Computer Basics

AIM

Gain knowledge of basic computer components, learn how to operate a keyboard and mouse, identify, navigate and use features of a Microsoft Windows 10 operating system.

Understanding a Computer

What makes up a computer?

What is a computer?

- Hardware versus Software
  - **Hardware** is any part of your computer that has a physical structure, such as the keyboard or mouse. It also includes all of the computer's internal parts.
  - **Software** is any set of instructions that tells the hardware what to do and how to do it
- Different types of computers
  - Desktop
  - All in One PC
  - Laptop
  - Tablet

Parts of a computer

- Case
  - The **computer case** is the metal and plastic box that **contains the main components** of the computer, including the motherboard, central processing unit (CPU), and power supply
- Screen/monitor
- The **monitor** works with a **video card**, located inside the computer case, to display images and text on the screen. Most monitors have **control buttons** that allow you to change your monitor's display settings, and some monitors also have built-in speakers.
- Peripherals
  - Keyboard
    - The **keyboard** is one of the main ways to communicate with a computer. There are many different types of keyboards, but most are **very similar** and allow you to accomplish the same basic tasks.
  - Mouse
    - The **mouse** is another important tool for communicating with computers. Commonly known as a **pointing device**, it lets you **point** to objects on the screen, **click** on them, and **move** them.

Buttons and ports on a computer

- Disc drive
  - Often called a **CD-ROM** or **DVD-ROM** drive, this lets your computer read CDs and DVDs.
- Power button
  - The power button is used to power the computer **on** and **off**.
- Audio in/out
  - computers include **audio ports** on the front and back allowing you to easily connect **speakers**, **microphones**, and **headsets** without fumbling with the back of the computer.
- USB ports
  - Most desktop computers have several **USB ports**. These can be used to connect almost any type of device, including mice, keyboards, printers, and digital cameras. They will often appear on the front and back of the computer.
- Power socket
  - This is where you'll connect the **power cord** to the computer.
- Ethernet port
  - This port looks a lot like the **modem** or telephone port, but it is slightly wider. You can use this port for **networking** and connecting to the Internet.
- Monitor port
  - This is where you'll connect your **monitor cable**. types of monitor ports include VGA port or HDMI (high-definition multimedia interface)

Peripherals

- Printer
- Scanner
- Speakers/headphones
- Microphone
- Web camera
- Keyboard
- Mouse

Keyboard and Mouse Skills

Mouse tutorials

For mouse skills - go to the online resources

Mousing Around

http://www.pbclibrary.org/mousing/intro.htm

or

Solitaire for more advanced practice

Keyboard tutorials

For typing skills - go to the online resource GCF Learn Free

https://www.gcflearnfree.org/typing/

Using an Operating System

Introduction to Windows

Microsoft Windows Operating System

- Windows is an **operating system** designed by Microsoft. The operating system is what allows you to use a computer. Windows comes **preloaded** on most new personal computers (PCs), which helps to make it the most popular operating system in the world.

- Windows makes it possible to complete all types of **everyday tasks** on your computer. For example, you can use Windows to gain access to programs that browse the Internet, check your email, edit digital photos, listen to music, play games, and do much more.

- Microsoft released the first version of Windows in the mid-1980s. There have been many versions of Windows since then, but the most recent ones include **Windows 10** (released in 2015), **Windows 8** (2012), **Windows 7** (2009), **Windows Vista** (2007), and **Windows XP**(2001).

Navigating Windows

- **Desktop** – Main work space for your computer
  - Background
    - The **desktop background**, or **wallpaper**, allows you to personalize your computer. You can choose a built-in background or use one of your own images.
  - Folders and shortcuts
    - You can keep **folders**, **files**, and **shortcuts** on the desktop so they'll be easily accessible.
  - Start Button/Menu
  - In Windows 10, you'll click the Start button to open the **Start menu**.
  - Search
  - Taskbar
    - The taskbar contains **shortcuts to applications**, the **date and time**, and **more**. When you open a program or file, it will appear on the taskbar, and you can easily **switch between different programs** by selecting them on the taskbar.
    - Some programs will have **shortcuts** on the taskbar for easy access.
    - On the right side of the taskbar, you will see the **date and time**. There will also be shortcuts to different settings, like **Internet settings** and **sound volume**.

Navigating Windows

- **Applications/Programs**
- Type of software that allows you to complete tasks on your computer
- Opening Applications/Programs
  - Click the **Start** button, then select the desired application. If you don't see the one you want, click **All Programs** to see a complete list of applications
  - You can also open applications/programs from shortcuts on your desktop or task bar

Navigating Windows

- **Working with Windows** - Whenever you open a file, folder, or application, it will appear in a new window
  - Minimize
  - Maximize
  - Restore
  - Resize
  - Move and switch between windows
  - Close

Navigating Windows

Power Icon

– Shutdown

- When you're done using your computer, it's important to **shut it down properly**. The procedure will vary slightly depending on which version of Windows you're using.

– Restart

- Turns it off and on again. For example, if your computer has become unresponsive, you can choose **Restart** to quickly turn it off and on again.

– Sleep mode

- This turns off most of your computer's processes, but it remembers which applications and files are open. It allows the computer to **start up more quickly** because you won't have to wait for the operating system and applications to load

- If your computer is in Sleep mode, you'll need to **wake it** to use it. To wake the computer from Sleep mode, click the mouse or press any key on the keyboard.

Working with files and folders

What is a file?

There are many different types of files you can use. For example, Microsoft Word documents, digital photos, digital music, and digital videos are all types of files. You might even think of a file as a digital version of a real-world thing you can interact with on your computer. When you use different applications, you'll often be viewing, creating, or editing files.

What is a folder?

Windows uses folders to help you organize files. You can put files inside a folder, just like you would put documents inside a real folder. In the image below, you can see some folders on the desktop.

Working with files and folders

- **File Explorer** - You can view and organise files and folders using this built-in application.
  - Default folders
    - – Downloads, Documents and Desktop
  - Address bar location
    - you can see the **location** of a folder in the **address bar** near the top of the window.
  - Accessing a USB
  - Searching for files

Working with files and folders

- **Files and Folders**
  - Open
  - Create
  - Rename
  - Move
  - Delete
  - Shortcuts

Common Computer Tasks

- **Menu Bar**
  - File menu commands
    - New
    - Open
    - Save
    - Print

- **Cut, Copy and Paste**
  - Right click
    - Cut
    - Copy
    - Paste
  - Undo changes

Training Resources

Training Resources – Comprehensive:
BeConnected
https://beconnected.esafety.gov.au/topic-library/essentials/getting-to-know-your-device/using-a-computer

Training Resources – Session Specific:
Computer basics
http://www.gcflearnfree.org/computers/computerbasics

Mouse tutorial
http://www.gcflearnfree.org/computers/mousetutorial
http://pbclibrary.org/mousing/intro.htm

Typing tutorial
http://www.gcflearnfree.org/computers/typing

Windows 10
https://edu.gcfglobal.org/en/windowsbasics/
https://edu.gcfglobal.org/en/windows10/
https://support.microsoft.com/en-au