

Customizing the Windows XP Operating System for Students with Disabilities

Preliminary Notes

1. The following information details steps for customizing the Windows XP operating system so that students with disabilities may use it more effectively. Changes should only be made for the student using the computer.
2. Be sure to have the original Windows XP operating system CD available.
3. Names of buttons, menu items, or commands appear in **bold**, text to be entered by the user appears in quotations. Do **not** type the quotation marks.
4. When instructed to perform a mouse click, always use the left mouse button (unless otherwise indicated).
5. Apply vs. OK: Throughout this document, steps will be given to click the OK button after settings are adjusted. The Apply button may be used instead to test your changes. Within operating system windows, (and most programs – some may differ slightly), the only difference between the OK button and the Apply button, is that while the Apply button executes any of the changes made, it will leave that particular window open – the OK button will execute any changes made *and* close that particular window.
6. Windows XP presents significant differences in how changes are made to the operating system. Adjustments may be made to have the operating system behave like previous versions of Windows. However, for the purpose of this document, adjustments will be made within Windows XP conventions.

Icon Size and Spacing

View Types

Previous versions of Windows have the following view types for icons within folders: Large Icons, Small Icons, List, and Details. To increase the size of the icons within these folders, in addition to those on the desktop, the folders need to be set to display the items as Large Icons from the View pull down menu. Small Icons, List, and Details have preset icon sizes that may not be adjusted. Windows XP adds Thumbnails and Tiles to the display choices on the View pull down menu.

Thumbnails or Tiles

Use either the Thumbnails or Tile view type to increase the icon sizes to a larger than default, but preset size that cannot be adjusted.

1. Open the desired folder.
2. From the **View** pull down menu, select **Thumbnails**.
3. From the **View** pull down menu, select **Tiles**.
4. Click the **X** button in the top right-hand corner to close the window.

Icons

To adjust the size of the icons within folders in Windows XP, Icon must be the display choice selected from the View pull down menu.

1. Open the desired folder.
2. From the **View** pull down menu, select **Icons**.
3. Click the **X** button in the top right-hand corner to close the window.

Adjust View Type for All Folders

All folders may be set to view their items with the same view type setting.

1. Open a folder.
2. From the **View** pull down menu, select a view type (**Thumbnails, Tiles, Icons, List, or Details**).
3. From the **Tools** pull down menu, select **Folder Options**.
4. Click the **View** tab.
5. Click **Apply to All Folders**.
6. Click **Yes**.
7. Click **OK**.
8. Click the **X** button in the top right-hand corner of all open windows.
9. Open any window to see the adjustment made.

Icon Size

Consider customizing the icon size. Larger sizes may be useful for students with visual impairments. In all cases, improving the readability of the computer display may reduce eye strain and fatigue. These settings will automatically adjust the icons on the desktop, as well as the icons on the Start Menu. Individual folders will need to be set to the Icon view type for the changes to be seen. If changes are to be set for all folders, complete the steps in the section Adjust View Type for All Folders before completing the following section.

1. From **start**, select **Control Panel**.
2. Click **Appearance and Themes**.
3. Click **Display**.
4. Click the **Appearance** tab.
5. Click **Advanced**.
6. From the **Item** pull down menu, select **Icon**.
7. In the **Size** box (to the right of **Item**), choose an appropriate size for the student. (The desktop icons can be resized in a wide range from 16 to 72. Experiment with sizes for each user. Start with a size within the 30 to 40 range.)
8. Click **OK**.
9. Click **OK**.
10. Click the **X** button in the top right-hand corner to close the **Appearance and Themes** window.

Font Size

Customizing the desktop font size may help users with visual impairments locate and use icons. Enlarging the desktop font size may cause the icon names to be “clipped” short. This can be corrected by adjusting the icon spacing as described in the section, Desktop Icon Spacing below. However, in Windows XP adjusting the icon spacing only solves the “clipping” issue within open folders, *not* the desktop.

1. From **start**, select **Control Panel**.
2. Click **Appearance and Themes**.
3. Click **Display**.
4. Click the **Appearance** tab.
5. Click **Advanced**.
6. From the **Item** pull down menu, select **Icon**.
7. From the **Font** pull down menu, select the desired font. (Choose a font that lacks curls at the letter ends, e.g., MS Sans Serif.)
8. In the **Size** box (to the right of **Font**), choose an appropriate point size. For 15” monitors and smaller, start with a 10-point font. Click the **B** to the right of the font size to select bold. For 17” inch monitors and larger, try a bold, 10 to 12-point font.
9. Click **OK**.
10. Click **OK**.
11. Click the **X** button in the top right-hand corner to close the **Appearance and Themes** window.

Icon Spacing

Users with visual impairments may benefit from spacing the desktop icons further apart.

1. From **start**, select **Control Panel**.
2. Click **Appearance and Themes**.
3. Click **Display**.
4. Click the **Appearance** tab.
5. Click **Advanced**.
6. From the **Item** pull down menu, select **Icon Spacing (Horizontal)**.
7. In the **Size** box (to the right of **Item**), choose an appropriate size for the spacing between icons. [This number will be determined partly by the values entered for **Icon** size and **Font** size (described above). Trial and error is the only way to ensure a proper setting.]
8. From the **Item** pull down menu, select **Icon Spacing (Vertical)**.
9. In the **Size** box (to the right of **Item**), choose an appropriate size for the spacing between icons. [This number will be determined partly by the values entered for **Icon** size and **Font** size (described above). Trial and error is the only way to ensure a proper setting.]
10. Click **OK**.
11. Click **OK**.
12. Click the **X** button in the top right-hand corner to close the **Appearance and Themes** window.

Desktop Display Color

Desktop Display

Certain students respond better to different color contrasts than the typical black text on white background. The background of the desktop is visible, at least in part, most of the time. Do not use desktop settings that conflict with the icons displayed. Select one that is neutral and pleasant in color.

Windows XP comes with a preset display scheme which includes a desktop picture. Consider removing this picture.

Removing a Desktop Picture

1. From **start**, select **Control Panel**.
2. Click **Appearance and Themes**.
3. Click **Display**.
4. Click the **Desktop** tab.
5. Under **Background**, select (**None**).
6. From the **Color** pull down menu, select the desired color.
7. Click **OK**.
8. Click the **X** button in the top right-hand corner to close the **Appearance and Themes** window.

Using a Preset Color Scheme

1. From **start**, select **Control Panel**.
2. Click **Appearance and Themes**.
3. Click **Display**.
4. Click the **Appearance** tab. (The current color scheme and changes made are previewed in this window.)
5. From the **Color scheme** pull down menu, select a scheme that is appropriate to the user.
6. Click **OK**.
7. Click the **X** button in the top right-hand corner to close the **Appearance and Themes** window.

Manually Creating a Color Scheme

Any combinations of colors may be chosen, for this example the choices will be to select white or yellow text displayed on medium and dark blue windows/panels.

1. From **start**, select **Control Panel**.
2. Click **Appearance and Themes**.
3. Click **Display**.
4. Click the **Themes** tab.
5. From the **Theme** pull down menu, select **Windows XP** to reset the computer to default settings.
6. Click **Apply**.
7. Click the **Desktop** tab.
8. Under **Background**, make a selection. (When one of these items is selected, further changes to the desktop color, and pattern settings will be hidden from view – again, consider selecting **(None)**.)
9. From the **Color** pull down menu, select the desired color.
10. Click **Apply**.
11. Click the **Appearance** tab.
12. Click **Advanced**.
13. From the **Item** pull down menu, select **Window**.
14. From the **Color 1** pull down menu (to the right of **Item**), select the dark blue color choice.
15. From the **Item** pull down menu, select **3D Objects**.
16. From the **Color 1** pull down menu (to the right of **Item**), select the medium blue color choice.
17. From the **Item** pull down menu, select **Selected Items**.
18. From the **Color** pull down menu (to the right of **Font**), select the yellow color choice.
19. From the **Item** pull down menu, select **Message Box**.
20. From the **Color** pull down menu (to the right of **Font**), select the yellow color choice.
21. From the **Item** pull down menu, select **Inactive Title Bar**.
22. From the **Color** pull down menu (to the right of **Font**), select the black color choice.
23. Click **OK**.
24. Click the **Themes** tab.
25. Click **Save As**.
26. In the **File** name text box, type in a name for this custom theme.
27. Click **Save**.
28. Click the **Theme** pull down menu to verify that the newly saved color scheme appears in the pull down menu.
29. Click the **Theme** pull down menu to cancel the pull down menu.
30. Click **OK**.
31. Click the **X** button in the top right-hand corner to close the **Appearance and Themes** window.

High Contrast Display

A preset high contrast setting is available through the **Accessibility Options** control panel. These settings will override many changes made in the Icon Size and Spacing and Desktop Display Color sections described above.

1. From **start**, select **Control Panel**.
2. Click **Accessibility Options**.
3. Click **Accessibility Options**.
4. Click the **Display** tab.
5. Check the **Use High Contrast** checkbox.
6. Click **Settings**.
7. Under **High contrast appearance scheme**, select one of the **High Contrast Black** choices (white text on black background), or one of the **High Contrast White** choices (black text on white background).
8. Click **OK**.
9. Click **OK**.
10. Click the **X** button in the top right-hand corner to close the **Accessibility Options** window.

Sound

Assigning Audio Alerts

The alert sound is one way the computer provides feedback to the user. Sound can add excitement and motivation. Try using a very obvious sound or create a personal message using the Windows XP Sound Recorder.

1. From **start**, select **Control Panel**.
2. Double click **Sounds, Speech, and Audio Devices**.
3. Click **Sounds and Audio Devices**.
4. Click the **Sounds** tab. (Windows XP offers several sound schemes, or you can assign specific event sounds.)
5. From the **Program events** scroll list, click an event.
6. From the **Sounds** pull down menu, choose one of the available sounds.
7. Click the **Play** button (▶) to test the sound.
8. Click **OK**.
9. Click the **X** button in the top right-hand corner to close the **Sounds, Speech, and Audio Devices** window.

Recording and Assigning Custom Alert Sounds

1. From **start**, highlight **All Programs**, then highlight **Accessories**, then highlight **Entertainment**, and then select **Sound Recorder**.

Note: Steps 2 through 4 need to be performed almost immediately after each other.

2. Click the **Record** button (●).
3. Immediately speak the message.
4. Click the **Stop** button (■) when the message is complete.
5. Click the **Play** button (▶) to preview the message. (If changes are necessary, make changes. From the **File** pull down menu, select **New** and then click **No** when prompted to save changes. Repeat steps 2 through 5 to make changes.)
6. From the **File** pull down menu, select **Save**.
7. From the **Save in** pull down menu, select **Local Disk (C:)**.
8. Double click the **WINDOWS** folder.
9. Double click the **Media** folder.
10. In the **File name** text box, type in a name for the sound.
11. Click **Save**.
12. Click the **X** button in the top right-hand corner to close the **Sound Recorder** window.
13. From **start**, select **Control Panel**.
14. Double click **Sounds, Speech, and Audio Devices**.
15. Click **Sounds and Audio Devices**.
16. Click the **Sounds** tab.

17. From the **Program events** scroll list, click an event.
18. From the **Sounds** pull down menu, choose the name of the newly created sound.
19. Click the **Play** button (▶) to test the sound.
20. Click **OK**.
21. Click the **X** button in the top right-hand corner to close the **Sounds, Speech, and Audio Devices** window.

Adjusting the Sound Volume

1. From **start**, select **Control Panel**.
2. Click **Sounds, Speech, and Audio Devices**.
3. Click **Adjust the system volume**.
4. Move the **Device volume** slide bar to the desired setting.
5. Click **OK**.
6. Click the **X** button in the top right-hand corner to close the **Sounds, Speech, and Audio Devices** window.

Visual Alert

For students with hearing impairments or those who are easily distracted by the alert sounds, Windows XP can be set to give visual feedback when alerting the user. Options include having the active caption bar, the active window, or the desktop flash.

1. From **start**, select **Control Panel**.
2. Click **Accessibility Options**.
3. Click **Accessibility Options**.
4. Click the **Sound** tab.
5. Check the **Use SoundSentry** checkbox.
6. Under the **Choose the visual warning** pull down menu, select the desired option.
7. On the keyboard, while pressing the **Ctrl** key, tap the **P** key to see the selected flash.
8. Click **OK**.
9. Click the **X** button in the top right-hand corner to close the **Accessibility Options** window.

For additional visual feedback, programs can be made to display captions for the sounds they make.

1. From **start**, select **Control Panel**.
2. Click **Accessibility Options**.
3. Click **Accessibility Options**.
4. Click the **Sound** tab.
5. Check the **Use ShowSounds** checkbox.
6. Click **OK**.
7. Click the **X** button in the top right-hand corner to close the **Accessibility Options** window.

Control

Mouse Movement and Clicking

If the mouse pointer tracking and double click speeds are not set properly, the results may be frustration and inability to control the mouse. Consider mouse alternatives (e.g., trackball). Many mouse alternatives include their own software for further adjustment to mouse response. In addition, consider the purchase of a third party mouse driver to enlarge the mouse pointer size and/or change its color.

Often computers may be shipped with different mouse driver software. Therefore, the actual methods for adjustment may differ slightly from what is described below.

1. From **start**, select **Control Panel**.
2. Click **Printers and Other Hardware**.
3. Click **Mouse**.
4. Click the **Buttons** tab.
5. Under **Double-click speed**, move the slide bar to the appropriate setting within the given range to adjust the amount of time allowed for double clicking. (Check this setting by double clicking the folder in the **Test area**.)
6. Click **Apply**.
7. Click the **Pointers** tab.
8. From the **Scheme** pull down menu, select a preset group of mouse pointer icons. (Additional settings may be customized by selecting **None** under the **Scheme** pull down menu, and using the lower portion of this window.)
9. Click **Apply**.
10. Click the **Pointer Options** tab.
11. Under **Motion**, move the **Select a pointer speed** slide bar to the appropriate setting within the given range to adjust the tracking speed of the mouse.
12. Under **Visability**, check the **Display pointer trails** checkbox to provide an additional visual feedback of mouse trails that may help locate the mouse pointer.
13. Under the **Display pointer trails** checkbox, move the slide bar to the appropriate setting within the given range to adjust the length of the mouse trails.
14. Under **Snap To**, check the **Automatically move pointer to the default button in a dialog box** checkbox to cause the cursor to jump to the highlighted button of each dialog box.
15. Click **OK**.
16. Click the **X** button in the top right-hand corner to close the **Printers and Other Hardware** window.

Setting Icons for Single Click

Icons on the desktop, as well as items within each folder, can be set to be opened with a single click. This may be helpful for students who do not benefit from even the slowest mouse double click speed setting detailed in the above section.

1. From **start**, select **Control Panel**.
2. Click **Appearance and Themes**.
3. Click **Folder Options**.
4. Click the **General** tab.
5. Under **Click items as follows**, click the **Single-click to open an item (point to select)** radio button.

Note: Depending upon the user's needs/preference complete either step 6 or 7.

6. Under **Click items as follows**, click the **Underline icon titles consistent with my browser** radio button to have icons underlined at all times.
7. Under **Click items as follows**, click the **Underline icon titles only when I point at them** radio button to have icons underlined only when the mouse pointer is located above an item.
8. Click **Apply**.
9. Move the mouse pointer over any icon and single click the mouse.
10. Under **Click items as follows**, click **Double-click to open an item (single-click to select)** radio button to reset the computer back to the normal double click method.
11. Click **OK**.
12. Click the **X** button in the top right-hand corner to close the **Appearance and Themes** window.

MouseKeys

The MouseKeys feature provides full mouse emulation from the numeric keypad of any standard IBM-compatible keyboard and is provided for those users who have difficulty manipulating a mouse. The numbers on the keypad are like the points of a compass. Keys **1** to **9** (excluding **5**) become the directional keys, the **5** key performs a single left click, the **+** key executes a double click, the **Ins** key begins a drag, and the **Del** key releases the drag.

To activate the right click mode, press the **-** key on the numeric keypad, and then press the **5** key. MouseKeys will stay in right click mode until the **/** key on the numeric keypad is pressed.

1. From **start**, select **Control Panel**.
2. Click **Accessibility Options**.
3. Click **Accessibility Options**.
4. Click the **Mouse** tab.
5. Check the **Use MouseKeys** checkbox.
6. Click **Settings**.
7. Under **Keyboard shortcut**, check the **Use shortcut** checkbox to activate the capability to toggle MouseKeys on and off with the keyboard. (The keyboard shortcut is **Left Alt+Left Shift+Num Lock**.)
8. Under **Pointer speed**, move the **Top speed** slide bar to the appropriate setting within the given range to set the mouse pointer's speed when a directional key is held down.
9. Under **Pointer speed**, move the **Acceleration** slide bar to the appropriate setting within the given range to set the acceleration speed of the mouse pointer.
10. Next to **Use MouseKeys when NumLock is**, click either the **On** or **Off** radio button to set when MouseKeys will be available for use.
11. Check the **Show MouseKey status on screen** checkbox to be able to see when MouseKeys is available for use. (A small icon of a mouse will appear next to the **clock** in the **System Tray**.)
12. Click **OK**.
13. Click **OK**.
14. Click the **X** button in the top right-hand corner to close the **Accessibility Options** window.

Keyboard

The Keyboard control panel can be used to make two adjustments to the operation of the keyboard. Repeat Rate adjusts how fast a character repeats when its key is held down. Repeat Delay adjusts how long a key needs to be held down before the character begins to repeat. Students with difficulty manipulating the keyboard may benefit from modifying these settings.

1. From **start**, select **Control Panel**.
2. Click **Printers and Other Hardware**.
3. Click **Keyboard**.
4. Click the **Speed** tab.
5. Under **Repeat delay**, move the slide bar to the appropriate setting within the given range to adjust how long a key needs to be held down before its character begins to repeat.
6. Under **Repeat rate**, move the slide bar to the appropriate setting within the given range to adjust how fast a character repeats when its key is held down.
7. Click once in the **Click here and hold down a key to test repeat rate** text box.
8. On the keyboard, press and hold any character key to test the settings.
9. Click **OK**.
10. Click the **X** button in the top right-hand corner to close the **Printers and Other Hardware** window.

StickyKeys

StickyKeys is used for students with physical disabilities who type with one finger/hand, use a pointing device/typing aid, or who have difficulty performing key combinations. StickyKeys will latch a modifier key (Shift, Ctrl, Alt) during times when two or three keys need to be pressed simultaneously (e.g., to type a capital letter or perform a computer command).

1. From **start**, select **Control Panel**.
2. Click **Accessibility Options**.
3. Click **Accessibility Options**.
4. Click the **Keyboard** tab.
5. Under **StickyKeys**, check the **Use StickyKeys** checkbox.
6. Click **Settings**.
7. Under **Keyboard shortcut**, check the **Use shortcut** checkbox in order to use the keyboard shortcut to turn StickyKeys on. (To use the shortcut for StickyKeys, press the **Shift** key five times.)

Note: StickyKeys option settings can be made for a variety of users. Not all of the adjustments provided below need to be made. Select only those appropriate for the user.

8. Under **Options**, check the **Press modifier key twice to lock** checkbox. (When this is selected a modifier key will stay held down if pressed twice.)
9. Under **Options**, check the **Turn StickyKeys off if two keys are pressed at once** checkbox. (When this is selected StickyKeys may be turned off whenever any two modifier keys are pressed simultaneously.)

10. Under **Notification**, check the **Make sounds when modifier key is pressed** checkbox for audible feedback when a **Shift**, **Ctrl**, or **Alt** key is pressed.
11. Under **Notification**, check the **Show StickyKeys status on screen** checkbox to see when StickyKeys is available for use. (A small icon of a keyboard will appear next to the **clock** in the **System Tray**.)
12. Click **OK**.
13. Click **OK**.
14. Click the **X** button in the top right-hand corner to close the **Accessibility Options** window.

FilterKeys

The amount of time a key must be held down before it is accepted by the computer can be adjusted through FilterKeys. This is also where adjustments can be made to slow down or completely eliminate the key repeat rate. FilterKeys may assist users who make unintentional keystrokes.

1. From **start**, select **Control Panel**.
2. Click **Accessibility Options**.
3. Click **Accessibility Options**.
4. Click the **Keyboard** tab.
5. Under **FilterKeys**, check the **Use FilterKeys** checkbox.
6. Click **Settings**.
7. Under **Keyboard shortcut**, check the **Use shortcut** checkbox to use the keyboard shortcut to activate FilterKeys. (To use the shortcut for FilterKeys, hold down the **Right Shift** key for eight seconds.)

Note: The following Filter options settings may be made for a variety of users. Not all of the adjustments provided below need to be made. Select only those appropriate for the user.

8. Click the **Ignore repeated keystrokes** radio button.
9. Click **Settings**.
10. Click the **Ignore keystrokes repeated faster than** pull down menu.
11. Select an appropriate setting to adjust how long the computer will wait to accept the next keystroke.
12. Click once in the **Test area** text box.
13. On the keyboard, press any character key repeatedly, and at different rates, to test the settings.
14. Click **OK**.

Note: The following RepeatKeys settings will override settings made on the Keyboard control panel.

15. Click the **Ignore quick keystrokes and slow down the repeat rate** radio button. (Selecting this option will deselect **Ignore repeated keystrokes**.)
16. Click **Settings**.
17. Click the **No keyboard repeat** radio button to eliminate characters being repeated while any key is held down.
18. Click once in the **Test area** text box.
19. On the keyboard, press and hold any character key, to test the settings.
20. Click the **Slow down keyboard repeat rates** radio button. (Selecting this option will deselect **No keyboard repeat**.)
21. Click the **Repeat delay** pull down menu.
22. Select an appropriate setting to adjust how long a key must be held down before its character begins to repeat.
23. Click once in the **Test area** text box.
24. On the keyboard, press and hold any character key, to test the settings.
25. Click the **Repeat rate** pull down menu.
26. Select an appropriate setting to adjust how fast a character repeats when its key is held down.
27. Click once in the **Test area** text box.
28. On the keyboard, press and hold any character key, to test the settings.
29. Click the **SlowKeys** pull down menu.
30. Select an appropriate setting to adjust how long a key must be held down for the computer to accept its input.
31. Click once in the **Test area** text box.
32. On the keyboard, press and hold any character key, to test the settings.
33. Click **OK**.
34. Under **Notification** check the **Beep when keys pressed or accepted** checkbox for audible feedback when any key is pressed (or accepted—depending on selected settings).
35. Under **Notification** check the **Show FilterKey status on screen** checkbox to see whether FilterKeys is available for use. (A small icon of a stopwatch will appear next to the **clock** in the **System Tray**.)
36. Click **OK**.
37. Click **OK**.
38. Click the **X** button in the top right-hand corner to close the **Accessibility Options** window.

ToggleKeys

ToggleKeys provides an audible cue to tell a user when the Caps Lock, Num Lock, or Scroll Lock keys have been activated or deactivated.

1. From **start**, select **Control Panel**.
2. Click **Accessibility Options**.
3. Click **Accessibility Options**.
4. Click the **Keyboard** tab.
5. Under **ToggleKeys**, check the **Use ToggleKeys** checkbox.
6. Click **Settings**.
7. Under **Keyboard shortcut**, check the **Use shortcut** checkbox in order to use the keyboard shortcut to turn **ToggleKeys** on. (To use the shortcut, press and hold down the **Num Lock** key for five seconds.)
8. Click **OK**.
9. Click **OK**.
10. Click the **X** button in the top right-hand corner to close the **Accessibility Options** window.

Organization

Desktop Items and New Programs

The only icon that is placed on the desktop in Windows XP is the Recycle Bin. Programs installed will be accessible from the Start menu.

Creating a Personal Work Folder

Create a new folder for each user to save work.

1. From **start**, select **My Documents**.
2. From the **File** pull down menu, highlight **New** and then select **Folder**.
3. While it is still highlighted, type in the name of the folder (e.g., student's name).
4. Click anywhere on a blank area of the **My Documents** window.
5. Click the **X** button in the top right-hand corner of the **My Documents** window.

Using Shortcuts

Shortcuts were designed to reduce the need of searching for files, folders, or programs within the computer's hard disk. They also help maintain the integrity of programs by reducing (or even eliminating) the need to open the program's folder. Shortcuts may be used on the desktop or on the Start menu. A small arrow on the lower left side designates an icon as a Shortcut.

For some students, having a shortcut on the desktop that will access their personal work folder helps them to locate work more efficiently.

1. From **start**, select **My Documents**.
2. Right click on the student's personal work folder icon, highlight **Send To**, and select **Desktop (create shortcut)**.
3. Click the **X** button in the top right-hand corner of the **My Documents** window.

For other students, placing a shortcut to their personal work folder on the Start menu may create easy access to their work.

1. From **start**, highlight **Settings** and then select **Taskbar & Start Menu**.
2. On the desktop, click and drag the shortcut icon to the **start** button.
3. Click **start** to verify that the student's personal work folder appears on the **start** menu.

For some students, having shortcuts on the desktop to access programs they will use may improve their efficiency.

1. From **start**, highlight **All Programs**, then highlight **Accessories**.
2. Right click **WordPad**, highlight **Send To**, and select **Desktop (create shortcut)**.
3. Click anywhere on a blank area of the desktop (to collapse the **start** menu).

For some students, having shortcuts in their personal work folder to access programs they will use may improve their efficiency.

1. From **start**, highlight **All Programs**.
2. Navigate to the desired item within **All Programs**. (This may include navigation through sub-menus.)
3. Right click on the desired program, highlight **Send To**, and select **Desktop (create shortcut)**.
4. Click anywhere on a blank area of the desktop (to collapse the **start** menu).
5. Right click the newly created shortcut.
6. Click **Cut**.
7. From **start**, select **My Documents**.
8. Right click on the student's personal work folder.
9. Click **Paste**.
10. Double click the student's personal work folder to verify that the shortcut is now there.
11. Click the **X** button in the top right-hand corner of the student's personal work folder window.

Startup Items

The Startup folder starts files, opens folders, or launches programs when the computer is started.

Startup Items (Programs)

The following steps are to be used when setting a program to automatically launch at the time the computer is booted. This is recommended when only one student is using the computer or multiple students use the same program(s).

1. From **start**, highlight **All Programs**.
2. Navigate to the desired item within **All Programs**. (This may include navigation through sub-menus.)
3. Right click on the desired program, highlight **Send To**, and select **Desktop (create shortcut)**.
4. Click anywhere on a blank area of the desktop (to collapse the **start** menu).
5. Right click the newly created shortcut.
6. Click **Cut**.
7. From **start**, highlight **All Programs**.
8. Right click on **Startup**, and select **Open**.
9. From the **Edit** pull down menu, select **Paste**.
10. Click the **X** button in the top right-hand corner of the **Startup** window.
11. From **start**, highlight **All Programs**, and then highlight **Startup**.
12. Verify that the desired program is displayed.
13. From **start**, click **Turn Off Computer**.
14. Click **Restart**. (Once the computer has restarted, any items in **Startup** will automatically run.)

Startup Items (Folders and Files)

The following steps are to be used to set a folder to automatically open, or a file to automatically launch at the time the computer is booted.

1. From the **start** menu, navigate to the desired folder or file (which is likely to be found within **My Documents** and may include navigation through folders within).
2. Right click on the desired folder or file, highlight **Send To**, and select **Desktop (create shortcut)**.
3. Click the **X** button in the top right-hand corner of the **My Documents** window.
4. Right click the newly created shortcut.
5. Click **Cut**.
6. From **start**, highlight **All Programs**.
7. Right click on **Startup**, and select **Open**.
8. From the **Edit** pull down menu, select **Paste**.
9. Click the **X** button in the top right-hand corner of the **Startup** window.

10. From **start**, highlight **All Programs**, and then highlight **Startup**.
11. Verify that the desired folder or file is displayed.
12. From **start**, click **Turn Off Computer**.
13. Click **Restart**. (Once the computer has restarted, any items in **Startup** will automatically run.)

Accessibility Options and Features

General

There are general settings to be made regarding the Accessibility Options.

1. From **start**, select **Control Panel**.
2. Click **Accessibility Options**.
3. Click **Accessibility Options**.
4. Click the **General** tab.
5. Under **Automatic reset**, check the **Turn off accessibility features after idle for** checkbox and use the **minutes** pull down menu to specify the time. Consider leaving this box unchecked to ensure that the accessibility features activated will remain on indefinitely.
6. Under **Notification**, consider checking the **Give warning message when turning a feature on** and/or **Make a sound when turning a feature on or off** checkboxes.

Note: The SerialKey devices portion of the General window is used to configure alternative input devices for the computer. Alternate input may be an alternative keyboard or an augmentative communication device.

7. Click **OK**.
8. Click the **X** button in the top right-hand corner of the **Control Panel** window.

Specific Accessibility Features

Microsoft has built additional options into Windows XP to make the computer more accessible. These are standard options as part of Windows XP. The access features (and the procedures to activate them) have been presented throughout this document. In addition Windows XP includes a Magnifier, a Narrator, an On-Screen Keyboard and an Accessibility Wizard.

Magnifier

Magnifier is a display utility that makes the screen more readable for students with visual impairments. It displays a magnified portion of your screen in a separate window. Magnifier also makes it possible to alter the color scheme and contrast of the magnification window. Magnifier can be moved or resized. It can also be “docked” by dragging it to any edge of the screen. Most users with visual impairments will need a magnification utility program with higher functionality for daily use.

1. From **start**, highlight **All Programs**, then highlight, **Accessories**, then highlight **Accessibility**, and then select **Magnifier**.
2. If a dialog box appears describing the Microsoft Magnifier, click **OK**.
3. In the **Magnification level** text box, type (or use the pull down menu to select) a magnification level number between 1 and 9.
4. Under **Tracking** check the **Follow mouse cursor** checkbox, to have the magnification window reflect wherever the mouse pointer is moved.
5. Under **Tracking** check the **Follow keyboard focus** checkbox, to have the magnification window reflect the area of the screen that is affected by keyboard commands, such as the Tab or arrow keys.
6. Under **Tracking** check the **Follow text editing** checkbox, to have the magnification window reflect the area of the screen where text is being entered.
7. Under **Presentation** check the **Invert colors** checkbox, to have the magnification window (only) change its display to complementary colors, for example, blue changes to yellow, and black changes to white.
8. Under **Presentation**, check the **Start Minimized** checkbox, to have Magnifier start with the Magnifier Settings dialog box minimized.
9. Under **Presentation**, check the **Show Magnifier** checkbox, to display the Magnifier with the settings chosen within this section.
10. Position and resize the magnification window as desired just like any standard Windows XP window.
11. Click **Exit**.
12. From **start**, highlight **All Programs**, then highlight, **Accessories**, then highlight **Accessibility**, and then select **Magnifier**.
13. If a dialog box appears describing the Microsoft Magnifier, click **OK**.
14. Verify that Magnifier starts with its settings window minimized to the Task Bar.
15. On the **Task Bar**, click **Magnifier Settings**.
16. Click **Exit**.

Narrator

Narrator is a screen reading utility to help those with low vision setup their own computers, or use another's computer. Narrator can read aloud on-screen text, dialog box options, menus, and buttons. Narrator can be set to read each character as it is typed on the keyboard. Narrator is designed to work with Notepad, WordPad, Control Panel items, Internet Explorer, the Windows XP desktop, and Windows XP setup. Narrator may not read words aloud correctly in other programs. Most users with visual impairments will need a screen reading utility program with higher functionality for daily use.

1. From **start**, highlight **All Programs**, then highlight, **Accessories**, then highlight **Accessibility**, and then select **Narrator**.
2. If a dialog box appears describing the Microsoft Narrator, click **OK**.
3. Check the **Announce events on screen** checkbox, to have Narrator read new windows, menus, or shortcut menus aloud when they are displayed.
4. Check the **Read typed characters** checkbox, to have Narrator read aloud each key as it is pressed.
5. Check the **Move mouse pointer to the active item** checkbox, to have Narrator move the mouse pointer to the active item on the screen.
6. Check the **Start Narrator minimized** checkbox, to have Narrator start with the Narrator dialog box minimized.
7. Click **Exit**.
8. Click **Yes**.
9. From **start**, highlight **All Programs**, then highlight, **Accessories**, then highlight **Accessibility**, and then select **Narrator**.
10. If a dialog box appears describing the Microsoft Narrator, click **OK**.
11. Verify that Narrator starts with its settings window minimized to the Task Bar.
12. On the **Task Bar**, click **Narrator**.
13. Click **Exit**.
14. Click **Yes**.

On-Screen Keyboard

On-Screen Keyboard is a utility that displays a virtual keyboard on the screen and allows users with mobility impairments to type data by using a variety of methods. Input devices can be a traditional pointing device (mouse or trackpad), an alternative mouse (joystick or trackball), or through the use of switch technology. On-Screen Keyboard is also useful for users who do not know how to type. Mobility impaired users will need a utility program with higher functionality for daily use.

1. From **start**, highlight **All Programs**, then highlight, **Accessories**, and then select **WordPad**.
2. Click **Maximize**.
3. From **start**, highlight **All Programs**, then highlight, **Accessories**, then highlight **Accessibility**, and then select **On-Screen Keyboard**.
4. If a dialog box appears describing the On-Screen Keyboard, click **OK**.
5. From the **Keyboard** pull down menu, select **Enhanced Keyboard**, to display a keyboard that includes the numeric keypad.
6. From the **Keyboard** pull down menu, select **Standard Keyboard**, to display a keyboard that does not include the numeric keypad.
7. From the **Keyboard** pull down menu, select **Regular Layout**, to display the keys as they would normally appear on a standard keyboard.
8. From the **Keyboard** pull down menu, select **Block Layout**, to display the keys in a lined up format with the arrow keys in the lower right corner.
9. From the **Settings** pull down menu, select **Always on Top** to ensure that the keyboard window will remain in front of all other windows.
10. From the **Settings** pull down menu, select **Use Click Sound** to hear a sound as each character is selected in the keyboard window.
11. From the **Settings** pull down menu, select **Font** to bring up a standard Font dialog box to be used to change the appearance of the letters on the keyboard window.

Note: There are three typing modes that may be used with On-Screen Keyboard. They are clicking mode, hover mode, and scanning mode.

12. From the **Settings** pull down menu, select **Typing Mode**.
13. Click **Click to select**, to use a pointing device (i.e., mouse or joystick) to point and click the keyboard characters.
14. Click **OK**.
15. Click once anywhere within the **WordPad** window (to make it active).
16. Point and click to the letters in the **On-Screen Keyboard** window and verify that they are displayed in WordPad.
17. From the **Settings** pull down menu, select **Typing Mode**.
18. Click **Hover to select**, to use a pointing device to point and wait a specified amount of time over a keyboard character before it is selected and typed.

19. Use the **Minimum time to hover** pull down menu to adjust the length of time that the pointing device is to be held over a keyboard character before it is selected and typed.
20. Click **OK**.
21. Click once anywhere within the **WordPad** window (to make it active).
22. Point (and wait) to the letters in the **On-Screen Keyboard** window and verify that they are displayed in WordPad.
23. From the **Settings** pull down menu, select **Typing Mode**.
24. Click **Joystick or key to select**, to access the keyboard through scanning.
25. Use the **Scan interval** pull down menu to set the speed for how quickly the keyboard is scanned.
26. Click **Advanced**.
27. Use the **Keyboard** key pull down menu, to select which key is to be used to begin scanning. (For this activity, select **Space**.)
28. Click **OK**.
29. Click **OK**.
30. Click once anywhere within the **WordPad** window (to make it active).
31. Press the **Spacebar** and use standard scanning techniques to select the desired keys.
32. In the **On-Screen Keyboard** window, from the **File** pull down menu, select **Exit**.
33. In the **Document – WordPad** window, from the **File** pull down menu, select **Exit**.
34. Click **No**.

Accessibility Wizard

By prompting users to select specific needs regarding disabilities, the Accessibility Wizard helps users configure Windows XP for vision, hearing, and mobility needs. Depending upon the choices selected, changes may be made within the Accessibility Options, Mouse, or Display control panels; and/or the Magnifier. Therefore, users will not have to go to the individual control panels to make adjustments. At the completion of the Accessibility Wizard, a list of the changes made will be presented.

1. From **start**, select **Control Panel**.
2. Click **Accessibility Options**.
3. Click **Configure Windows to work for your vision, hearing, and mobility needs**.
4. On the **Welcome to the Accessibility Wizard** screen, click **Next**.
5. On the **Text Size** screen, click on one of the three choices presented.
6. Click **Next**.

Note: The following Display Settings screen provides options for adjusting the size of text and other items on your screen. The preselected options on this screen are recommended and are based on the font size that was selected on the previous Text Size screen.

7. On the **Display Settings** screen, review the preselected items, and/or make changes as desired.
8. Click **Next**.
9. On the **Set Wizard Options** screen, click all of the statements that apply.

Note: The choices made on the Set Wizard Options screen determines which screens will be presented next in this Wizard.

10. Click **Next**.
11. Read each screen, make the selection(s) as they best meet the needs of the student.
12. When finished with each screen, click **Next** to move to the next one.
13. When the **Completing the Accessibility Wizard** appears, go to step 14.

Note: Depending on how each question is answered, the following changes may be made to Windows XP:

Low Vision:

- Font size of window title bars, menus, and other features
- Screen resolution
- Magnifier

Blind or Low Vision:

- Scroll bar and window border size
- Icon size
- High contrast color schemes
- Mouse Cursor

Deaf or Hard of Hearing:

- SoundSentry
- ShowSounds

Motor Needs (adjustments to the keyboard and/or mouse):

- StickyKeys
- BounceKeys
- ToggleKeys
- Extra Keyboard Help (displays button tooltips and other instructions within certain programs)
- MouseKeys
- Mouse Button Settings (left or right handed user setting for mouse buttons)
- Mouse Speed

Administrative Options

- Automatic Timeouts (MouseKeys, StickyKeys, ToggleKeys, and High Contrast settings may be automatically turned off after the computer has been idle for a specified amount of time – there is also the option to leave these features turned on all the time)
- Default Accessibility Settings (provides the option of having the accessibility options that are chosen through the Accessibility Wizard applied to only the current user profile or the current and all new user profiles)
- Save Settings to File (save the settings chosen through the Accessibility Wizard to a file that can run on other computers (running Windows XP))

14. On the **Completing the Accessibility Wizard** screen, click **Finish**.

User Accounts

The computer can be adjusted to meet the needs of several students through the implementation of User Accounts. All of the customization options illustrated within this document can be made separately and saved for each user. This allows tremendous flexibility in customizing the computer for several students who have a variety of needs at the same time. As students use the login process, all settings will be saved for previous users.

Creating User Profiles

Be sure to be logged in as the Administrator or with an account that has administrative privileges.

1. From **start**, select **Control Panel**.
2. Click **User Accounts**.
3. Click **Create a new account**.
4. In the **Type a name for the new account** text box, type in a user name for the student.
5. Click **Next**.
6. Click the **Limited** radio button.
7. Click **Create Account**.
8. Click the **X** button in the top right-hand corner of the **User Accounts** window.
9. Click the **X** button in the top right-hand corner of the **Control Panel** window.

Logging In as a Different User without Restarting

1. From **start**, select **Log Off**.
2. Click **Log Off**.
3. Click the desired person's user name. (A password will only be required if one is set up for the desired user – this is configured on the User Accounts screen.)

Logging In as a Specific User upon Startup

The following two steps need to be completed only if the computer is already powered on. If the computer is powered off, begin with step 3.

1. From **start**, select **Turn Off Computer**.
2. Click **Turn Off**.
3. Power the computer on.
4. Click the desired person's user name.

Appendix

General Protection

Any user of a computer may move or delete files, change attributes, or otherwise compromise the performance of the operating system. Files, folders, or programs can be protected by making them Read-only or Hidden.

Read-Only

Files, folders, or programs can be protected from being deleted or changed by designating them as read-only.

1. Locate the file, folder, or program.
2. Right click on the item.
3. Select **Properties**.
4. Click the **General** tab.
5. Under **Attributes**, check the **Read-only** checkbox.
6. Click **OK**.
7. Click the **X** button in the top right-hand corner of all open windows.

Setting Hidden Items

Files, folders, or programs can be protected from being deleted or changed by designating them as hidden.

- A. The following steps will set the computer to hide items that are marked as **Hidden**.
 1. From **start**, select **Control Panel**.
 2. Click **Appearance and Themes**.
 3. Click **Folder Options**.
 4. Click the **View** tab.
 5. Click the **Do not show hidden files or folders** radio button.
 6. Click **OK**.
 7. Click the **X** button in the top right-hand corner of the **Appearance and Themes** window.
- B. The following steps will hide a file, folder, or program.
 1. Locate the file, folder, or program.
 2. Right click on the item.
 3. Select **Properties**.
 4. Click the **General** tab.
 5. Under **Attributes**, check the **Hidden** checkbox.
 6. Click **OK**.

Note: At this point, the item is marked as hidden, but will be displayed in a more transparent fashion until the window which encloses the item is either closed and re-opened, or is refreshed.

7. From the **View** pull down menu, select **Refresh**.
8. Click the **X** button in the top right-hand corner of all open windows.

Viewing Hidden Items

The following steps explain how to view items that will be still marked as hidden.

1. From **start**, select **Control Panel**.
2. Click **Appearance and Themes**.
3. Click **Folder Options**.
4. Click the **View** tab.
5. Click the **Show hidden files and folders** radio button.
6. Click **OK**.
7. Click the **X** button in the top right-hand corner of the **Appearance and Themes** window.
8. Locate the file, folder, or program.

Note: At this point, the item is still marked as hidden, but will be displayed in a more transparent fashion. Selecting **Show hidden files and folders** overrides the hidden option. Once **Do not show hidden files or folders** is re-selected, the hidden items will become invisible again.

9. Click the **X** button in the top right-hand corner of all open windows.

Deselecting the Hidden Property

To view an item at all times, it is necessary to deselect its hidden property. Steps 1 through 7 below are not necessary if they were completed in the previous section.

1. From **start**, select **Control Panel**.
2. Click **Appearance and Themes**.
3. Click **Folder Options**.
4. Click the **View** tab.
5. Click the **Show hidden files and folders** radio button.
6. Click **OK**.
7. Click the **X** button in the top right-hand corner of the **Appearance and Themes** window.
8. Locate the file, folder, or program.
9. Right click on the item.
10. Select **Properties**.
11. Click the **General** tab.
12. Under **Attributes**, uncheck the **Hidden** checkbox.
13. Click **OK**.
14. From **start**, select **Control Panel**.

15. Click **Appearance and Themes**.
16. Click **Folder Options**.
17. Click the **View** tab.
18. Click the **Do not show hidden files or folders** radio button.
19. Click **OK**.
20. Click the **X** button in the top right-hand corner of the **Appearance and Themes** window.
21. Click the **X** button in the top right-hand corner of all open windows.