

Computer Literacy Review Guide

Computer Concepts:

Units of Measure

- Bit (b)– a single binary digit (0 or 1)
- Byte (B)– Eight Bits
- Kilobyte (KB) – 1024 Bytes (1000 for all other things prefixed with Kilo)
- Megabyte (MB) – 1024² Bytes (1,048,576 Bytes or 1024 Kilobytes)
- Gigabyte (GB) – 1024³ Bytes (1,073,741,824 Bytes or 1024 Megabytes)
- Terabyte (TB) – 1024⁴ Bytes (1024 Gigabytes)
- Hertz (hz) – measure of frequency

Primary Components of the Computer/Hardware

- Central Processing Unit
 - Performance depends on frequency (megahertz, gigahertz) with higher being better.
 - Performance also depends on the number of cores available with higher being better.
- Storage System
 - Hard Disk Drives (Hard Drives)
 - CD-ROM/R/RW drives
 - DVD-ROM/R/RW drives
 - Blue Ray drives
 - Thumb drives
- RAM – Primary working area for programs and data. Larger is better.
- Input Devices – take data from the outside world into the computer
 - Mouse
 - Keyboard
 - Digital Camera
 - Scanner
 - Microphone
- Output Devices – bring data from the computer back into the outside world
 - Monitor
 - Printer
 - Speakers
- Telecommunications Devices – allow communication between computers
 - Modem – used for analog lines such as basic telephone, some cable systems
 - Network Interface Card – used for local area networks (LANs) or to connect to some network bridges (sometimes called DSL or Cable Modems)

- Wireless – IEEE 802.11a, b, g, and n – used to connect to wireless access points or hot spots.

Software Concepts – Software is the stored instructions that tell your computer how to perform tasks. Software is not physical and cannot be touched or seen.

- System Software – software designed to help the computer run more efficiently, more safely, or interact with peripheral devices like printers and sound cards.
 - The operating system is the most essential piece of system software
 - Linux
 - Windows
 - Mac OS
 - Other types of system software include firewall software, device drivers, and compilers
- Application Software – helps a user to achieve a goal they have.
 - Business software
 - Personal finance software
 - Games
 - Productivity Software (like Microsoft Office)
- Malicious Software – Software designed to harm your computer or your data (sometimes called Malware)
 - Worm – infects your computer through a vulnerable piece of software then tries to infect other computers
 - Virus – self-replicating software which harms your computer system
 - Spyware – software which tracks your use of your computer and may attempt to steal personal data

Networking Concepts – a network is a collection of interconnected nodes (computers or other devices capable of communicating on the network).

- IP – Internet Protocol – addresses allow computers to distinguish each other on the Internet by assigning a unique number to each node.
 - The IP address works like a phone number. Since each is unique, a computer can establish a connection to any other computer by connecting to its IP address.
 - The Domain Name System (DNS) allows a lookup between IP address (which are hard to remember) and a logical name.
 - DNS entries are categorized by organization type: .com for commercial, .edu for education, .gov for US government, etc.
 - DNS entries are kept for a certain period of time on a local DNS server, but eventually expire and must be looked up in the root servers which contain the master list of all names for the Internet.
- Important Network Tools and Software for Windows

- Ipconfig – shows the current IP address, DNS server, and other important information on a Windows computer
- Ping – sends a message to a node on the network asking for a response. Can be used to tell if a computer is capable of sending and receiving data.
- Nslookup – determines the IP address for a computer based on its DNS name
- Web Browser – Internet Explorer, Firefox, Opera, Chrome, and Safari are popular browsers which allow World Wide Web pages to be displayed on a computer.

Microsoft Excel:

You will be expected to know how to:

- Enter and format data in an Excel spreadsheet including changing font, size, color, type, decimal places, and other basic formatting.
- Change cell dimensions – merge cells, adjust row height and column width.
- Create simple formulas to calculate values (ex. =5%*F2 would be a formula that multiplies the value in F2 by 5%) Multiplication is *, and division is /.
- Create a chart showing the data graphically.
- Use built-in functions to perform calculations. Only basic functions will be expected: sum, average, count, min, max, etc.

Microsoft Access

You will be expected to know how to:

- Create a table with different data types in Access.
- Choose appropriate field sizes for different fields in the table.
- Enter data into a table
- Create a query which extracts information from the table according to criteria
 - > is >
 - < is <
 - = is =
 - <= is ≤
 - >= is ≥
 - <> is ≠

Microsoft PowerPoint

You will be expected to know how to:

- Create a slide show which incorporates images, bulleted lists, and different slide templates
- Use pre-designed design themes

- Use animations and transitions
- Set automatic times for advancing slides
- Set the slide show to loop continuously until the esc key is struck

General Skills

You should be able to:

- Save and open files in the applications assessed
- Copy, move, and delete files from the system
- Access the Sakai page and attach files
- Change a file name or rename a file