MIDLANDS PTY LTD
COMPUTER TRAINING CENTRE

IC3 - Internet & Computing Certification

Computer Training

Course Number: MCTC 01
Certification: Digital Literacy Certificate

IC3 - Internet & Computing Certification

Prerequisites: No previous experience with computers is required however should be familiar with the basic concepts of using keyboard, mouse and switching on the computer.

Course Content

Module A: Computing Fundamentals

Mobile Devices	✓ Understand cellular phone concepts ***Key concepts:*** ➢ Define what it means to have a cellular phone and what that implies ➢ Explain how cellular phone connections require a carrier ➢ Describe carriers plans, contracts associated with plans, and how these contracts can vary widely ➢ Describe how cell towers provide the connection, as opposed to an ISP infrastructure ✓ Be familiar with cellular-enabled tablets ***Key concepts:*** ➢ Explain what a tablet can and cannot do ➢ Tablets can be wi-fi connected or cellular-enabled ➢ A wi-fi connection has no limit on usage, but is limited to a location with the wi-fi connection ➢ Usage of tablets that are cellular-enabled affect the cellular data plan; for example, one would not want to stream movies on a cellular connection because it could quickly use up allotted number of gigabytes of data purchased ✓ Be familiar with smart phone ***Key concepts:*** ➢ Apps can be downloaded to a smartphone

	➤ Abilities and limitations of a smartphone ➤ How a smartphone connects to the Internet ➤ What are the benefits that apps and the operating system provide to the user ➤ A basic phone can be Internet enabled but has limited functionality ✓ Understand the use of hard wired phones ***Key concepts:*** ➤ Understand limitations of and capability of a hard-wired phone in a business ➤ On a business phone system, make outgoing calls and transfer a line ➤ Use short codes to get to anyone in the office ➤ Conduct conference calls ✓ Know how to configure and use voice mail ***Key concepts:*** ➤ Use voice mail in business ➤ Use voice mail on a cellular phone—both business and personal ➤ Elements of a clear and understandable voice mail message ✓ Use of instant messaging ***Key concepts:*** ➤ Differentiate SMS and MMS ➤ Mechanics of instant messaging—technically what can a user do, basically how is the transfer of the message accomplished ➤ Use the basic features of Skype ➤ Use the basic features of chat in gmail ➤ Mechanics—understand what you are technically able to do, what is SMS, what is MMS ➤ Skype good tool to use—that is what they use in simulation, also in gmail app that allows for chat ✓ Know how to configure notifications ***Key concepts**:* ➤ Configure notifications for appointments; for example, if you have work email on your phone, create a notification through sound or vibration or screen alert ➤ Understand the rules around configuring notifications
Hardware	✓ Types of devices ➤ Server ➤ Laptop ➤ Desktop

Key concepts:
➢ For each type of hardware above, describe who would be most likely to use each type of device

✓ Know the impact of memory and storage on usage
Key concepts:
➢ Define memory and storage
➢ Describe usage of memory and storage; for example, if you have a high amount of memory and storage, you can be more free in your usage. If you have low memory there are restraints such as having multiple tabs open in a browser, or the system is slow when bigger programs like PhotoShop
➢ One can max out storage, especially if storing photos and videos—can fill up hard drive space

✓ Know how to connect to different peripherals
➢ Camera
➢ Audio
➢ Microphone
➢ Printer
➢ USB devices
➢ External display

Key concepts:
➢ Define types of connections; for example, 3.5 mil connections for an audio cable, VGA, HDMI,
➢ USB for most other things
➢ Microphone port
➢ Printers—wireless as well as USB
➢ Cameras or audio can connect through Bluetooth or infrared connections

✓ Understand the use of Ethernet ports
Key concepts:
➢ Basic definition and use of Ethernet—non-technical
➢ Use of Ethernet for Internet connectivity—when wireless is not available

✓ Connect a device wireless network [Wi-Fi]
Key concepts:
➢ Connecting a wireless printer
➢ How to get a device onto wi-fi
➢ Settings, find secured
➢ How to enter password or passkey

✓ Understand power management and power settings

Key concepts:
- ➢ How to save battery time when using a laptop
- ➢ Locate power settings and use them
- ➢ Differentiate between sleep and hibernate

✓ Understand driver concepts as well as their device compatibility
- ➢ Know what drivers do
- ➢ Know if specific drivers are compatible with a personal device

Key concepts:
- ➢ What devices, such as a mouse or keyboard, can work with a personal device like an iPad or smartphone, and how do they connect
- ➢ Bluetooth pairing of devices

✓ Know platform implications and considerations For Example Mac, PC, Linux, iOS, Android, Firmware
Key concepts:
- ➢ Define platforms, describe various platforms
- ➢ Understand lines and distinctions between apps on various platforms
- ➢ What software works on various platforms—for example, cannot buy Pages for a Windows device, but can buy Word for Mac—but still a different OS
- ➢ Professional world still using desktop apps, photoshop
- ➢ Some apps cannot be on a mobile operating system
- ➢ Define and describe SaaS applications that are delivered online

✓ Know platform compatibility
Key concepts:
- ➢ Device limitations
  - ✦ *Media compatibility issues [Why won't my video play?]*
  - ✦ *Device limitations [a device might only have Wi-Fi or only have wired capabilities]*

✓ Know the difference between cellular, Wi-Fi, and wired networks
Key concepts:
- ➢ Define, in general, the difference among these types of networks
- ➢ Implications of sending large files on cellular or streaming
- ➢ Wi-fi limitations by locations, wired networks you cannot move
- ➢ Difference between an ISP provider and a cellular provider

✓ Understand concepts regarding connecting to the internet
Key concepts:
- ➢ Organizations typically have both wired and wireless connections
- ➢ For home use, one must purchase bandwidth and speed from an ISP that is non-cellular

	✦ *Modem* ✦ *Bandwidth, speed* ✦ *Have a basic understanding of what a router is* ✦ *Wired* ✦ *Wireless* ✓ Understand common hardware configurations ***Key concepts:*** ➢ Laptop with multiple monitors, docking stations, CPU with a video card or some laptops have integrated video ➢ Wireless keyboards, devices connected to a desktop and laptop ✓ Implications for document usage ✓ Understand the pros and cons of touch screens vs non-touch screen devices ***Key concepts:*** ➢ Limitations of input using a touch keyboard ➢ Limitations of input using touch vs keyboard and mouse, such as fine selection points, efficiency of input, having multiple tabs open
Computer Software Architecture	✓ Understand operating system versioning and update awareness ***Key concepts:*** ➢ Implications of updates, understanding benefits and features of new updates ✓ Know concepts surrounding applications vs operating system vs global settings ***Key concepts:*** ➢ Global settings common to all operating systems; for example, password protection, power management configurations, screen resolution ✓ Have a general understanding of operating systems and software settings Know basic desktop customization ***Key concepts:*** ➢ Setting a screensaver, screen resolution, screen background ➢ Know window management [minimize, maximize, resizing windows] ➢ Set software preferences ***Key concepts:*** ➢ Understand basic software settings that a user can set; for example, changing frequency of AutoSave, changing a print setting, and changing settings in Microsoft Office using File/Options ✓ Users and profiles ***Key concepts:***

➢ Basic concepts of users and profiles; for example, on a Windows PC, a family could use a computer and each user has a distinct account with a user profiles and own login and credentials
➢ Understand that profiles are customizable

✓ Know file structures and file/folder management
✦ *Moving/renaming files*
✦ *File permissions*
✦ *File extensions*
✦ *Managing electronic media* **[eBooks, songs, videos]**

Key concepts:
➢ File management of electronic media, how they are controlled by the app
➢ Understand that one must open an app to find media on a system like Kindle—one must go to the app to manage the media and not the reverse

✓ Zipping/compression
➢ Document Management

✓ Scanning documents
Key concepts:
➢ Define scan, understand how a scanned file is stored

✓ Taking picture
Key concepts:
➢ Transfer a picture to a computer; manage picture files
➢ Transfer pictures from a phone to various locations

✓ Menu navigation Radio buttons
Key concepts:
➢ An option ("radio") button limited to one selection
✦ *Check boxes*
✦ *Drop-down menus*
✦ *Multi-select*

Key concepts:
➢ Enables multiple selections

✓ Searching for files
Key concepts:
➢ Know where to go for files, use search options to find files
➢ Use file search techniques such as WIN KEY and start typing; on a Mac Command + Spacebar
➢ Understand that downloaded files go the Downloads folder

✓ Rights and permissions (administrative rights)

	Key concepts:
	➢ Understand that Admin-level rights exist and that you may not have permission to access all files in an organization
	➢ Describe why permissions are valuable in an organization
	
	✓ Define an IP address
	
	✓ Know how to install, uninstall, update, repair software
	
	Key concepts:
	➢ Software purchased on media might need to be reinstalled
	  ✦ *From the Internet*
	  ✦ *Using local media* **(DVD-ROM, etc.).**
	
	✓ Troubleshooting
	➢ Know basic problem solving techniques
	➢ Know how to determine problems involving hardware vs. software
	➢ Know proper terminology to be able to describe the problem
	➢ Know how to find an IP address on a personal computer
	➢ Know how to determine a connection speed

Backup and Restore	***Key concepts:***
	➢ Understand local backup and restore
	➢ A backup is an instance of your machine, restore point is a snapshot in time of settings
	➢ Specifically, in Windows 7, differentiate when you would use backup (find a lost file) and when you would use restore (fix settings)
	  ✦ Understand backing up concepts
	  ✦ Know how to back up and restore
	  ✦ Know how to complete a full system restore on a personal device
	
	Key concepts:
	➢ Complete a full system restore/reset on a tablet and phone
	➢ Define factory default setting; if a laptop, reformat a hard drive

File Sharing	✓ Understand file transfer options and characteristics ➢ Know how to attach files to e-mail ➢ Know how to get links to online stored files ➢ Understand the difference between publicly shared vs shared links vs shared folders ***Key concepts:*** ➢ Anyone can see the link ✓ Understand needs for file compression/zipping in

	sharing
Cloud Computing	✓ Understand "cloud" concepts ✓ Understand cloud storage vs. cloud access concepts ***Key concepts:*** ➢ Define cloud storage and cloud access ➢ Must have Internet access to get to cloud ➢ Describe cloud storage of photos for different systems, such as iCloud ✓ Understand sharing and collaboration via the cloud ➢ Know the benefits of using cloud storage ***Key concepts:*** ➢ Safe storage, convenience ➢ Access and utilization of the cloud ✓ Understand account management on the cloud ✓ Know how to upload content to the cloud ***Key concepts:*** ➢ OneDrive, Google Drive, Dropbox, and iCloud ✓ Know how to download content from the cloud ✓ Know how to sync files between devices using the cloud ➢ Web apps vs. local apps ✓ Understand Software as a Service (SAAS) concepts ✓ Know what Learning Management Systems (LMS) do ***Key concepts:*** ➢ Define LMS, describe use of discussion boards, understand how and where personal progress is stored and reported ✓ Understand web app types ✦ *Online storage apps [Google Drive, Dropbox, OneDrive, iCloud storage]* ✦ *Online office apps [Google apps, office 365]* ✦ *Database Driven CRM apps [Salesforce, Oracle, Attask]* ***Key concepts:*** ➢ Define CRM and describe use and benefits; types of organizations that would use CRM ➢ CRM info can be accessed from the cloud ➢ Browser vs. tablet vs. smart phone vs. desktop apps

Security	✓ Know credential management best practices
	✦ *Usernames*
	✦ *Passwords*
	➢ Understand the components of a good password
	✓ Know basic account setting management
	Key concepts:
	➢ Your own user account, keeping it secure, locking your computer
	✓ Know the basic threats to security of computers, data, and identity
	✦ *Viruses*
	✦ *Trojans*
	✦ *Malware*
	✓ Social engineering
	➢ Understand the implications of monitoring software (surveillance)
	➢ Connecting to secured v. unsecured network (wired and wireless)
	➢ Know the ramifications
	✓ Understand the risks
	✓ Know the difference between public v. private computing (using a public computer)
	➢ Browser histories
	➢ Cache/cookies
	➢ Logging out of online and OS accounts
	✓ Know the use of and importance of anti-virus software
	✓ Understand how to prevent virus issues
	✓ Understand how to maintain and update anti-virus software
	➢ Know the use of firewalls and basic settings
	➢ Know eCommerce interactions and best practices
	➢ Recognize the use of a secure connection, networks, [https:]
	✓ Know how to be a savvy ecommerce consumer
	Key concepts:
	➢ Best practices, such as only buying from known companies, how a site is secure (https)
	➢ Exercise skepticism; a "verify" symbol may be meaningless
	✓ Understand what Virtual Private Networks (VPNs) are
	Key concepts:
	➢ Basic definition

Module B: Key Applications	
Common Features	✓ Know copy, cut, and paste keyboard equivalents ✓ Understand the difference between plain text and HTML (text with markup) ✓ Know how to use spell check ✓ Know how to use reviewing features ✓ Know the find/replace feature ✓ Be able to select text or cells ✓ Be able to redo and undo ✓ Be able to drag and drop ✓ Know the read-only view ✓ Understand what a protected mode means ✓ Be able to use the zoom feature

Word Processing	✓ Perform basic formatting skills
	✓ Adjust margins, page sizes, and page orientation
	✓ Alter text and font styles
	✓ Create and save files
	✓ Know page layout concepts
	   ➢ Page numbering
	   ➢ Columns
	   ➢ Margin
	   ➢ Alignment, text in paragraphs and tables
	   ➢ Tabs and rulers
	   ➢ Orientation
	   ➢ Spacing
	✓ Know how to print a word processing document
	✓ Use and configure print views
	✓ Use reviewing options within a word processing document
	✓ Turn on and off change tracking features Accept or reject proposed changes.
	   ➢ Be able to use tables
	   ➢ Understand which file types are compatible and/or editable with word processors
	✓ Example include Pdf, Pub, Doc, Docx, Txt, etc.
	   ➢ Use word processing templates to increase productivity

Spreadsheets	✓ Understand common spreadsheet terms
	   ➢ Cell
	   ➢ Column
	   ➢ Row
	   ➢ Range
	   ➢ Worksheet

	➤ Workbook
	➤ Navigation
	✓ Be able to insert/delete rows and columns
	✓ Be able to modify cell sizes
	✓ Be able to filter and sort data
	✓ Understand functions, formulas, and operators
	➤ Understand their purpose and how they are used
	➤ Recognize syntax
	➤ Be able to create simple formulas
	✓ Be able to enter data in a spreadsheet
	✓ Use and create spreadsheet charts
	➤ Recognize charts
	➤ Read and interpret charts
	➤ Create simple charts.
	✓ Create spreadsheet tables
	➤ Recognize tables
	➤ Use and manipulate tables
	➤ Create simple tables.
	✓ Manipulate data within a spreadsheet
	➤ Merge and unmerge cells
	➤ Cut, copy, and paste data.
	✓ Format data within spreadsheets
	➤ Modify borders, fill color, text color, alignment, data type
	✓ Understand compatible spreadsheet file types (Examples include Csv, Xlsx, Tab delimited, etc.)
	➤ Be able to use spreadsheet templates to increase productivity
	➤ Understand how a spreadsheet can be used as a simple database
Databases	✓ Understand what data is
	✓ Understand how websites utilize databases
	✓ Know basic concepts of a relational database
	➤ Field
	➤ Table
	➤ Data
	➤ Query
	➤ Form
	✓ Know what metadata is
Presentations	✓ Understand file types compatible with presentation software
	➤ Sharing [presentation, handout, outlines, video]
	➤ Publishing [pptx, pdf, jpg, show, png]
	✓ Understand how to connect to external/extended monitors to display presentation
	➤ Cables
	➤ Audio

	✓ Be able to us presentation views and modes
	✓ Know how to add animations, effects, and slide transitions
	✓ Know how to create and organize slides
	  ➢ Slide management
	  ➢ Inserting and managing media files
	✓ Know how to design slides
	✓ Be able to use templates
	✓ Identify presentation software options
	  ➢ Presentations
	  ➢ Add slides
	  ➢ Delete slides
	
	  ➢ Revise slide order
	  ➢ Layout

App Culture	**Key concepts:**
	Overall, how apps are obtained (must have an account), app stores, purchasing apps with a credit card, in-app purchases, how to use an app store
	✓ Understand how to obtain apps
	  ➢ Web apps
	  ➢ App stores
	✓ Identify different app genres
	  ➢ Productivity
	  ➢ Reference
	  ➢ Content
	  ➢ Creation
	  ➢ Social media
	  ➢ Music
	  ➢ Health
	✓ Understand strengths and limits of apps and applications
	  ➢ Applications may only run on certain devices

Graphic Modification	✓ Be able to import and insert images into documents ✓ Understand how to crop images

Module C: Living Online

Internet (Navigation)
- ✓ Understand what the Internet is
  - ➢ Understand how the Internet works

- ✓ Network topologies
- Key concepts:
  - ➢ Basic level, networks to networks, servers to servers—this is the Internet
  - ➢ Internet vs intranet—closed network—open vs closed

- ✓ DNS, IP addresses
  - ***Key concepts:***
  - ➢ Device to device, how you communicate
    - ✦ Domain **types [.gov, .edu, .com, .us, .uk, etc.]**
    - ✦ Bandwidth

- ✓ Understand data sizes [bits vs. bytes vs. megabytes, etc.]
  - ➢ Be familiar with media literacy

- ✓ Know how to search the Internet
  - ➢ Advance searches (keyword, hashtag) Key concepts:
  - ➢ Use search techniques such as inserting a colon and using options in search box
  - ➢ Demonstrate judgment and savviness when evaluating websites, such as asking who wrote the information, for what audience is the information intended, are persuasive words used? ⮞ How to determine if a site is valid

- ✓ Research fluency
  - ➢ Validity of resources

- ✓ Understand browser functionality
  - ➢ HTML/CSS
  - ➢ Cookies
  - ➢ Cache
  - ➢ Breadcrumbs
  - ➢ Plugins ⮞ Widget
  - ➢ Add-ons
  - ➢ In-browser apps
  - ➢ Popups
  - ➢ Different browsers
  - ➢ Browser navigation (URLs, scroll bars, etc.)
  - ➢ New window, tabs
  - ➢ Bookmarks, favorites, synchronize bookmark
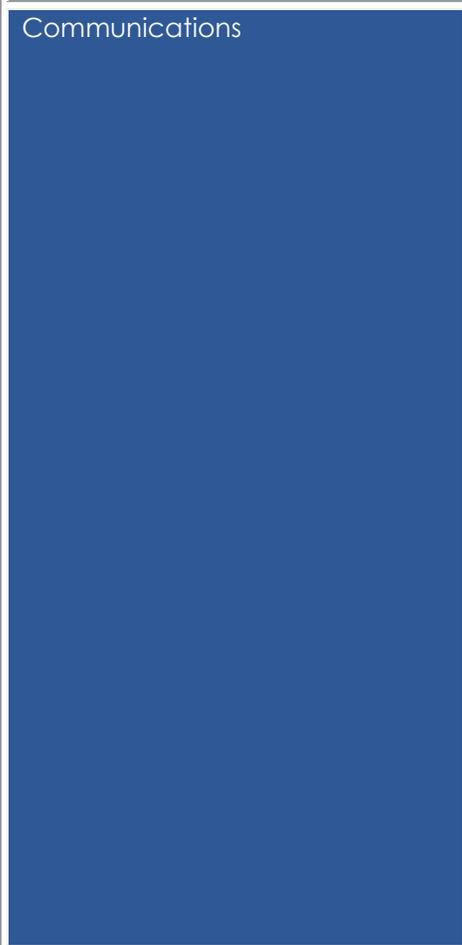

	✓ Know about IP rights/usage
	Key concepts:
	➢ IP rights regarding images and articles, which have owners ▢ Fair use
	
	✓ Know about licensing rules/laws
	Key concepts:
	➢ If your company gives you software, you can't install at home
	    ✦ Of *intellectual* property Software programs.
	    ✦ Know *about* copyrights
	
	✓ Know about censorship and filtering
	Key concepts:
	➢ Define censorship and describe why it's needed
	➢ Explain why there are rules around explicit content and the reason we should know about it from an organization standpoint
	➢ Understand appropriate use of the Internet in a business setting; cannot offend others or search for offensive material
	➢ Companies may block Facebook or other sites; this is legal and appropriate for companies to do
	
	✓ Know plagiarism rules/laws
	Key concepts:
	➢ Describe plagiarism laws, how these laws are punishable
	➢ How detecting plagiarism is now easier
	➢ Fair use

Common Functionality	✓ Understand how to use common website navigation conventions ➢ Click / delayed / double click ➢ Mouse over ➢ Drag and drop ➢ Basic web navigation principles
Email clients	✓ Identify email applications ➢ Desktop application platform [ie. Outlook] ➢ Web-based platform [Gmail, Yahoo] ✓ Understand email etiquette ➢ Reply vs reply all, forward ➢ Cc vs bcc ➢ Signature ➢ Header ➢ SPAM ➢ Junk mail ✓ Understand email history and management

	➢ Spam / junk email
	➢ Archiving
	➢ Trash
	➢ Folders
	
	✓ Understand e-mail attachments
	
	Size limits
	    Key concepts:
	    ➢ Web apps vs desktop apps
	
	✓ Understand contact management
	    ➢ Address books

Calendaring	✓ Know how to create events and appointments
	    ➢ Recurring
	    ➢ Details (location, time zone, notes)
	✓ Know how to share calendars
	
	Invitations
	✓ Know how to view multiple calendars
	    Key concepts:
	    ➢ Multiple calendars can be connected in one view; show up in different colors in same user interface
	
	✓ Understand how to subscribe to calendars
	    Key concepts:
	    ➢ A public calendar (like a municipal calendar) vs sharing your own calendar

Social Media	✓ Understand what a digital identity is (identity on social media)
	    Key concepts:
	    ➢ Concept of once you do something, it cannot be undone
	
	✓ Know what social networks are and how they are used [FB, LinkedIn etc.]
	    Key concepts:
	    ➢ Define social network; describe how Facebook is a social network
	    ➢ Describe LinkedIn and how it functions as a social network; explain how LinkedIn is a valuable social network for business
	
	✓ Know other types of networks [YouTube, Instagram, etc.]
	    Key concepts:
	    ➢ Define digital identity
	    ➢ Describe how following certain people on social networks such as YouTube and Instagram says something about the individual
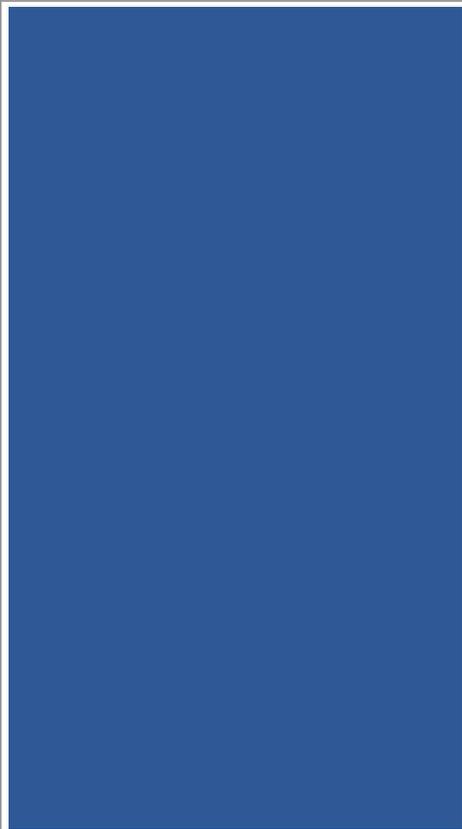
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➤ Describe how you are choosing your digital identity based on the choices you make on all of these networks; use caution and understand that these choices follow you

✓ Recognize the difference of internal (school/business) vs. open media sites
Key concepts:
➤ There are business and school social media sites, such as Neo and Yammer and Slack
➤ Difference between an open social media site and a closed site; for example, Facebook started as a closed site (for students at a specific college), but is not an open site available to anyone who signs up for an account

✓ Neo v. Facebook
➤ Know what blogs, wikis, and forums are and how they are used
➤ Know what cyber bullying is
Key concepts:
➤ Define cyber bulling, cite examples
➤ Describe how to be conscious of other people; explain that a person is always on both sides-not just interacting with a computer

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<tr><td>Communications</td><td>

✓ Know the best tool for the various situations and scenarios
Key concepts:
➤ Describe how different communication technologies (email, phone, text message) are suited for differing circumstances; for example, if you needed to get an urgent message to your boss, what technology is best?
➤ Describe which technology is likely to get the fastest and slowest response from the recipient Email
✦ *SMS*
✦ *Instant message*
✦ *VOIP*
✦ *Phone calls*
✦ *Web ex*
✦ *Conference calls*

✓ Know how to use SMS texting
Key concepts:
➤ Describe appropriate use of SMS; for example, when communicating with your boss, maybe use text only if he or she is out of the office

Etiquette
➤ Know what it is and how it can be used as a tool
➤ Know when to use and not use

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	➢ Determine when it is appropriate to use it ✓ Know how to use chat platforms ***Key concepts:*** ➢ Describe and demonstrate the use of Skype as a chat platform in business ✓ Understand options for and how to use distant/remote/individual learning technologies ✓ Know basic remote workforce tools ***Key concepts:*** ➢ Identify tools and options to increase productivity for distant employees or co-workers ➢ Describe workplace storage options such as SharePoint ➢ Describe and identify various platforms for web and video conferencing ➢ Describe common features of such platforms such as being able to share your screen, edit documents at the same time
Online Conferencing	✓ Understand and identify online conference offerings ✦ *VOIP conferencing [Skype]* ✦ *Video conferencing [Google hangouts, Skype, Facetime]* ✦ *Phone conferencing* ✦ *Screen sharing*
Streaming	✓ Understand what streaming is and how it works with devices ***Key concepts:*** ➢ Differentiate between streaming and downloading ➢ Define live audio ➢ Describe how you could stream the video of a live recording ✦ *Video streaming* ✦ *Live streaming* ✦ *Audio streaming*
Digital Principles/Ethics/Skills/Citizenship	✓ Understand the necessity of coping with change in technology Audience awareness ***Key concepts:*** ➢ Demonstrate sensitivity when determining the most appropriate technology to use when communicating with others; for example, some people can Skype but some may not know or have that technology ✓ Understand Digital Wellness basics ✦ *Screen time* ✦ *Ergonomic best practices* ✓ Understand an online identity management

	Branding
	Key concepts:
	➢ Define and describe a personal digital footprint
	➢ Explain the consequences (both positive and negative) of how you define yourself online
	➢ Describe how your online activities define how others perceive you
	➢ Describe how potential employers might perceive you by searching your name online ⬜ Describe how you can create your own positive online identity
Managing profiles	✓ Gaming
	✓ Facebook
	✓ Twitter
	✓ Linkedin
	✓ etc…
	➢ Know the difference between personal vs. professional identity

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