activity Folders and workbooks. The learner may choose the level of difficulty and is able to use the disk independently.
THE CHOICE TOOL MATCH DISK MAY BE USED IMMEDIATELY BY ANY STUDENT OR TEACHER WHO KNOWS HOW TO INSERT A DISK AND TURN ON THE COMPUTER.

Note: If you have not used an Apple computer before, you may want to review the "Know Your Apple" introduction disk. In any event, remember NEVER insert or remove a disk or press <CONTROL> & <RESET> if the disk drive operating light is on. In this manual special keys will be indicated within <> symbols; for example, if you need to press the key marked "return" on the right hand side of your machine, the instruction will say "press <RETURN>". After typing any information, you must press the <RETURN> key in order for the computer to interpret the information you have typed.

Insert the CHOICE Tool Match program disk in the disk drive of the Apple computer and turn on the power switch. This will automatically run the program. If the Apple computer has been used with another program and is already on, simply insert the CHOICE Tool Match program disk in the disk drive as above and then press the <RESET> key on the Apple // Plus, or, on the Apple //e or //c, press in conjunction the <OPEN APPLE> key, the <CONTROL> key and the <RESET> key. This will also automatically run the program.

NOTE: Use the <ESC> key to reset the program when the screen asks how many are playing or for the name(s) of the player(s).

HOW THE PROGRAM WORKS

1. Insert the CHOICE Tool Match program disk (label side facing up and towards you) into the disk drive and turn on the power switch. 
   ** TOUCH ONLY THE LABEL END OF THE DISK **
2. The disk drive will operate and you will see title screens on your computer monitor. When the disk drive stops and the screen instructs you to "press return", press the <RETURN> key on the right hand side of the keyboard.
3. The disk drive will operate again and the learners' title screens will appear on the monitor. When the screen display shows:

![Screen Display](image)

4. Press the <RETURN> Key. The screen display asks the learner if one or two players will use the activity. (This option is displayed graphically as well as in words and, after an introduction, the learner should be able to respond without the aid of the teacher.)

5. The learner now types a '1' or a '2' in the blank and presses <RETURN>.

6. The screen display will then request the first name of player 1.

7. The learner types his or her name and presses <RETURN>. (If two learners are playing, the display will now ask for the first name of the second player. Remember to press <RETURN> after typing the name.)
   a. The program will accept any name up to nine letters in length.
   b. If the learner makes an error when typing his or her name, it can be corrected by using the <DELETE> key on the upper right of the keyboard of the Apple //e or //c, or by using the <-- (left arrow) key on the lower right of the keyboard and retyping the name.
   c. The program may be used with the <CAPS LOCK> key on the Apple //e or //c in either position. All letters entered from the keyboard will appear in capital form.
8. The monitor will now display the menu choice screen.

9. Use the <-- (left arrow) or --> (right arrow) key to move the flashing indicator to the desired option and press <RETURN>.

10. Pressing return when the flashing indicator is on an option will cause the following results:

   a. Selecting "YES", the smiling face, indicates to the computer that the learner wishes to use the activity matching the tools of the worker shown on the screen.

   b. Selecting "NO", the frowning face, indicates to the computer that the learner wishes to choose a different worker.

   c. Selecting "HELP", the "?", indicates to the computer that the learner wishes to see a summary of the workers available on the disk.

      1) The disk drive will operate and three workers will appear on the screen.
      2) The learner presses <RETURN> to see an additional three workers.
      3) Pressing <RETURN> again will cause the menu screen to reappear as in #8 above.
Selecting "STOP", the raised hand, indicates to the computer that the learner wishes to stop.

1) The disk drive will operate.
2) The program will reposition itself to the student title page as in #3 above.

11. Once a worker has been decided upon (by pressing \(<RETURN>\) when the flashing indicator is on the "YES" option and the desired worker picture is on the screen), the screen will ask that the learner choose the Easy or Hard version of the activity (see #22 and #24 below for playing and scoring differences between the easy and hard versions).

12. The learner types "E" or "H" and presses \(<RETURN>\).

13. The game board will appear on the screen and the learner is asked to wait while the program positions the tools behind the numbered windows. (Each time the program is run, the tools are placed behind the windows in a random pattern.)

14. When the program is ready, the lower portion of the screen will prompt the learner:

15. If there are two players, the program randomly chooses which one goes first. It does not matter which learner entered his or her name first in #7 above.

16. The learner prompted then enters a number from 1 to 12 and presses \(<RETURN>\)
   a. If the learner makes a mistake, he or she can change the number, before pressing \(<RETURN>\), by using the \(<DELETE>\) key on the Apple //e or //c or the \(<--\) key and typing another number.
b. If the learner types and enters a number less than 1 or greater than 12, the program will refuse to accept the number and continue to prompt the learner to pick a number.

17. The window corresponding to the number chosen by the learner will open to reveal a picture of a tool used by the worker chosen for the game.

18. The program will now prompt the learner to:
   "Match it, <NAME>!"

19. The learner types in a second number as in #16 above.

20. A second window opens revealing another tool.

21. If the two tool pictures do not match there is a "bleep" sound (if the sound option has been chosen by the instructor), the two windows return to their numbered positions, and the program prompts the next player to "Pick a window, <NAME>!".

22. If the two tool pictures do match, there is a musical reward (if the sound option has been chosen by the instructor), the windows flash, and the same player is prompted to "Pick a window, <NAME>!".

   a. In the easy version the two matched pictures will remain on the screen in reverse image and, if these windows are picked again in the course of the game, the program will note that it has already been matched and ask the learner to pick another window.

   b. In the hard version the two matched pictures disappear again behind their numbered windows and, if either of these windows are picked again in the course of the game, the learner will be told that window has already been matched, and it becomes the next player's turn.
23. When all six pairs of tools have been matched, the screen will instruct the learner(s) to press \texttt{<RETURN>}. 
24. A musical (if the instructor has chosen sound) and a graphic reward will declare the winner and the summary score screen will appear.

\begin{center}
\includegraphics[width=0.5\textwidth]{image}
\end{center}

\begin{center}
\begin{tabular}{cc}
\textbf{TON - WINNER!} & \textbf{HARRY} \\
\textbf{Tries} & \textbf{Matches} \\
\hline
1 & 2 \\
\end{tabular}
\end{center}

Press \texttt{ENTER} to go on ....

a. The scoring is proportional and indicates the number of matches compared to the number of tries.
b. The score is displayed both graphically and in words as in the example above. The "ghosts" indicate the number of tries and the "heads" indicate the number of matches.
c. In the easy version picking an already matched window does not effect the learner's score.
d. In the hard version picking an already matched window counts as a "try" for that learner.
e. A learner's tries are limited to 24.
   1) If a learner has 24 tries before all the tools are matched, the score summary is displayed, a message appears "YOU HAVE TOO MANY TRIES", but no winner is declared.
2) If all tools are matched within the limit, a winner will be declared.

25. The program will return to the choice screen as in #8 above when <RETURN> is pressed.

TEACHER SOUND OPTION

When using the Tool Match disk, the teacher has the option of turning the sound portion of the program on or off. When the screen requests the number of players:

A. Type "1" and press <RETURN>
B. Type "TEACHER" and press <RETURN>
C. Type "007" and press <RETURN>
D. Answer the question by typing "YES" or "NO" and press <RETURN>
E. Press <RETURN> when the screen advises you to do so

The disk drive will operate and return to the beginning of the program. The sound option chosen will remain on the disk until it is changed by following the above steps.
CHOICE Tool Match

Outline

I. Educational Objectives
   A. To reinforce career concepts
   B. To identify tools related to particular workers
   C. To reinforce tool and worker vocabulary
   D. To practice basic computer keyboard manipulation
   E. To develop and increase computer assisted instruction and awareness
   F. To recognize symbols as representations of concepts
   G. To recognize graphic representations of objects
   H. To improve visual memory

II. Main Concepts of Design
   A. Appeal to multiple senses for greater learning
      1. Graphics and animation
      2. Optional sound at the discretion of the instructor
   B. Graphics representations of concept
      1. Aid for student understanding of program flow
      2. Aid for students with minimal reading capabilities
   C. Player options
      1. One or two players
      2. Easy or hard option
   D. Help and stop options
      1. Review of occupational choices
      2. Provides option to leave program or begin again
   E. Career choices presented by cluster, one cluster to each disk

III. Program Flow
   A. Introduction
      1. Titles
      2. Visual sample of program
      3. Name(s) input
   B. Choice of number of players (1 or 2)
   C. Choice of occupation to play (6)
   D. Play
      1. Positive and negative feedback
      2. 24 tries to make 6 matches
   E. Summary of play
   F. Option: play again or stop