Windows and Computer Basics

Course description

This course will provide an overview of computer hardware as well as how to navigate the Windows operating system. Students will learn the terminology used with computers to better describe questions and issues. We will explore the Windows interface, how to navigate programs, access and personalize the start menu and task bar, and utilize the file manager.

Learning outcome

Students should leave the class with the fundamentals to take any of the other classes offered by the library.

Main areas of focus

Learn computer/OS terminology
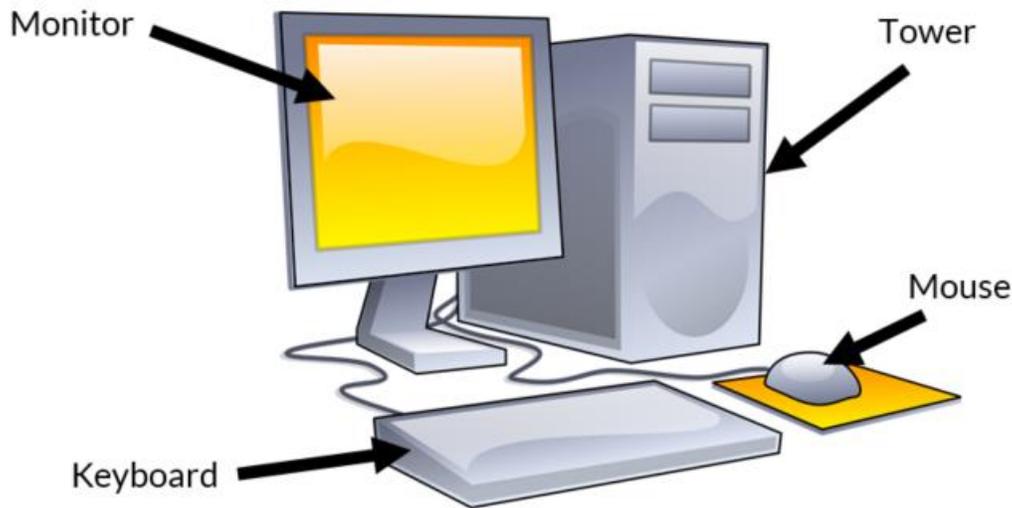
Understand the parts of a computer

Use the start menu and task bar

Manage programs and files

Class length: 1 hour

Prerequisites: None

Parts of a computer

The **Tower** is the portion of the computer containing the internal components, like the processor and hard drive. In a laptop, the tower is located inside the body of the laptop, underneath the keyboard.

The **monitor** is the screen of the computer, which allows you to see what the computer is doing.

The **mouse** and **keyboard** are input devices, which allow you to interact with the computer and give it instructions.

Some of the other parts of a computer you don't always see but are necessary to operate your computer are as follows.

Processor (CPU) – This is the brain of your computer. It's what processes all the commands running through it.

RAM (Random Access Memory) – This is the short term memory of the computer where information is pulled into active usage from storage on the hard drive.

Hard Drive – This is your long term storage for files and programs. Anymore these are measured in gigabytes (GB) and terabytes (TB).

USB port – USB (Universal Serial Bus) is one of the most common connections for a computer allowing quick and easy access to charging cables, portable storage, and computer peripherals.

CD/DVD drive – This is the slot or tray where you place physical discs to watch movies, listen to music, or store files. Many computers no longer come with an internal disc drive anymore.

The Mouse

Left mouse button

Right mouse button

Scroll wheel/ Middle mouse button
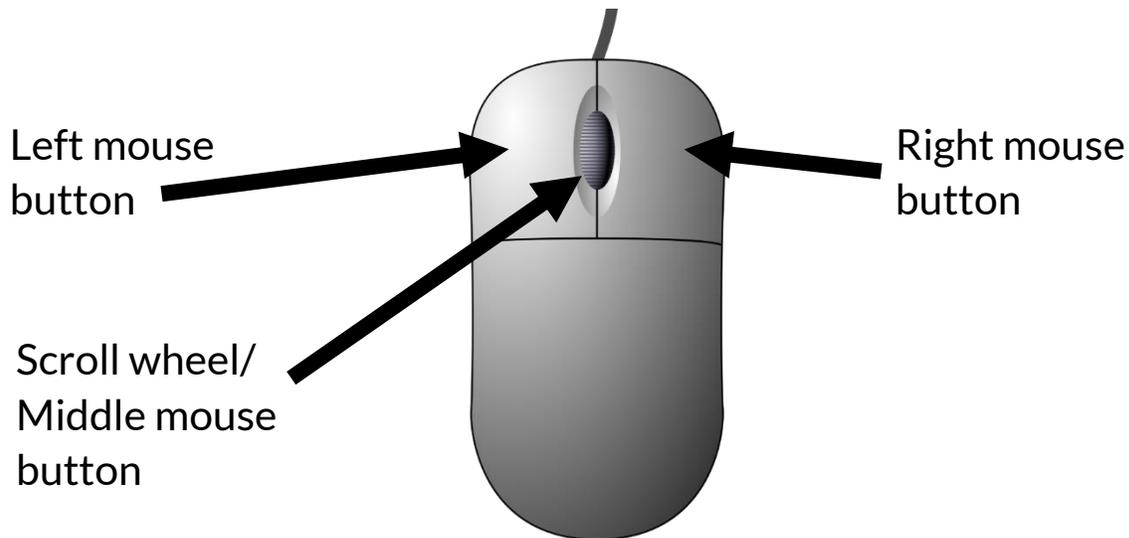
The mouse has typically three buttons, the **left mouse button**, the **right mouse button**, and the **scroll wheel** (or middle mouse button).

Most functions of the mouse will be completed with the **left mouse** button. Most tasks need only a single press of the button, however icons on the desktop and in the file explorer are opened with a "double click" where you quickly press the button twice in a row.

The **right mouse** button is used for bringing up a menu of options relating to the item selected.

The **scroll wheel** allows you to move up and down a page by scrolling the wheel. The wheel can also be pushed as the middle mouse button to do various tasks depending on the program, often allowing another method of navigating the page.

Mouse **cursors** appear in a variety of ways depending on the task you are working on. The cursor is the point on the screen that allows you to interact with the computer through the mouse.

Here are some ways the cursor can look. The first cursor is the most common look for the cursor to appear. The second is often what it will look like when hovering over a clickable link in a web browser. The third is what it will look like in a word processor when moving in an area you can type in.

Laptops use what are called **trackpads**. Here you slide your finger around in order to move the cursor. Some trackpads have buttons for left and right click, while others rely on you to tap the trackpad to click. Usually tapping with one finger acts as a left click, while tapping with two will act as a right click. To scroll a page, place two fingers on the trackpad and move them up or down.

The Keyboard

The keyboard allows you to type information into the computer. The different keys allow you to type numbers, letters, and punctuation. Commonly used function keys are highlighted above and described below.

Enter: This button confirms you've completed entering information. Often you'll be asked to click enter on a website to submit information, and the enter key will also serve the same function. There are two enter keys on a full keyboard and both function the same way.

Shift: The shift key allows you to type capital letters as long as it is held down. Additionally, if a key shows two symbols like the 1 and ! key, holding the shift will type the top symbol instead of the bottom one. So to type a $, you press **SHIFT + 4** at the same time.

Windows: This button brings up the Start Menu when pressed. It can also be pressed alongside several other buttons for various Windows shortcuts. (See 'Common Keyboard Shortcuts' at the end of the booklet.)

Control (Ctrl): Control is used in combination with other buttons to perform simple tasks like cut, copy, and paste.

Caps Lock: Caps Lock functions like the shift key, but only for letters. However, you do not need to keep it held down. If you press the Caps Lock button, ALL YOUR TEXT WILL APPEAR AS CAPITALS. While it is turned on, the Caps Lock light will appear lit in the top right of your keyboard. (Some computers have the light on the Caps Lock key instead of in the corner.)

Number (Num) Lock: The Num Lock button toggles the number pad on the right side of the keyboard on and off. While off, they function as navigational buttons. When the Num Lock is on, the buttons will type numbers instead of move around the page. While it is turned on, the Num Lock light will appear lit in the top right of your keyboard. (Some computers have the light on the Num Lock key instead of in the corner.)

Tab: Tab is used in a word processor to indent the first line of a paragraph. In a web browser, it can be used to jump to the next available text box or link.

The Desktop
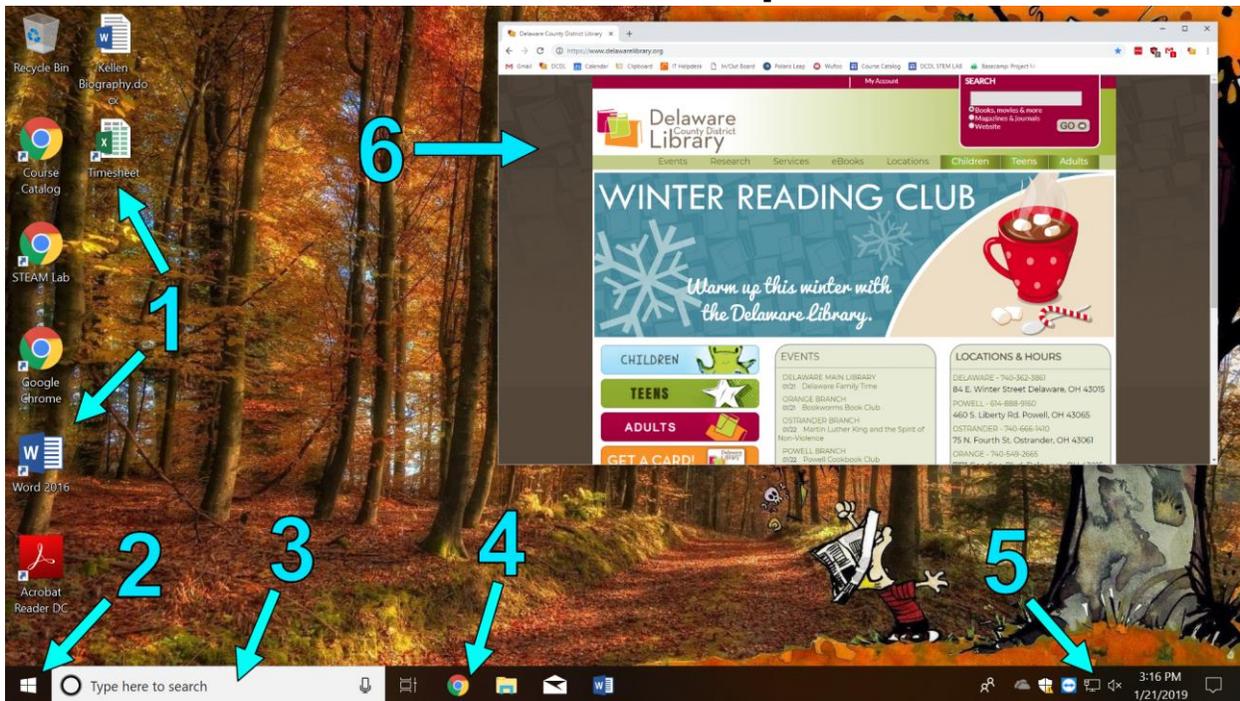
1. Icons: These are files and programs on your Desktop that can be opened. The **Desktop** is a location on the computer you can save files to, or you can place shortcuts. Shortcuts are icons that point to a file somewhere else on your computer instead of existing on the desktop itself. These are indicated by a [shortcut icon] in the lower left corner of the icon.

2. Start menu: The easiest way to find your programs that aren't icons on the desktop is to open the start menu. Clicking the Windows logo in the corner will open the start menu. For more information, look at the next page on the Start Menu.

3. Search bar: The search bar can be used to find files, programs, and even do web searches in Windows 10. Simply click in the search area and start typing. Additionally, you can start typing once you've opened the Start Menu and it will do the same function.

4. Taskbar: The taskbar area has icons for programs that allow you to open them quickly if they are pinned there. Additionally, when a program is open its icon will appear here until you close it, even if it isn't pinned to the taskbar.

5. Notification area: This area has icons for background programs as well as your clock and calendar. The speech bubble in the bottom right corner will open the notification panel where system notifications will appear if you miss them as they pop up.

6. Program windows: Programs when open will appear over the desktop. Clicking the __ in the top right corner of the window will minimize it to the taskbar. This window is shown at not full size, but you can click the middle square to make it fill the screen. Clicking the X will close the window.

Start menu
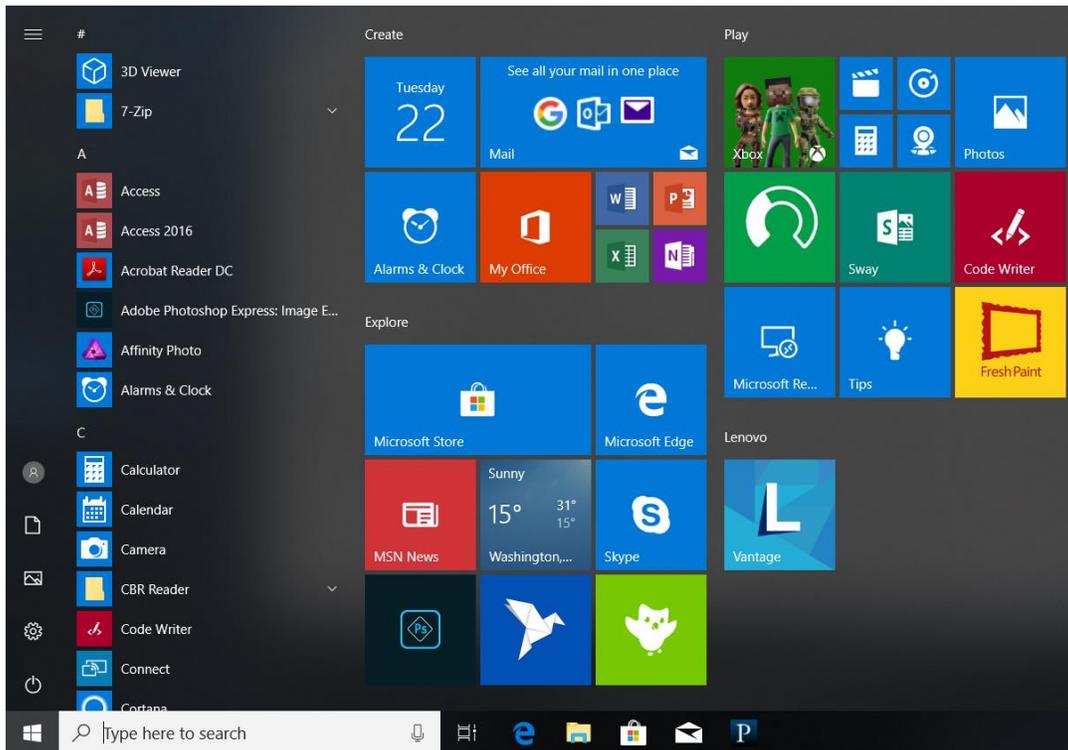
The **start menu** gives you quick and easy access to all your programs, as well as to news, weather, and other information through live tiles. These tiles on the right are customizable and you can add and remove them based on the programs you have installed on your computer. On the left side is a list of programs you have installed on your computer in alphabetical order. Folders like "7-Zip" are shown with a down arrow on the right side of the program name. If you click on the folder, it will open to show the programs and files inside.

There is a list of icons on the bottom left side. These are customizable as well in Windows settings, but by default they should look like the image above. Here you can see the little round icon is your profile which allows you to sign out or switch users. Below that is your **Documents** folder, then the **Pictures** folder, and the gear icon is your Windows **Settings**.

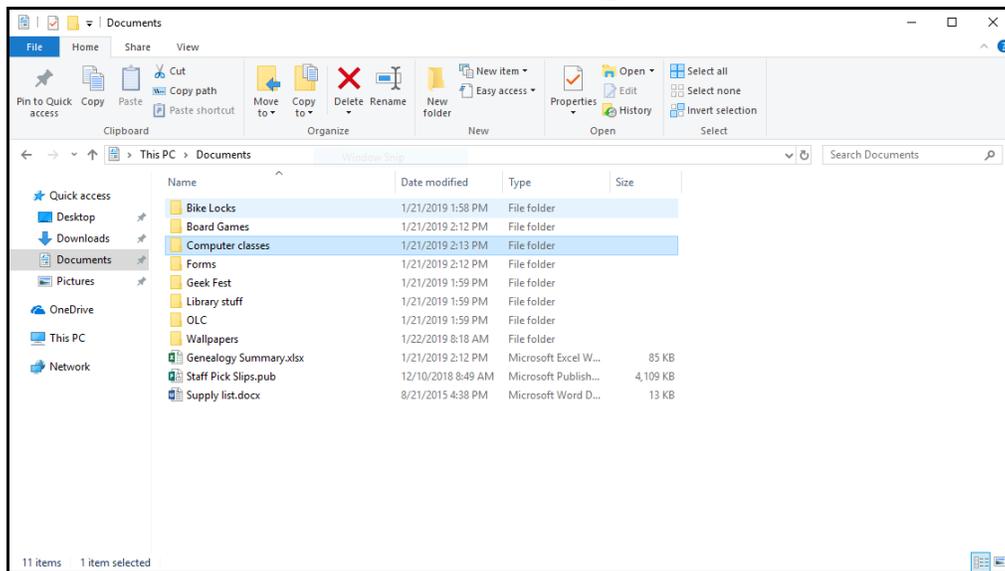The last icon is your power options. You can:

Sleep: Which puts the computer in low power mode.

Shut Down: Turns the computer off entirely.

Restart: Turns your computer off and back on again. Often needed when installing programs or to fix common glitches.
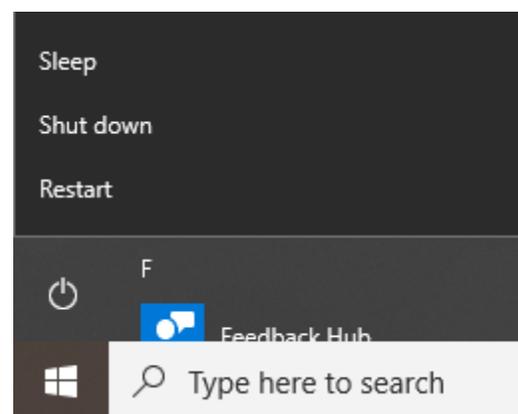
File Manager

The **file manager** is a helpful tool that allows you to browse and organize the files on your computer. It can be accessed by pressing "⊞ + E" on your keyboard or clicking the 📁 icon on your taskbar.

On the left is your sidebar. The top of the sidebar has **Quick Access**. This has some common folders pinned already, and sometimes shows commonly used folders. You can pin any file or folder to quick access by right clicking on it and selecting "Pin to quick access."

This PC is where you will find your hard drive, CD/DVD drives, and flash drives that are plugged into the computer, as well as your common save locations like Music, Documents, and Pictures.

Above Quick Access are your navigation buttons. The ← **back arrow** takes you back to the last folder you viewed. The → **forward arrow** takes you forward one arrow if you've already gone back. The ↑ "**Up To...**" button takes you up one level to the folder that contains the folder you're currently in.

The bar to the right of those buttons displays where you are located among your folders by showing the **file path** from This PC down to where you're currently at.

To the right of that is your **search bar** which allows you to search your folders and files. The key thing to remember is that it only searches the folders and files within the folder you're currently looking at. If you want a wider search, click the "**Up To**…" button and try searching again.

The top of the file manager has what's called the **ribbon**, and this has options for moving, copying, and deleting files, as well as creating new folders. You also have sharing options to share your files with others, as well as viewing options to change how you view your files (such as in a list or with icons).

Task Manager
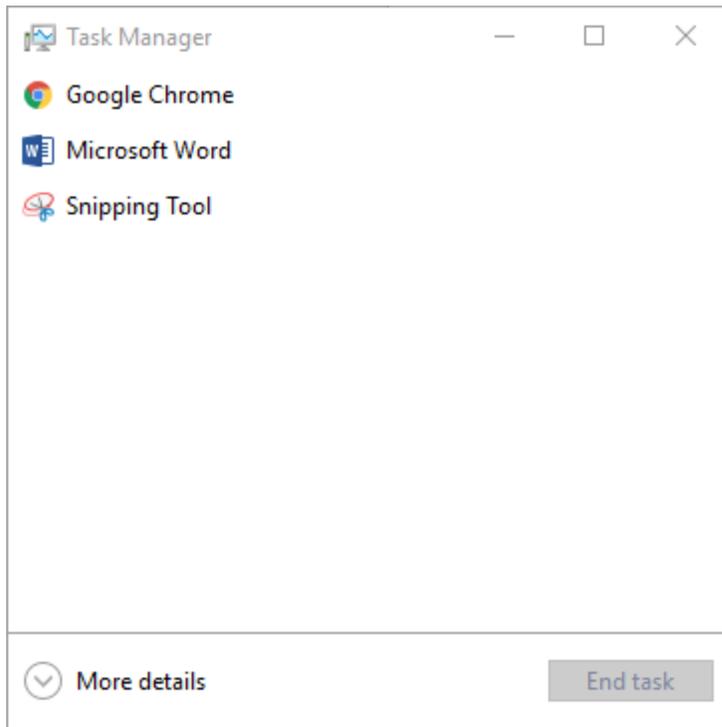
The **task manager** is a tool used to view computer processes and end programs that are frozen.

There are a couple ways to reach the task manager, but the most direct is to press **CTRL + SHIFT + ESC** at the same time. The other direct way is to right click on the Start menu button and select Task Manager from the list.

You can see in this image what the task manager looks like. I have three programs open right now and they're all working properly. If one of my programs was frozen, it would show (Not responding) beside it. To fix that, select the program in the list and click the "End task" button in the bottom right corner.

This will end your program's processes and should fix whatever is causing the computer to act up.

It's recommended you don't end tasks this way just to finish them because it won't save your work if you end them through the task manager. It should only be done if you cannot get the program to respond to you normally.

Common computer file types

Files are saved to a computer in what's called a file type. This allows the computer to understand what program is needed to open the file by the way it's coded. Some common file types are listed below along with what they are used for.

.exe - An executable file, often used to install a program on the computer.

.htm/.html - A webpage, which will open in a browser

.jpg/.jpeg - A common image file often found on cameras and the internet

.tif/.TIFF - A less common image file often used with higher quality photography

.png - An image that may have an invisible background

.gif - An image file that has the ability for movement

.flv - Flash video file

.wmv - A Windows Media Video file

.mp3 - A music file

.mp4 - A video file

.txt - A simple plain text document

.rtf - A text file

.doc/.docx - Microsoft Word document

.xls/.xlsx - Microsoft Excel spreadsheet

.ppt/.pptx - Microsoft PowerPoint slide show

.pdf - A document that cannot be edited

.zip – A compressed file to make it easier to download. You will need to extract the files in order to use them.

Common Keyboard Shortcuts

There are many keyboard shortcuts that allow you to perform various tasks simply by pressing a couple of keyboard buttons at the same time. Some of the more common shortcuts are listed here.

CTRL + X - Cut a section of text or a file, removing it from its current location.

CTRL + C - Copy a section of text or a file, making a duplicate.

CTRL + V - Paste a section of text or a file, making a duplicate if copied or removing the original if cut.

CTRL + Z - Undo the last action completed.

CTRL + B - Turns a set of highlighted text **bold**.

CTRL + I - Turns a set of highlighted text to *italics*.

CTRL + U - <u>Underlines</u> a set of highlighted text.

CTRL + A - Selects everything in the area.

CTRL + S - Saves a file of your work.

F1 - The built in key to access the help within many programs.

ALT + F4 - Closes a program.

ALT + TAB – Switches between programs. Keep holding ALT until you reach the program you want, then let go of the button.

⊞ + E - Opens the file explorer.

⊞ + I - Opens the Windows settings options.