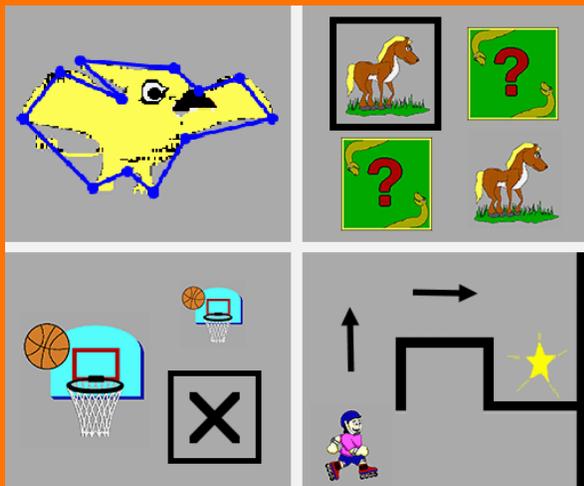


Welcome to ...

# MULTI-SCAN



*A single-switch  
activity center  
for  
Windows 8 & 10*

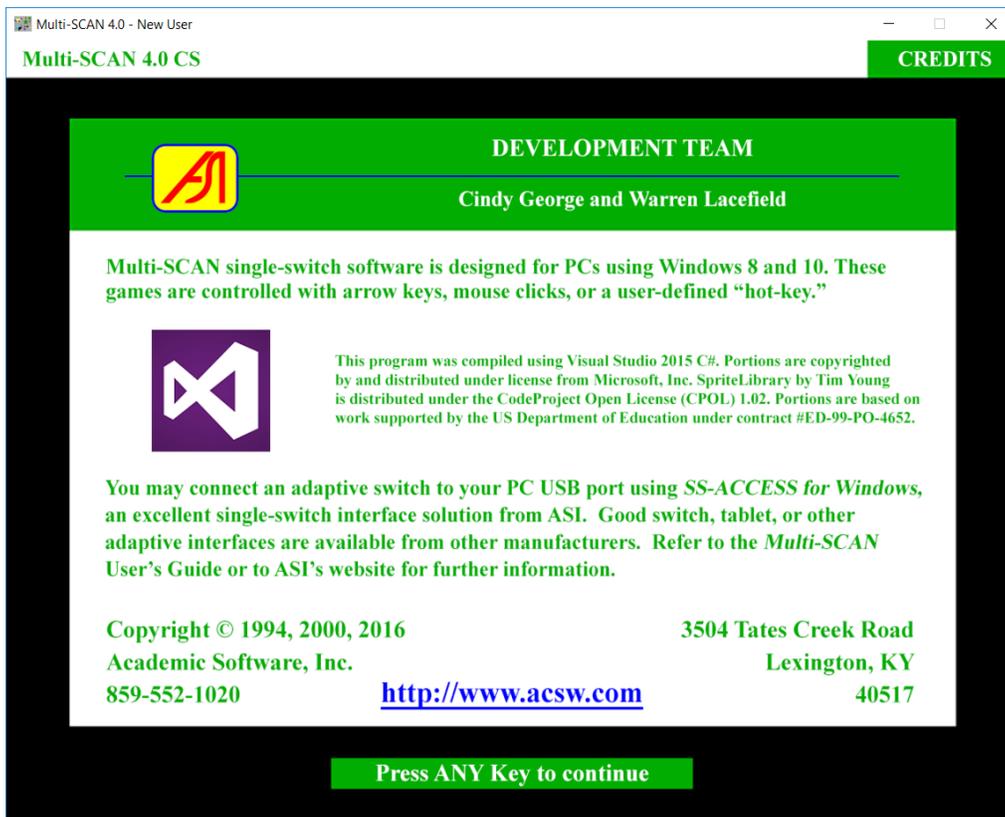
**Academic Software, Inc.**

3504 Tates Creek Road  
Lexington, KY 40517  
<http://www.acsw.com>



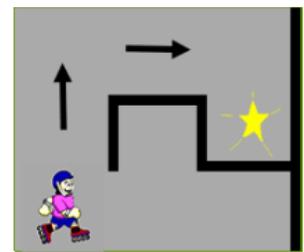
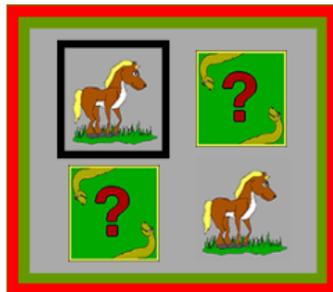
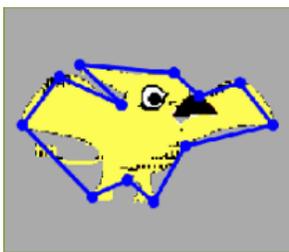
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## *Introducing Multi-SCAN for Windows 8 & 10*

**Multi-SCAN** is a single switch activity center featuring 4 educational games: Dot-to-Dot, Find, Match, and Maze; and 6 animation libraries offering a wide range of age-appropriate graphics: Animals, Cosmetology, Dinosaurs, Independent Living, Sports, and Vocations.



**Multi-SCAN** lets you select a graphics library, choose games and set a play schedule for each user, and adjust the difficulty level and other settings independently for each game.

Other features of **Multi-SCAN** include saving and retrieving custom game setups for each user and printing an individual performance report after each play session.

- The *Multi-SCAN* Package.....**
- Installer CD-ROM for PCs running Windows 8 or 10
  - *Multi-SCAN* User's Guide (PDF file on CD-ROM)
  - *Multi-SCAN* registration card

If you are missing any of the above items, contact Academic Software, Inc., at [asistaff@acsw.com](mailto:asistaff@acsw.com) or 1-859-552-1020 for replacements.

**Registration .....** So that we can continue to provide you with the highest quality software, offer technical support, and keep you informed about new *Multi-SCAN* software developments, please return the enclosed registration card to Academic Software, Inc.

**System Requirements .....** To run the *Multi-SCAN* program, you need:

- A PC running Windows 8 or 10, either natively or using an emulator (such as a Mac running VirtualBox).
- Optionally, a single-switch interface such as **SS-ACCESS for Windows** from ASI for persons who cannot use a keyboard or mouse.

**Installation .....** *Multi-SCAN* is distributed on a CD-ROM for Windows 8 and 10 computers. This contains a folder named **MS Publish** containing a “click-once” installer file named **setup.exe**. Double-click this file to run the Installer and follow the instructions and prompts to complete the installation. A shortcut program icon to run the *Multi-SCAN* program will be placed in the Windows START Menu APPS list and on the Desktop.<sup>1</sup>



At this point, we suggest that you also use Windows File Explorer to create a new folder named **MultiSCAN**. Later on, this would be a good place to save custom *Multi-SCAN User Setup* files and *Lesson Plans*. This folder can be placed on your c-drive (e.g., c:/MultiSCAN, in your Documents folder, on your Desktop, or in another location you may choose.

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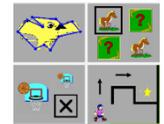
<sup>1</sup> To uninstall the *Multi-SCAN* software, use the *Programs and Features* tool and the *Add/Remove Programs* option available from the Windows *Control Panel*. For additional information, see the **Technical Notes** pages at the end of this User's Guide.

## Program Overview.....



Once you have installed *Multi-SCAN*, you are ready to begin working with the program.

Run the program by clicking on the *Multi-SCAN* shortcut Desktop icon.

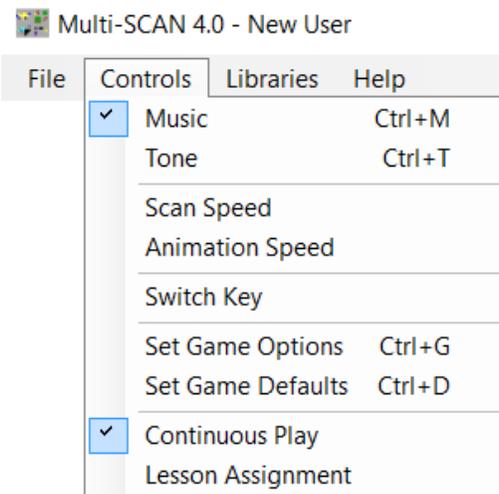


*Multi-SCAN* icon

The **Welcome Screen** and **Main Menu Strip** will appear. This window can be resized and repositioned conveniently on your Desktop and these settings will be saved automatically when you quit the program.

## Setting Game Controls .....

There are two types of game controls you will need to set. General game controls affect all of the *Multi-SCAN* games. Specific game controls affect each game individually.



### General Controls:

Music for the games can be toggled on or off. Pull down the **Controls Menu** and select *Music* or press **Ctrl+M** on the keyboard. A checkmark will appear to show the music is active. To turn the music off, just select *Music* again.

A beeping tone to accompany the scan also can be toggled on/off. Pull down the **Controls Menu** and select *Tone* or type **Ctrl+T**. A checkmark will appear to show the beep is active. To turn the beep off, select *Tone* again. Use the Windows Speaker Icon to adjust the volume of the music and tone.

**IMPORTANT NOTE:** *Multi-SCAN* is shipped with a set of standard default settings. When first opened or whenever the **Welcome Screen** says “*Default Setup for New User*,” all current displayed settings are “default settings” and - if these are changed and you quit *Multi-SCAN* - they are saved as new “default settings” which will reappear the next time the program starts. As explained later, the factory settings can be restored easily. When you create a *User Setup* file, it inherits the current default settings. Then you can customize, save, and retrieve all individual user settings without changing the default settings.

The scan speed can be adjusted from .5 seconds up to 5 seconds. Pull down the **Controls Menu** and select *Scan Speed*. A **Scan Speed Screen** will appear. Use the up and down arrow keys to make changes while observing the effect on the scan speed.

**SET SCAN SPEED ..... Now: 1 sec.**

Press UP or DOWN ARROW to speed up or slow down the scan.  
Press ANY KEY to return to the menu.



The image shows a screen with a green border. At the top, it says "SET SCAN SPEED ..... Now: 1 sec." where "1" is in a red box. Below that, it says "Press UP or DOWN ARROW to speed up or slow down the scan." and "Press ANY KEY to return to the menu." At the bottom, there are four square icons, each containing a black star with dashed lines extending from its points. The third icon from the left is highlighted with a red border.

The animation speed can be adjusted for slower or faster movement. Pull down the **Controls Menu** and select *Animation Speed*. An **Animation Screen** will appear. The animation speed can be set from 0 to 9 units. Higher numbers produce slower animation. Use the up and down arrow keys to make changes while observing the effect on the animation speed.

**ADJUST ANIMATION ..... Now: 4 units**

Press UP or DOWN ARROW to speed up or slow down the animation.

Press ANY KEY to return to the menu.



The image shows a screen with a green border. At the top, it says "ADJUST ANIMATION ..... Now: 4 units" where "4" is in a red box. Below that, it says "Press UP or DOWN ARROW to speed up or slow down the animation." and "Press ANY KEY to return to the menu." At the bottom right, there is a blue cartoon dinosaur sitting and smiling.

**Multi-SCAN** also provides a **Switch Key** option. This defines the key or combination keys on the keyboard that will act as the "hot key" and emulate pressing the real adaptive switch. The default setting is the **RETURN** or **ENTER** key. However, you may choose, for instance, the **SPACE BAR** to act like the external switch and be a larger target for a user. The important thing about the **Switch Key** is that when you use control interface software to allow the computer to respond to pressing an external adaptive switch, that software will need to know what is supposed to happen when the switch is pressed. In this case, when the external switch is pressed, the interface software should be set to send either a mouse click or the current "Switch Key" stroke to **Multi-SCAN**.

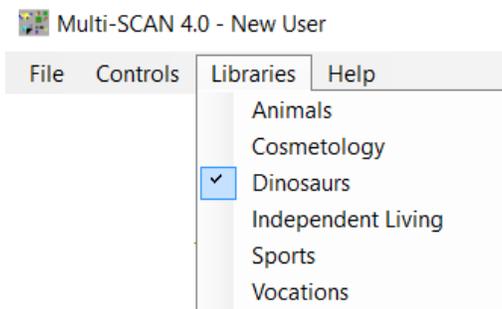
## SELECT A 'SWITCH KEY'

Current Value  
Return key

The 'switch key' is any single key on the keyboard (e.g., **ENTER**, **Spacebar**, a function key, or a letter or number key) that you choose to emulate pressing your real adaptive switch in response to the scanning selector.

This feature is specially useful when using switch interfaces or other alternative input devices such as touch keyboards.

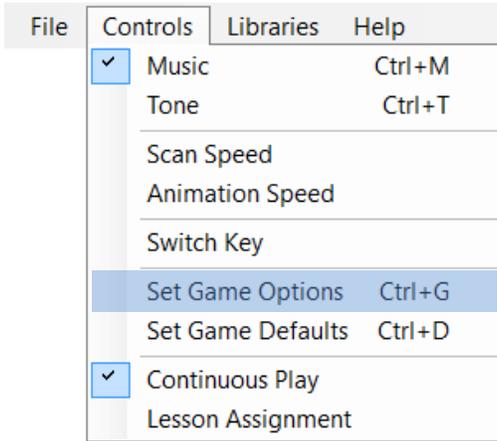
### Press a keyboard equivalent now.



You can select the graphic library to be used with the games. Pull down the **Libraries Menu** and select a library. A checkmark will appear to show which library is active.

**NOTE:** The **Maze** game is always played with the *Dinosaurs* library. If you choose a different library such as *Sports*, when the user reaches the **Play Screen**, that library will be used by the **Dot**, **Find**, and **Match** games.

The **Match**, **Find**, and **Dot-to-Dot** games can access all six libraries. A section at the end of this User's Guide shows all of the graphic animations available in each of the libraries.

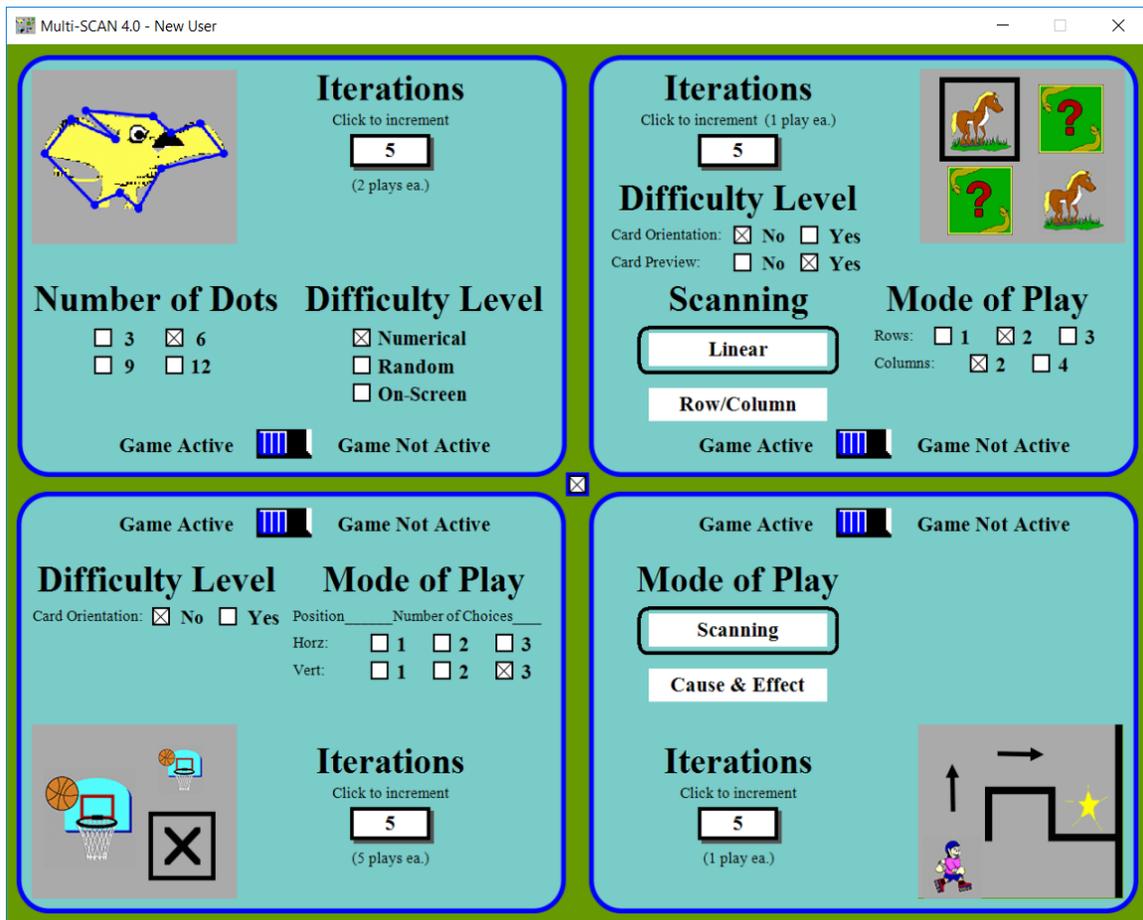


## Specific Controls:

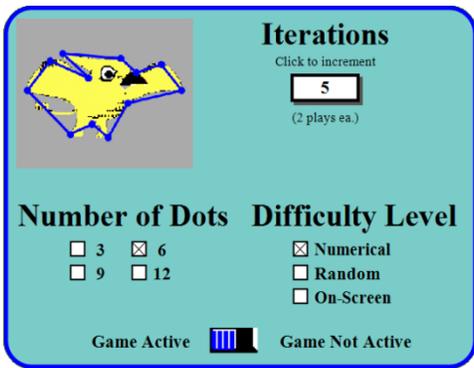
For each game you can select whether the user will be able to choose to play the game. You also can set the number of iterations, the mode of play, the level of difficulty, and other specific options.

To set the individual game options, pull down the **Controls Menu** and select *Set Game Options* or press **CTRL+G**. Press **Escape** or click the small box in the middle to return to the **Welcome Screen**.

A screen will appear displaying the **Dot-to-Dot**, **Find**, **Match**, and **Maze** game controls. At this point you can change *Multi-SCAN* default parameters or set custom parameters for each individual user. (To save your custom setup, refer to pages 13-14.)



**Dot-to-Dot Game** .....



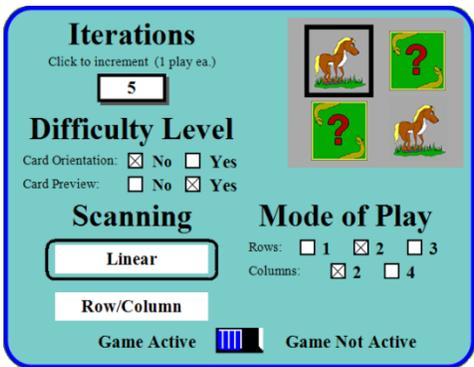
The **Dot-to-Dot** game offers four **Modes of Play**, depending upon the number of dots that are displayed for each graphic. Patterns of 3, 6, 9, or 12 dots are available.

You can select one of three **Difficulty Levels**. A *Numerical Scan* places numbered dots on the screen above a number line sorted in numeric order. A *Random Scan* places dots on the screen above a number line sorted in random order. In either case, the scanning selector moves from left to right across the number line. When the user selects the correct number on the number line, a line is drawn connecting the appropriate dots in the display.

An *On-Screen Scan* is also an option. Numbered dots are placed on the screen and the dots themselves are scanned in sequential order. When the correct dot is selected, a line is drawn connecting the appropriate dots.

You also can choose to make the game *Not Active* or *Active* and control the number of game **Iterations** to be played. For the **Dot-to-Dot** game, 2 play cycles constitute 1 game iteration.

**Finding Game** .....



This "concentration" game has numerous **Modes of Play**. You select *Number of Rows* (1, 2, or 3) and *Number of Columns* (2 or 4). This determines the number of cards to match. For example: 1 row and 2 columns displays 2 cards; 3 rows and 4 columns displays 12 cards.

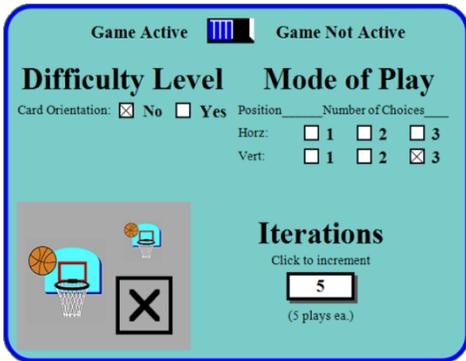
Two **Scanning Modes** are provided. A *Linear Scan* goes from left to right and top to bottom, selecting one card at a time. A *Row/Column Scan* is a two-step selection process. At first, the scanning selector moves from top to bottom, selecting entire rows of cards.

When the user selects a row, the scan begins to move from left to right across columns, selecting one card at a time. At the end of the row, the column scan reverts to a row scan and continues down the display.

The **Difficulty Level** can be adjusted in two ways. Including *Orientation* as a factor makes the game more difficult. You also can choose not to *Preview* the game cards first. If you choose *Preview*, the game cards will appear for several seconds before being covered. The least difficult combination is no orientation change and card preview. You also can choose to make the game *Not Active* or *Active* and control the number of game **Iterations** to be played. For the **Find** game, 1 play cycle constitutes 1 game iteration.

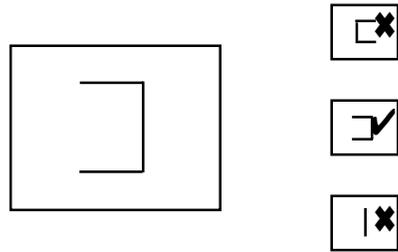
**Matching Game**.....

This game has three **Modes of Play**. You choose the number of distractors (*1 Choice, 2 Choices, or 3 Choices*) to compare against the target by clicking in the appropriate check box. The distractors can be displayed vertically to the right of the target on the screen or horizontally below the larger target.



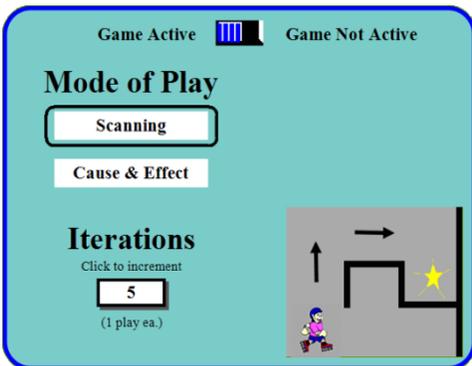
To make the game available to the user on the **Play Screen**, click *Game Active*. If you do not want the user to have the **Matching** game as a choice, click *Game Not Active*. You can also control the number of game **Iterations** to be played. For the **Matching** game, 5 play cycles constitute 1 game iteration.

The game can be made more difficult by choosing to include *Orientation* as a consideration for matching figures. At this level the user must be able to match the correct figure shape and distinguish if it is facing in the same direction as the target. For example:



**Maze Game**.....

The **Maze** game has two **Modes of Play**: a scanning mode and a cause & effect mode.



In the *Scanning* mode, the maze appears on the screen above a scanned array of four large directional arrows.

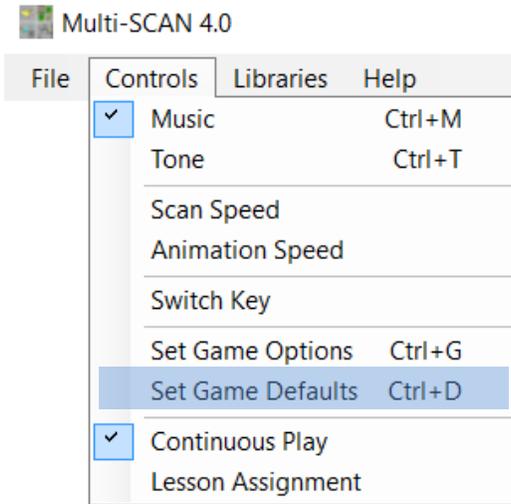
In the *Cause & Effect* mode, only the maze appears on the screen. In this mode, each time the user activates the switch, the character moves one step through the maze in the correct direction to eventually reach a goal and enjoy a celebration.

To make the game available to the user on the **Play Screen**, click *Game Active*. If you do not want the user to have the Maze game as a choice, click *Game Not Active*. The slide switch indicator toggles right or left when clicked.

You can set the number of times the user can play the game before the program returns to the **Play Screen**. (There the user can play the game again (in the *Continuous Play* mode) or choose a different game.) The number of **Iterations** can be set from 1 to 9 by repeatedly clicking on the control box. For the **Maze** game, 1 play cycle constitutes 1 game iteration. The **Maze** game offers three different mazes and the user can choose which one to play each play cycle.

**Set Game Defaults**.....

When **Multi-SCAN** starts, all game controls are set to default values. During setup these defaults can be changed and saved. Custom setups for individual users can be created, edited, saved, and retrieved. Choosing *Set Game Defaults* is a quick way to restore all current custom **User Settings** to the current default settings.



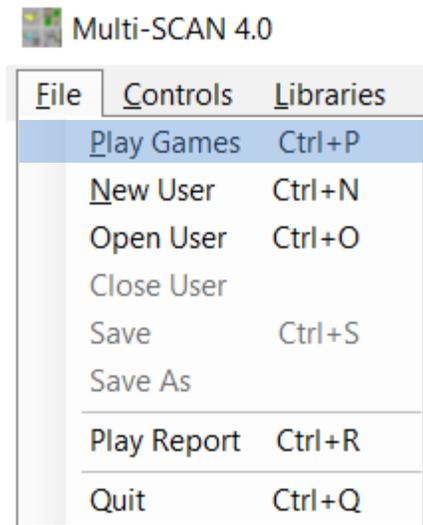
Original general game default settings affecting all games include:

- Music** ..... **On**
- Tone** ..... **Off**
- Scan Speed** ..... **1 sec**
- Animation Speed** ..... **4 units**
- Switch Key** ..... **Return or Enter key**
- Activity** ..... **Continuous Play**
- Library** ..... **Dinosaurs**

The **Game Control Panel** on page 6 illustrates all game-specific default settings. All of these can be changed and saved as new default settings (by quitting the program after making changes when the user is **New User**). The original default settings (both general and game-specific) shown above can be reset quickly using the **Help Menu**.

**File Menu**.....

In addition to the *Play Games* option, other options available under the **File Menu** include standard and custom input/output functions.

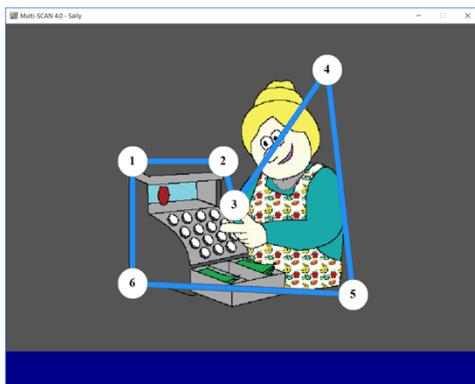


Custom features allow you to save and retrieve game setups for each user and to print out an individual performance report after each play session.

To save game setups under a user's name, pull down the **File Menu** and select *New User*. A prompt will appear asking you to "Please type a User Name:" in a highlighted text box. Type a name for the setup you are saving (40 characters maximum). Click the **OK** button to the **Welcome Screen** and the new user's name will appear in the bottom right corner along with the current date. Now set the game options for the new user (refer to **Set Game Options**). Once you have created the setup for this user, pull down the **File Menu** again and select *Save* or *Save As*...

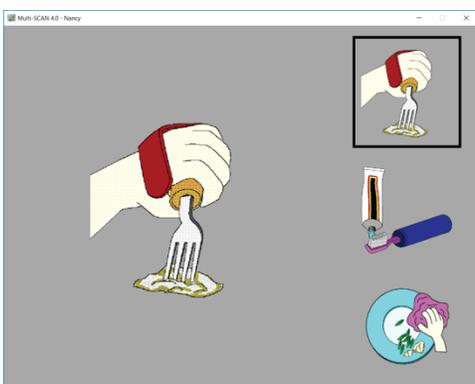
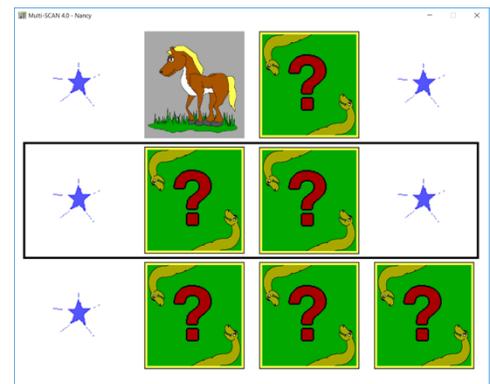
To open an existing user setup, pull down the **File Menu** and select *Open User*. The standard Windows Open File dialog box will appear. Select the folder and the user file you want and click *Open*. The program will not allow you to open a file that is not a **Multi-SCAN** setup file.

**Multi-SCAN** is now customized and ready for the user. To activate the games, pull down the **File Menu** and select *Play Games* or press **CTRL+P**. The **Play Screen** will appear in scan mode. The user selects a game by activating an external adaptive switch (or by clicking the mouse button or pressing the **Switch Key** - by default, the **Enter** or **Return** key) when the scan reaches the desired icon. (In **Multi-SCAN**, pressing the **ESCAPE** key always returns control to the previous window.)



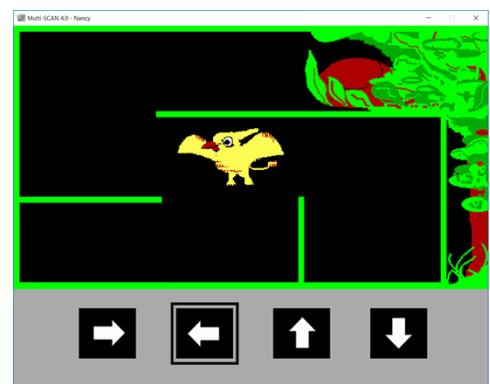
Dot-to-Dot Game Play

Finding Game Play

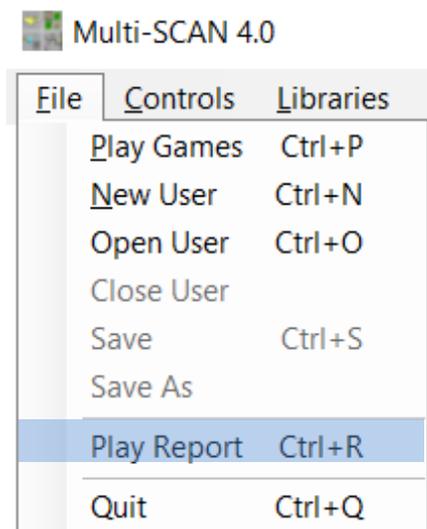


Matching Game Play

Maze Game Play



**Printing Performance Reports...** A *Multi-SCAN Play Report* can be viewed and/or printed at any time by selecting *Play Report* from the **File Menu** or pressing **CTRL+R**. The report shows the user name, date, and all current game settings as well as play results.



Play results are shown for the cumulative play sequence of each game. The *Optimal Score* shown is based on the minimum number of switch activations (i.e., correct choices) needed to complete a game and the pre-set number of game iterations. For example, since only 1 choice per **Matching** game is required and there are 2 play cycles per Iteration, then if Iterations=5, the *Optimal Score* for that play sequence would be 10.

For the **Finding** game, there is only 1 play cycle per iteration. So the *Optimal Score* is the number of pairs of icon choices times the pre-set number of game iterations. (The # of pairs is the # of rows times the # of columns divided by 2.)

For the **Dot** game, the *Optimal Score* is the number of dots per game times 2 plays per iteration times the number of game iterations. The **Maze** game is more complicated since each maze may be played more than once and in any order. The *Optimal Score* is computed for a particular sequence of maze game choices. *Play Attempts* record the actual number of (correct or incorrect) choices made by the player during a game sequence. The *Success Rate* is the percentage ratio of *Optimal Score* and *Play Attempts*. The *Elapsed Time* is the number of minutes that the user (1) spent continuously playing each game activity or (2) required to complete a Lesson Plan. *General Success* is a weighted average of game success rates. *Lesson Time* is the sum of individual game times.

Pressing the 'P' key when viewing the **Play Report** will evoke the standard Windows Printer dialog box. Using that control you can send the report as an image to your printer or save it as a PDF file. It is best to view and print reports immediately after users complete full play sequences for all selected games.

After *Continuous Play* if the user wishes to check data or change options (e.g., libraries) or after finishing a *Lesson Plan*, someone (perhaps a teacher or helper) must press the **Escape** key from the **Play Games Screen** to return to the **Welcome Screen** and **Main Menu**. Then, to resume play, each time *Play Games* is selected from the **File Menu**, *Multi-SCAN* checks to see if game data is available. If so, a dialog box asks whether (1) game data should be reset as play is resumed or (2) game data should continue to be accumulated for this user or (3) the request to play games should be cancelled (e.g., to go back and print the current **Play Report**).

This illustration shows the initial state of the **Play Report** while the current “user” is **New User**. The settings shown are therefore the current default settings that *Multi-SCAN* is using. Once a new **User Setup** is created or a saved **User Setup** is opened, the current custom settings for that particular user will be displayed.

# The Multi-SCAN Play Report

<b>USER:</b>	New User	<b>Date:</b>	September 26, 2016
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**GENERAL SETTINGS:**

<b>Library:</b> <input style="width: 80%;" type="text" value="Dinosaurs"/>	<b>Music:</b> <input style="width: 80%;" type="text" value="On"/>
<b>Scan Speed:</b> <input style="width: 40%;" type="text" value="1"/> second(s):	<b>Tone:</b> <input style="width: 80%;" type="text" value="Off"/>
<b>Activity Mode:</b> <input style="width: 80%;" type="text" value="Continuous Play"/>	

<b>GAME SETTINGS:</b>	(On)	(On)	(On)	(On)
<b><u>AND RESULTS:</u></b>	<b><u>MAZE</u></b>	<b><u>MATCH</u></b>	<b><u>FIND</u></b>	<b><u>DOT-TO-DOT</u></b>
<b>Iterations:</b>	5	5	5	5
<b>Play Mode:</b>	Scanning	3 Choices	2 Rows, 2 Cols	6 dots
<b>Difficulty:</b>			Preview/Reveal	
<b>Discrimination:</b>		Shape	Shape	
<b>Scan Mode:</b>			Linear	Numerical
<b>Optimal Score:</b>				
<b>Play Attempts:</b>	No data	No data	No data	No data
<b>Success Rate:</b>				
<b>Elapsed Time:</b>				

<p>Click mouse or press ANY KEY to return.</p> <p>Press 'P' to print this report.</p>	<p><b>General Success:</b> <input style="width: 80%;" type="text"/></p> <p><b>Lesson Time:</b> <input style="width: 80%;" type="text"/></p>
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# Lesson Planning and Lesson Plans: A Detailed Walk-Through

In this tutorial, we will create a new **User Setup** for a student named *Warren* and configure that setup as a *Lesson Plan* activity that can be saved and recalled again for further directed practice.

When **Multi-SCAN** starts, the **Welcome Screen** appears on the Desktop with the size and in the position it was in the last time the program was closed. The last default settings are loaded automatically and the **Welcome Screen** shows “*Default Setup for New User.*”

**Step 1:** Our first step will be to pull down the **File Menu** and select the *New User* option (or press **CTRL+N**). The **New User Screen** opens and we can type a name (up to 40 characters in length) in the displayed textbox.

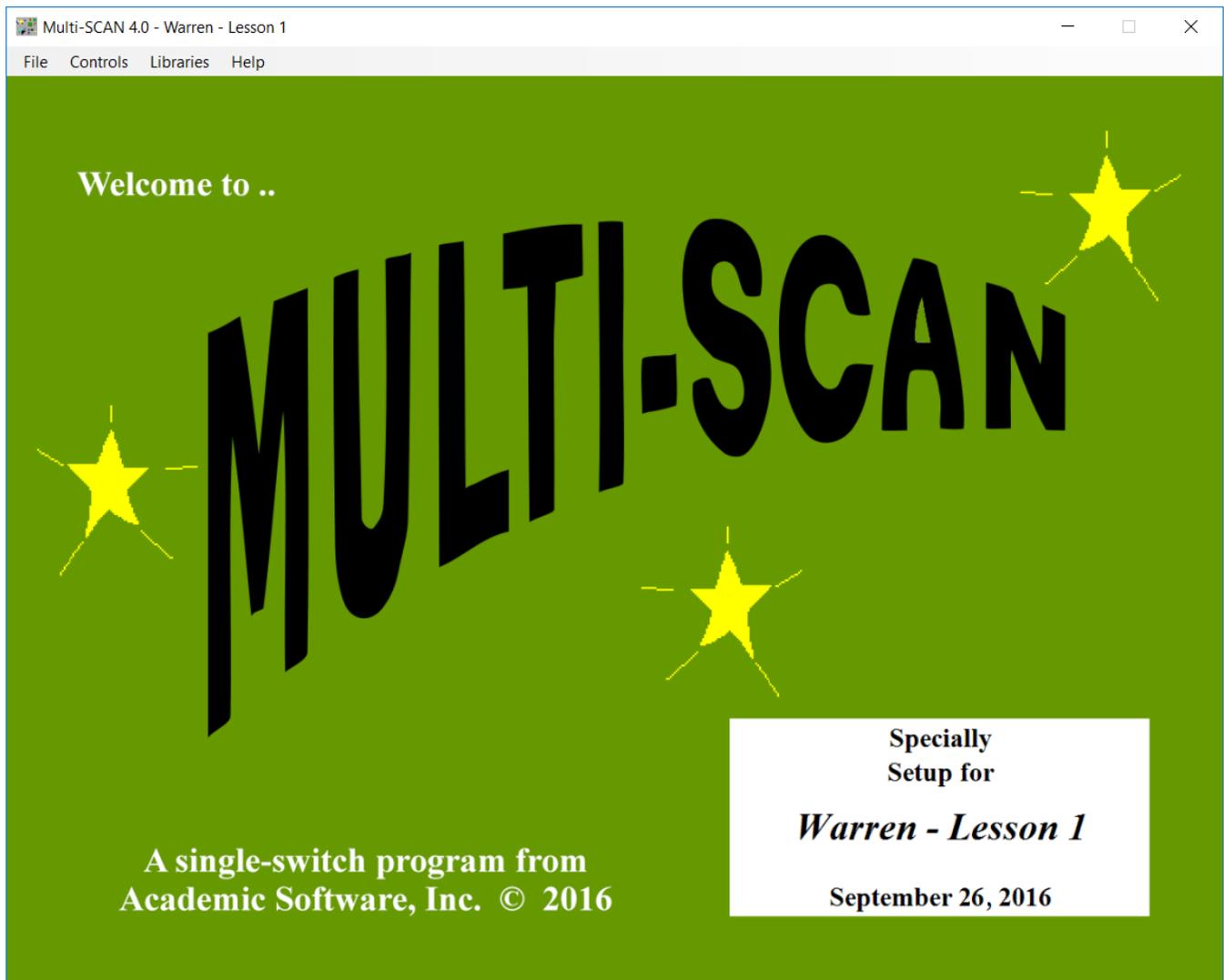


**IMPORTANT NOTE:** The **User Name** we enter is also used as the filename for the **User Setup** file which we will save using Windows. Therefore, this name **MUST** conform to standard Windows file naming conventions. **Multi-SCAN** attempts to check this name and will prompt the user if it contains illegal characters or words. The small **HELP** button in the **New User Dialog Box** provides more information.

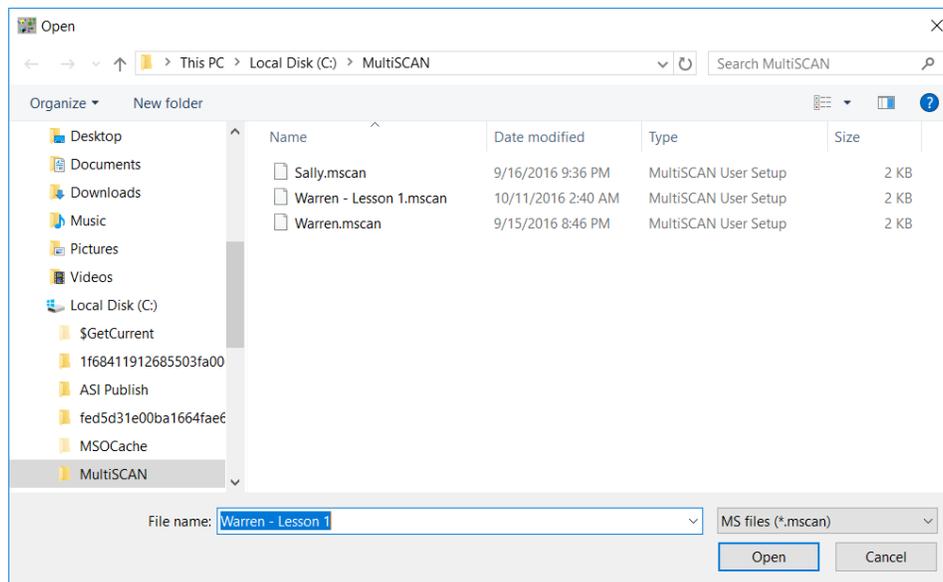
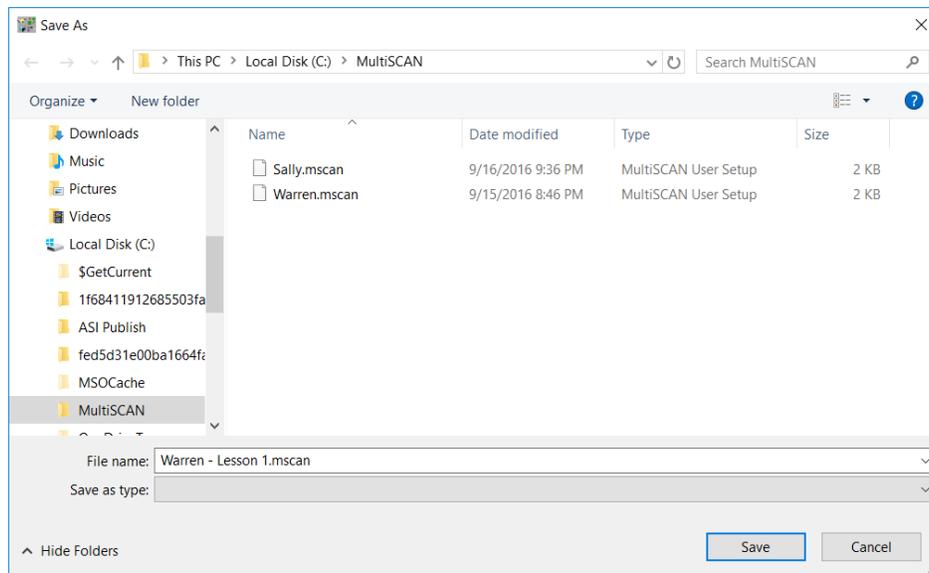
**Step 2:** For this tutorial, we will enter a name and identify this **User Setup** as a *Lesson Plan* by typing “*Warren – Lesson 1*” (without the quotes). This is also an acceptable Windows filename.

**Step 3:** Next we can click the **OK** Button to return to the **Welcome Screen**.

At this point, the **Title Bar** and the information box on the **Welcome Screen** show that **Multi-SCAN** is “*Specially Setup for Warren – Lesson 1*” as illustrated on the next page. Initially the current default settings have been copied into the custom setup for this user. We will be changing most of these. But, first, this would be a good time to initially save this **User Setup**.



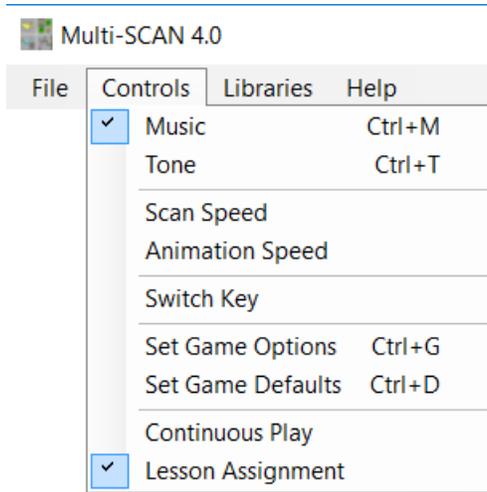
**Step 4:** Pull down the **File Menu** and select the *Save User* option. If this **User Setup** has never been saved, this will open a standard Windows Save As... dialog box showing **Warren – Lesson 1.mscan** in the **File name** textbox. You can choose a location to save this **User Setup**. We recommend saving your setups in a folder named **MultiSCAN** or **MultiSCAN Setups** (which you may have created for this purpose earlier). The *Save* and *Open* dialogs shown below remember the last folder location where setup files were saved.



**Step 5:** This is also a good place to practice opening a **User Setup**. Pull down the **File Menu** again and select the *Open User* option. This will open a standard Windows Open dialog box (illustrated above). Select the location or folder where you saved the **Warren – Lesson 1.mscan** setup file. Notice that all **Multi-SCAN** setup files are saved with the **.mscan** custom file extension and only these files are shown in the dialog box. Select the **Warren – Lesson 1.mscan** setup file by clicking on it. Then click the **OPEN** button. This action returns the display to the **Welcome Screen** showing that this user setup is currently the one that is loaded. At this point we are ready to begin customizing this *Lesson Plan* for this particular user.

**Step 6:** Perhaps the first thing to do is to pull down the **Controls Menu** and click on the *Lesson Assignment* option. The checkmark that was by *Continuous Play* moves to *Lesson Assignment*. The significant difference is that when the *Play Games* option is chosen and the user begins the lesson, he or she is asked to complete a pre-

defined series of iterations of a set of selected play activities. As the active games are completed, they cannot be played again. Eventually all activities are completed and the lesson is over. At the point an attendant can press the **Escape** key to return to the **Welcome Screen** and view and print a full **Play Report** for the finished lesson.

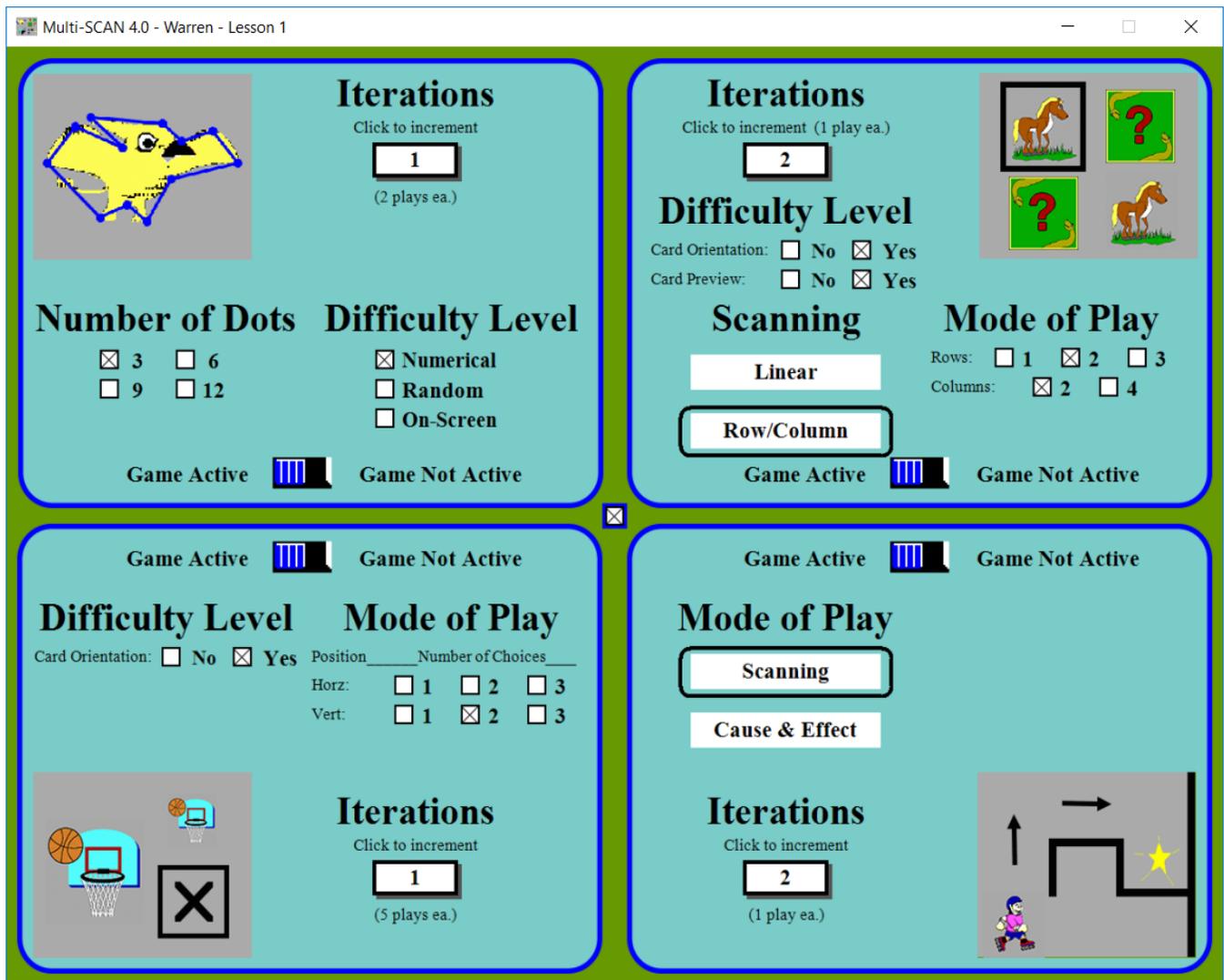


However, before that, the general parameter settings need to be checked and the specific game parameters need to be set to define this *Lesson Plan* for this user. And, after that, the new **User Setup** needs to be saved again.

Let us consider a user who is a young or developmentally young student who can use the mouse click (a mouse button or touchpad tap) or an external adaptive switch reliably but cannot use the keyboard well. This student needs psychomotor skill practice using scanning to select control inputs as well as cognitive skill practice in domains such as counting (**Dot-to-Dot**), memory (**Find**), pattern recognition (**Match**), and goal-oriented problem solving (**Maze**). We want to create a custom *Lesson Plan* setup for this user that will be quick and relatively easy to play and complete successfully. The student likes to see familiar people doing familiar things in the daily environment.

First, we should consider general parameter settings. We conclude that *Music=On*, *Tone=Off*, *Scan Speed=1*, and *Animation Speed=4* (the standard defaults) are reasonable beginning settings for this user. If we are using an external switch with control interface software, we have the *Multi-SCAN Switch Key* set to **ENTER** and the control interface software set to send that keypress to *Multi-SCAN* each time the switch is activated.<sup>2</sup>

<sup>2</sup> It is always important to remember that an application like *Multi-SCAN* must have the Windows focus to receive mouseclick or keystroke messages from the keyboard, the mouse, or other control interfaces. Clicking on a window gives it the focus.



- Step 7:** Since the user enjoys familiar people doing familiar things, pull down the **Libraries Menu** and click on the *Vocations* option.
- Step 8:** Next, pull down the **Controls Menu** and click on *Set Game Options*. This will open the **Game Controls Screen** and we will choose the settings shown above.
- Step 9:** Consider the **Dot-to-Dot** settings pane. We want a short and simple lesson. There are two play cycles per iteration in this game so *Iterations=1* would be a good setting. Click on the *Iterations* control repeatedly until the number cycles around to 1. To keep the game relatively simple, also click on the checkboxes for *3 dots per image* and for a *scanning number line* (left to right in numerical order) for Dot selection.
- Step 10:** Consider the **Find** settings pane. **Find** games tend to take longer so there is only one play cycle per iteration in this game. *Iterations=2* would be a good setting.

Click on the *Iterations* control repeatedly until the number cycles around to 2. Again, to keep the game relatively simple (but still emphasize pattern recognition), also click on the checkboxes for *Card Orientation=Yes*, *Card Preview=Yes*, and for *Rows=2* and *Columns=2*. For advanced scanning practice, click on *Row/Column* scanning.

**Step 11:** Consider the **Match** settings pane. Match games play very quickly so there are five play cycles per iteration in this game. *Iterations=1* would be a good setting. To keep the game relatively simple, also click on the checkboxes for *Card Orientation=Yes* and for *Number of Choices=2*, arranged *Vertically* to the right of the target.

**Step 12:** Consider the **Maze** settings pane. We want the user to use the scanning selector to solve the Maze problem. There is only one play cycle per iteration in this game so *Iterations=2* would be a good setting. Also click on *Scanning* as the mode of play.

**Step 13:** Make sure in all four panes, that the slide switch control for each game is set to *Game Active*. (Otherwise the game would not appear as an activity for the user to play during the lesson.)

**Step 14:** When all of the specific game settings match those shown in the illustration above, press the **Escape** key or click on the small checkbox in the middle of the screen to return to the **Welcome Screen**.

**Step 15:** Pull down the **File Menu** and choose the *Save User* option. This will save immediately save the current **User Setup** (with all the changes you just made) in the location and with the same filename as the setup had when you opened it (in Step 5 above), replacing the previous version. Alternately, you could select the *Save As...* option to rename the **User Setup** file and/or save it in a different location.

The current **User Setup Lesson Plan** is ready for the user to play through to completion. To double-check everything and perhaps print a record showing the *Lesson Plan* design:

**Step 16:** Pull down the **File Menu** and select the *Play Report* option. This **Play Report Screen** should resemble the one shown below. At this point, pressing the “P” key on the keyboard will open the Windows Printer dialog box.

Multi-SCAN 4.0 - Warren - Lesson 1

## The Multi-SCAN Play Report

**USER:** Warren - Lesson 1      **Date:** September 26, 2016

**GENERAL SETTINGS:**

**Library:** Vocations      **Music:** On  
**Scan Speed:** 1 second(s)      **Tone:** Off  
**Activity Mode:** Lesson Plan

**GAME SETTINGS:**

	(On)	(On)	(On)	(On)
<b>AND RESULTS:</b>	<u>MAZE</u>	<u>MATCH</u>	<u>FIND</u>	<u>DOT-TO-DOT</u>
<b>Iterations:</b>	2	1	2	1
<b>Play Mode:</b>	Scanning	2 Choices	2 Rows, 2 Cols	3 dots
<b>Difficulty:</b>			Preview/Reveal	
<b>Discrimination:</b>		Orientation	Orientation	
<b>Scan Mode:</b>			RowCol	Numerical
<b>Optimal Score:</b>				
<b>Play Attempts:</b>	No data	No data	No data	No data
<b>Success Rate:</b>				
<b>Elapsed Time:</b>				

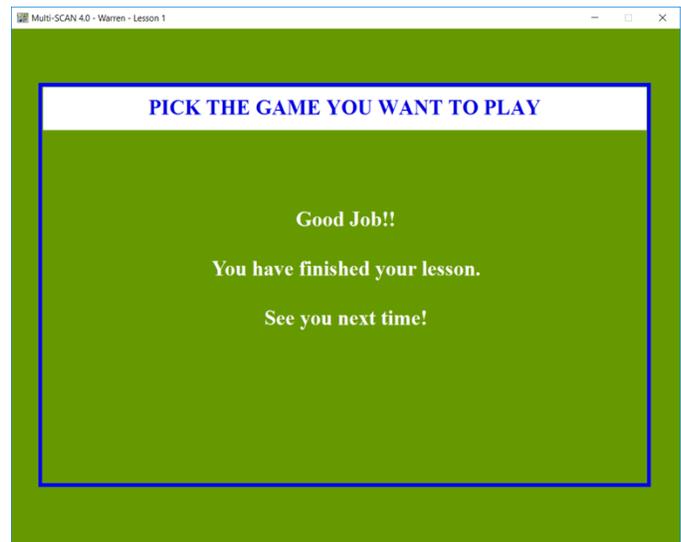
Click mouse or press ANY KEY to return.      **General Success:**   
 Press 'P' to print this report.      **Lesson Time:**

**Step 17:** When the user is seated and positioned and ready to work through the lesson, an attendant would pull down the **File Menu** and select the *Play Games* option. The **Play Games Screen** will appear showing all the games that are *Active* for this Lesson. When the user selects a game and plays through all of the pre-defined *Iterations* and play cycles successfully, control returns to the **Play Screen** for the user to select another game. The *Game Icon* for the finished game will appear dimmed and the scanning game selector will skip over that icon. (This illustration shows that both the **Dot-to-Dot** and **Match** games are completed, with **Find** and **Maze** still to play.)



**Step 18:** Upon completion of all game activities in the *Lesson Plan*, the user is rewarded by the “**Good Job!!**” message and play stops. At this point the attendant would press the **Escape** key on the keyboard to return to the **Welcome Screen**.

**Step 19:** Next (before doing anything else), the attendant should pull down the **File Menu** and select the *Play Report* option. The illustration below shows a typical set of lesson results. This would also be a good time to print this report, either for the user or for attendant record keeping purposes.



Multi-SCAN 4.0 - Warren - Lesson 1

## The Multi-SCAN Play Report

<b>USER:</b>	Warren - Lesson 1	<b>Date:</b>	September 26, 2016
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**GENERAL SETTINGS:**

<b>Library:</b> Vocations	<b>Music:</b> On
<b>Scan Speed:</b> 1 second(s)	<b>Tone:</b> Off
<b>Activity Mode:</b> Lesson Plan	

	(On)	(On)	(On)
<b>GAME SETTINGS:</b>			
<b>AND RESULTS:</b>	<b>MAZE</b>	<b>MATCH</b>	<b>FIND</b>
<b>Iterations:</b>	2	1	2
<b>Play Mode:</b>	Scanning	2 Choices	2 Rows, 2 Cols
<b>Difficulty:</b>			Preview/Reveal
<b>Discrimination:</b>		Orientation	Orientation
<b>Scan Mode:</b>			RowCol
<b>Optimal Score:</b>	11	5	4
<b>Play Attempts:</b>	12	7	4
<b>Success Rate:</b>	92%	71%	100%
<b>Elapsed Time:</b>	1 min	0.9 min	1.3 min

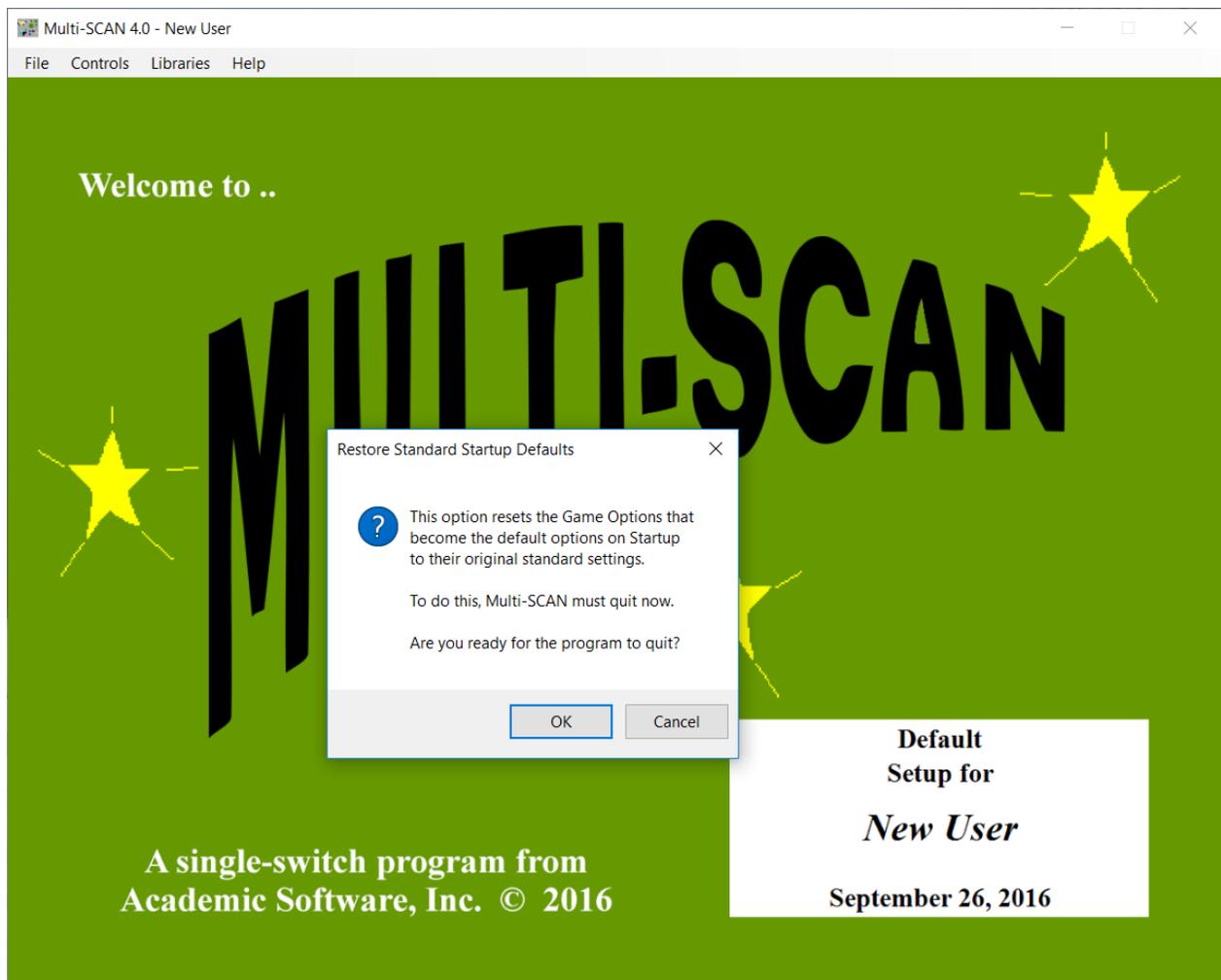
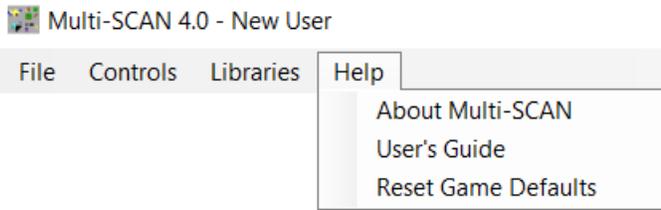
<b>Click mouse or press ANY KEY to return.</b>	<b>General Success:</b>	<b>87%</b>
<b>Press 'P' to print this report.</b>	<b>Lesson Time:</b>	<b>3.9 min</b>

# Technical Information

## Restoring Factory Game Default Settings ...

*Multi-SCAN* default settings can be customized easily by changing the general and/or specific game settings when a custom **User Setup** file is not loaded (i.e., when the user is *New User*). At that point, quitting *Multi-SCAN* saves the current settings as new default settings to load the

next time the program runs. However, there may often be times when you may want to restore the original default settings just as easily. To do that, pull down the **Help Menu** and select the *Reset Game Defaults* option. A warning message box pops up to remind you that this operation requires the program to quit, giving you an opportunity to save any **User Setup** or **Play Report**. If you are ready to reset, click on the OK button. *Multi-SCAN* will close and the next time the program runs, it will display the factory default settings.



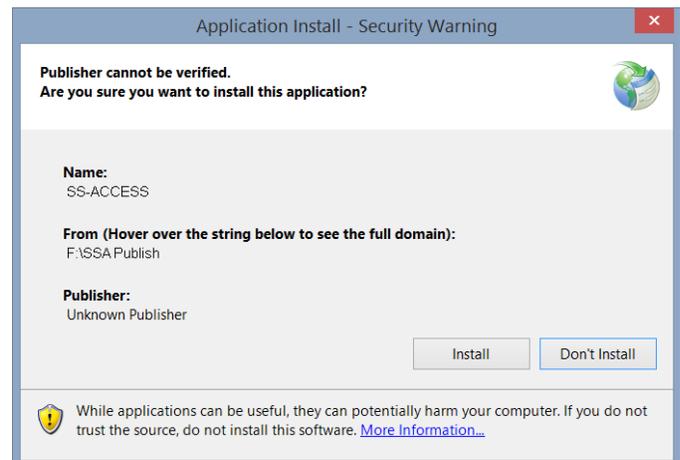
**To Install *Multi-SCAN* Using the *ClickOnce* Installer Program .....** A *ClickOnce* **setup.exe** *Installer* is a special Microsoft program provided to install *ClickOnce* application programs "safely" on Windows computers. In addition, the *Installer* places an "*application reference*" shortcut icon (that points to the **MultiSCAN.exe** program wherever that is installed) in the Windows **START SCREEN APPS** list and on the user's *Desktop*. Further, it facilitates completely removing the program using the Windows *Add/Remove Programs* tool.

Your **Multi-SCAN** CD-ROM contains several directories. These include:

- **MS Publish .....** This contains all the files needed to install **Multi-SCAN** automatically as a *ClickOnce* application on your hard disk.
- **MS Release .....** This contains files for manual copying and stand-alone use, without using the *Installer*. All files in this directory are necessary and must be kept together.
- **SS-Demo Publish....** This contains all the files needed to install **SS-Demo** (a fun, free single-switch program example) automatically as a *ClickOnce* application on your hard disk.
- **SS-Demo Release ...** This contains files for manual copying and stand-alone use, without using the *Installer*. All files in this directory are necessary and must be kept together.

There may also be a file named **MultiSCAN Users Guide.pdf** (this User's Guide) and a file named **readme.txt** containing useful notes and information not available when this User's Guide was written.

To install **Multi-SCAN** on your computer, open the **MS Publish** directory and double-click on the **setup.exe** file. This will evoke the *Application Install* window shown here. *ClickOnce* applications are "signed" and certified programs. They can use an official registered "certificate" from a certification guarantor or they can use a company-signed certificate. In the former case, the



**Publisher** field identifies the company that paid the certification guarantor for that service. In the latter case, the **Publisher** field is "Unknown Publisher." Academic Software, Inc. uses a company-signed certificate. If you trust that your software came from ASI or its distributors, then click **Install** to proceed and follow any further prompts. Otherwise, you cannot use the *ClickOnce Installer*.

**To copy and/or run *Multi-SCAN* manually as an ordinary executable Windows program ....** If you choose not to use the *Installer*, copy the entire **MS Release** directory (with all of its files) from your CD-ROM to your *Desktop* or to your hard drive (e.g., into a **c:\ASI** directory that you create for ASI software). It would be a good idea at this time to right-click on the **MultiSCAN.exe** file in the **MS Release** folder you copied and select the *Create shortcut* option. Then move the resulting shortcut icon to your *Desktop*. You can run **Multi-SCAN** by clicking on this shortcut icon or by opening the **MS Release** directory folder and double-clicking directly on the **MultiSCAN.exe** program file. (You can also run **Multi-SCAN** the same way directly from your **Multi-SCAN\_Software** CD-ROM itself.<sup>3</sup>)

<sup>3</sup> Note if you run **Multi-SCAN** directly from the CD-ROM, you will not be able to print the **Play Report** because the application cannot write the printer spool file to the read-only CD-ROM.

**To copy and print this User's Guide .....** This User's Guide is distributed on the *Multi-SCAN Software* CD-ROM as a PDF file. It is also a part of the *Multi-SCAN* program files and can be called up from within *Multi-SCAN* through the *Help* menu by selecting the *User Guide* option. As a PDF file, the free and widely available *Adobe Acrobat Reader* or some other similar PDF file reader program is required as a default program to open PDF files such as **MS Users Guide.pdf**. If need be, we suggest that you visit the Adobe website at <https://get.adobe.com/reader> and download this free program.

*Adobe Acrobat Reader* provides many options for reading and printing PDF files, including double-sided booklet formats. (This User's Guide is also available in bound book and e-book formats from ASI for assistive technology centers, schools, professionals, and other users.)

**What is the SS-Demo Program? .....** A demonstration program is provided for you to test the use of an external adaptive switch with another program besides *Multi-SCAN*. The *SS-Demo ClickOnce Installer* installs this program and adds an icon for it to the Windows **START SCREEN APPS** page and to the *Desktop*.



Run this demo by double-clicking its *Desktop* icon. A scene will appear and music plays. Along comes a character. This simple program is pretty much self-explanatory.



If you have a multi-function switch interface (like *WinSCAN* from ASI), you can configure a scanning control to access all of the command buttons. If you have a single-function switch interface (like *SS-ACCESS* from ASI), you can configure it to send either the **ENTER** key or the **S**-key to stop the character using an external switch. Another press of the switch will paste the original character in place and begin moving a copy of that character to the left. Continue pressing the switch to paste and move as many characters as you wish!<sup>4</sup> Use the regular keyboard to enter other commands: e.g., press **A** to view the program credits or **Q** to quit.

**Multi-SCAN requires .Net 4.5.1 Framework .....** Microsoft Windows, since version 7, comes equipped with **.Net** core software and will update that as needed automatically over the Internet. Thus for installation on an older computer, an Internet connection may be required. You may need administrator access to your computer for this.

***This completes your software installation.***

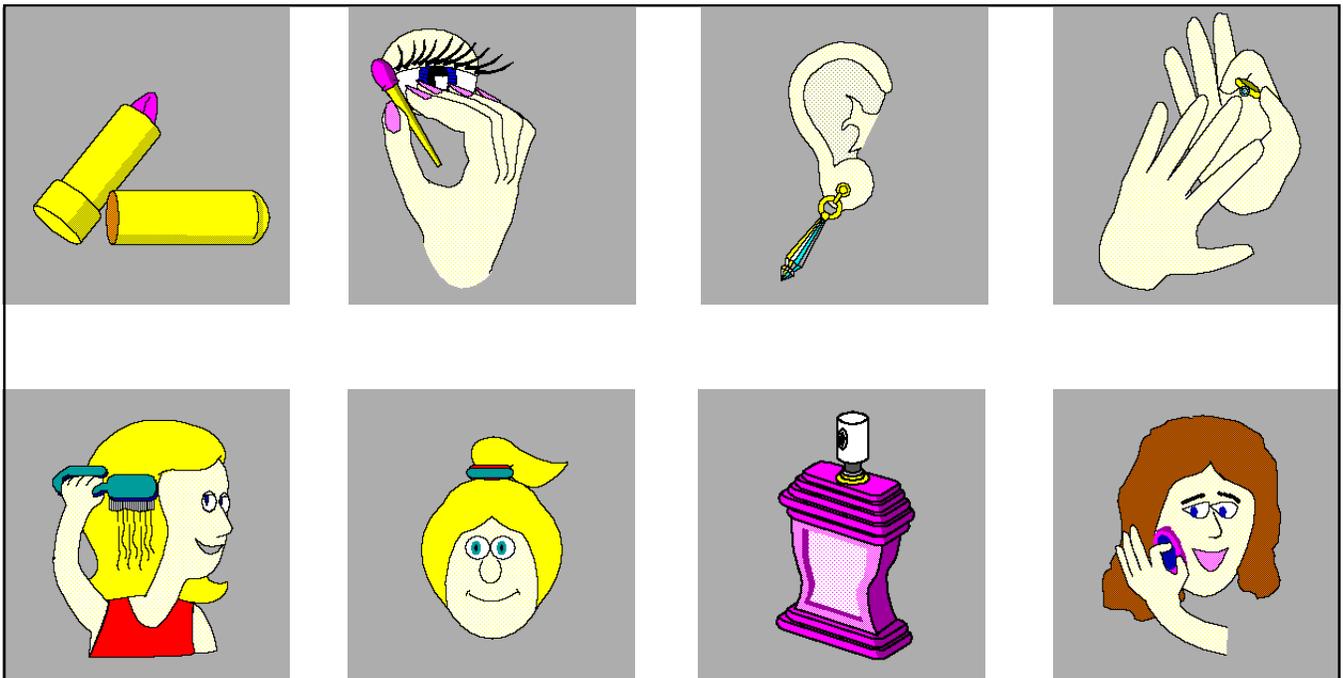
<sup>4</sup> After 10 characters are added, the *SS-Demo* display starts over. The window can be resized.

# Available Graphics Libraries

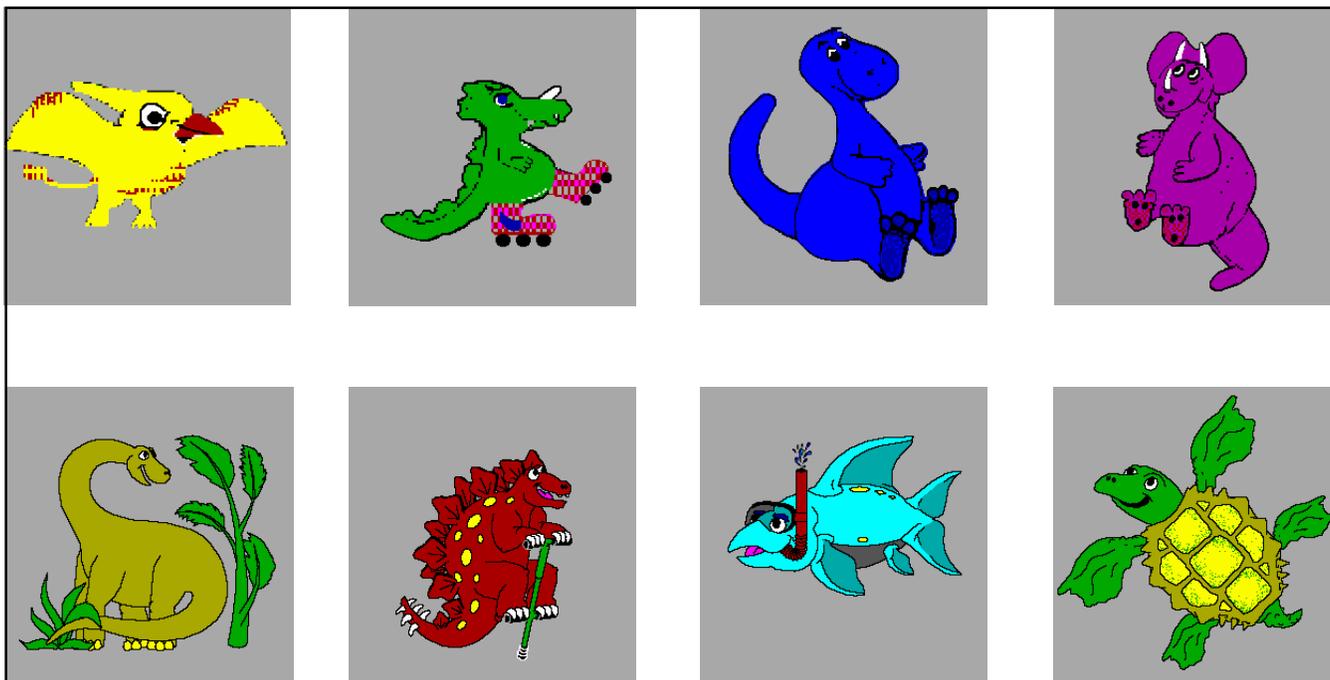
## Animals Library



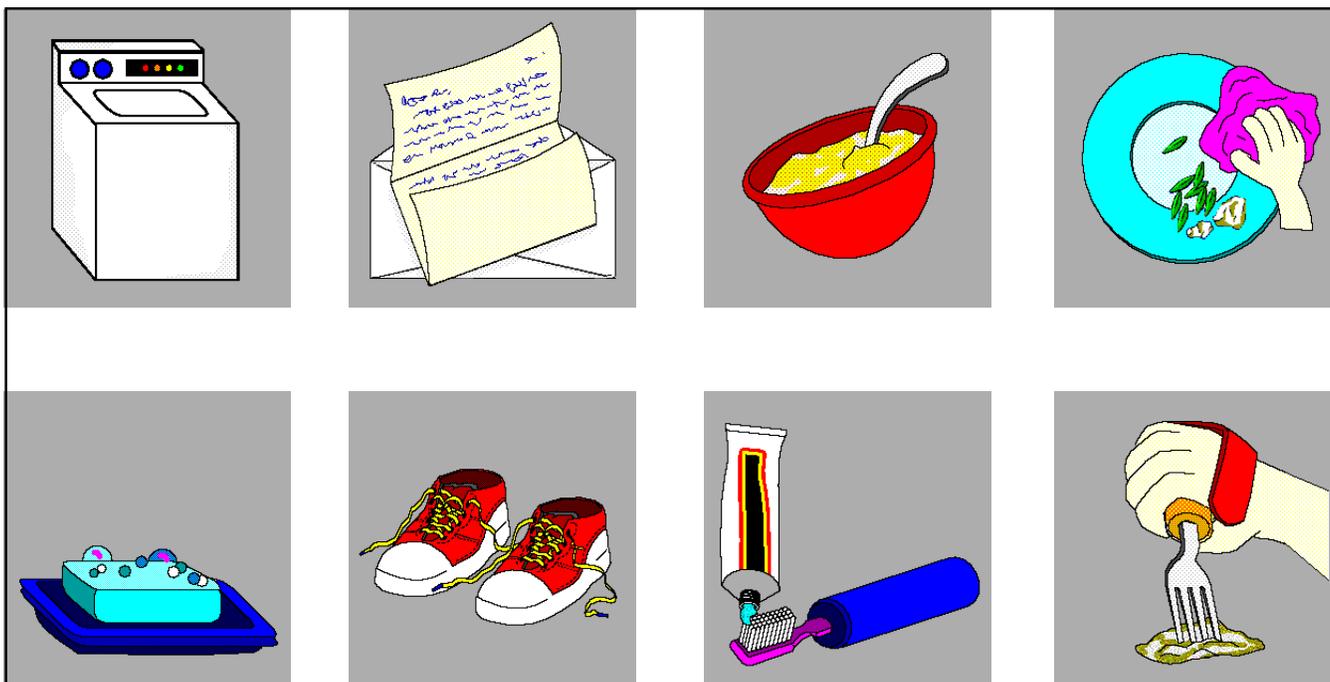
## Cosmetology Library



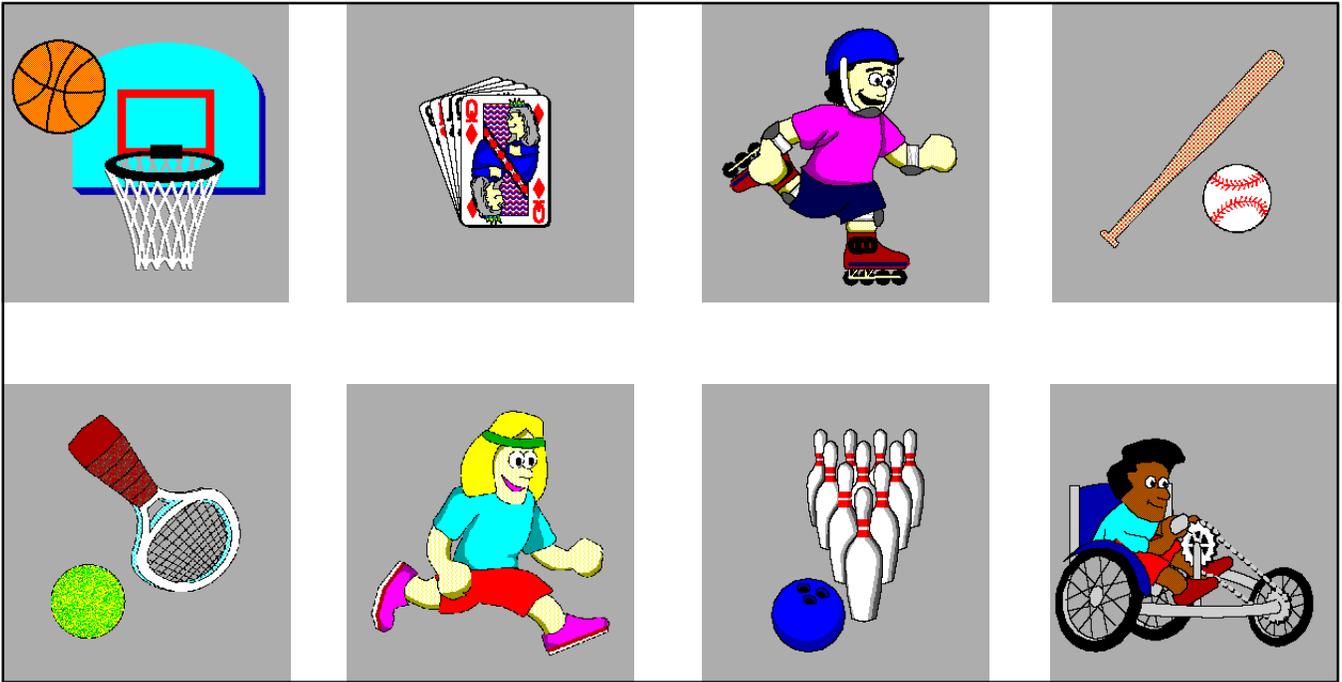
## Dinosaurs Library



## Independent Living Library



## Sports Library



## Vocations Library



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