LEARNER GUIDE

ACCESS THE INTERNET

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INTRODUCTION

Welcome

Welcome to the Learner Guide for Unit of Competency "**Access the Internet**". This is just one of a number of Learner Guides produced for the Data Operations Skills stream of the Information Technology and Communications Industry, and is designed to guide you, the learner, through a series of learning processes and activities that will enable you to achieve the specified learning outcomes for the competency unit.

The content of this guide was developed from the Competency Standard **ITICOR0471A**, which is one of the basic building blocks for the National Vocational Qualification of Jamaica (NVQ-J) certification within the industry. Please refer to your *Learner Handbook* for a thorough explanation of standards and competencies, and how these relate to the NVQ-J certification.

You are also advised to consult the Competency Standard and Assessment Instrument for a better understanding of what is required to master the competency.

This Competency Unit

"**Access the internet**" addresses the knowledge and skills requirements for effectively accessing the Internet. There are two main areas or elements:

Element 1: Identify and use local resources

Element 2: Identify and use remote resources

As you go through each element, you will find critical information relating to each one. You are advised to study them carefully so that you will be able to develop the necessary knowledge, skills and attitudes for accessing the Internet.

Before you start

Before you start this Learner Guide, you need to:

a. Obtain a *Learner's Logbook.* You will use it to record evidence of your new skills/competence. As you demonstrate your new skills, record your activities and have your learning facilitator sign off on them. This will allow you to provide evidence of your competence when you are being assessed against the competency standard.

b. Ensure that you have access to the facilities and equipment necessary for learning.

c. Ensure that your learning resources are available.

d. Ensure that you are wearing suitable clothing, that tools and equipment are safe, and that the correct safety equipment is used.

e. Plan your learning programme (see below)

f. Understand how to use this Learner Guide (see below)

Planning your learning programme

The self-assessment checklist on the following page will assist you in planning your learning programme and it will help you to think about the knowledge and skills needed to demonstrate competency in this unit. As you go through the checklist you will be able to find out what elements you have already mastered and which ones you will need to pay more attention to as you go through the learning process.

To complete the self-assessment checklist, simply read the statements and tick the 'Yes' or 'No' box. You should do this exercise now.

Self-Assessment Checklist
- Access the Internet

Element 1	**Identify and use local resources**	**Yes**	**No**
1.	I can identify installed Internet software applications and start up using the appropriate procedures	( )	( )
2.	I can use the appropriate Internet software offline and online following the correct procedures	( )	( )
3.	I understand how to access the desired site and download files	( )	( )
4.	I understand how to scan files for viruses using installed software according to guidelines	( )	( )
5.	I can ensure that guidelines and regulations are adhered to in the retrieval of information and files	( )	( )

Element 2	**Identify and use remote resources**	**Yes**	**No**
1.	I can access files and documents with the use of the Internet search engines using the correct procedures	( )	( )
2.	I can browse the Internet to find related sites via links according to procedures	( )	( )
3.	I can send, download, read and respond to e-mails following correct procedures	( )	( )
4.	I can retrieve files attached to incoming e-mails and send documents as attached files	( )	( )

How did you do?

If you ticked all or most of the 'Yes' boxes then you might not need to go through the entire guide. Ask your learning facilitator to assist you in determining the most appropriate action you should take.

If you ticked a few of the 'Yes' boxes or none at all then you should work through all of the guide, even though some of the material may be familiar to you.

Plan your learning based on your answers. Be sure to involve your learning facilitator in the planning process.

How to use this Learner Guide

This Learner Guide is designed to assist you in working and learning at your own pace.

We suggest that you:

- Go through the sections/elements as they are presented (starting at Section 1)
- Check your progress at each checkpoint to ensure that you have understood the material
- Observe the icons and special graphics used throughout this guide to remind you of what you have to do and to enhance your learning. The icons and their meanings are as follows:

Complete Assessment Exercise
This exercise requires you to think about the knowledge and skills that you have or will develop in this competency unit.

Definition Box
Words/phrases are defined or explained in this box. The words/phrases being explained are in bold print.

Checkpoint
This denotes a brain teaser and is used to check your understanding of the materials presented. No answers are provided for the questions asked.

Activity
This denotes something for you to do either alone or with the assistance of your learning facilitator.

Reference
Points you to the reference materials and other support documents or resources used in compiling the unit content.

- Ask your learning facilitator for help if you have any problems with the interpretation of the contents, the procedures, or the availability of resources.
- Complete each activity as you come to it. If the activity requires you to perform an actual task, be sure to tell your learning facilitator when you get to that activity so that he/she can make any arrangements, if necessary.
- Get your learning facilitator to sign and date the Learner Logbook when you have completed an activity.
- Complete the self-assessment checklist at the end of each section or element.

When you have worked through all elements of the guide, and when you can tick every 'Yes' box, you are ready for assessment and should ask your learning facilitator to assist you in making the arrangements to have your performance assessed.

Using the Computer and Other Resources

Where your activities refer you to the library, computer and/or Internet resources, ask your learning facilitator to assist you in locating these resources. If you are getting your training in an institution, there may be a library and a computer laboratory. If this is not the case, visit the local library and find out what resources are available.

If you are new to the computer and the Internet, someone in the computer room should be able to show you how to use these resources.

Please note that in many of your activities you have been referred to information on the Internet. This is because the Internet has a vast amount of information that can help you in acquiring the particular competencies. We would like to advise you, however, that we cannot guarantee that all the sites will be available when you need them. If this happens, ask your learning facilitator to assist you in locating other sites that have the information you require.

Method of Assessment

Competency will be assessed while you are actually performing the tasks related to this competency. This may be done in a real workplace or a simulated situation that accurately relates to the work situation. You are advised to consult the associated competency standard and assessment instrument for further details relating to the assessment strategies.

You may now start your learning. Have fun while you work!

ELEMENT 1: IDENTIFY AND START UP INSTALLED INTERNET SOFTWARE

LEARNING OUTCOMES

As you go through this element, you will acquire the knowledge, skills and attitudes necessary to identify and start up installed Internet software. Your learning facilitator is there to assist you with the various activities. Upon completion you will be able to:

1. Identify and start up installed Internet software applications using the correct procedures
2. Use the appropriate Internet software off line or online, following the correct procedures
3. Access the desired site and download files
4. Scan downloaded files for viruses using installed software according to established guidelines
5. Adhere to guidelines and regulations in the retrieval of information and files

STARTING THE INTERNET

Modem (short for Modulator-Demodulator*)* - A device or program that enables a computer to transmit data, for example, over telephone or cable lines. Computer information is stored digitally whereas information transmitted over telephone lines is transmitted in the form of analog waves. A modem converts between these two forms.

The Internet is the world's largest network that links millions of business, government agencies, educational institutions and individuals.

The Internet is also known as:

- Infobahn
- Data highway
- Electronic highway
- Net
- Cyberspace

The Internet is accessible to anyone with access to a computer and a modem. The Internet carries the following features:

- The world's largest information network
- Global web of computer networks
- Inter-network of many networks all running the TCP/IP (a combination of two protocols that mediate all communication over the Internet) protocol
- Powerful communication tools

- Giant highway system connecting computers and the regional and local networks that connect these computers

Accessing the Internet

You can access the Internet for a variety of reasons:

- To send messages to other connected users
- To access a wealth of information
- To shop for goods and services
- To meet and converse with people around the world
- For entertainment

As you can see, access to the Internet has different meanings to different people and to network providers. Any commercial service or organization that has full Internet access provides the following capabilities:

- Electronic mail (e-mail)
- Telnet
- File Transfer Protocol
- World Wide Web (www)

Electronic Mail (E-Mail)

Email is an abbreviation for electronic mail. It is the most common form of online communication and is readily available to anyone with connection to the Internet. E-mail allows you to send, forward and receive messages to and from any other person around the world. You can then reply to messages, save, file and categorize received messages as you see fit

You do not need to have your computer switched on all the time to receive E-mail. Your Internet Service Provider (ISP) stores your messages while you are offline. This allows you to access your messages whenever it suits you.

E-mail allows you to send, forward and receive messages from people all over the world. You can then reply to messages, save, file and categorize received messages as you see fit.

Telnet

Telnet provides the capability to login to a remote computer and to be able to work interactively with it. When a telnet session is run, your computer is connected to a computer at another location and it will act as if it were directly connected to your computer.

File Transfer Protocol (FTP)

File Transfer Protocol is a method that allows you to move files and data from one computer to another. File Transfer Protocol, most commonly referred to as FTP, enables only teachers to receive lesson plans, magazines, books, documents, free software, music, and graphics.

World Wide Web

The incredibly huge collection of specially formatted documents, (formatted in a markup language called HTML - *HyperText Markup Language),* that supports links to other documents, as well as graphics, audio, and video files. HTML documents existing on servers connected to the Internet. These documents use hyperlinks to connect to other documents, other servers, or to programs on either the local computer or the server, creating a big tangle of information that has become known as the "World Wide Web." The "World Wide Web" and the "Internet" are not synonymous. The World Wide Web is part of the Internet, but the Internet is much more than the World Wide Web.

You need the following for Internet access:

- a computer
- a communication modem
- communication software
- an account with an Internet Service Provider (ISP)

Most users connect to the Internet in one of two ways:

- Through an Internet Service Provider, which is a company that supplies connections to the Internet, as well as website hosting services.
- Through an On line Service Provider, which also provides internet access, as well as a variety of other specialized content and services such as financial, data, hardware and software guides, news and other similar commodities.

CHECKPOINT

- Define Internet
- Give five reasons for using the Internet
- What are the capabilities of the Internet?
- What do you need in order to access the Internet?

How the Internet works

Information sent over the Internet travels by networks and communication channels owned and operated by many companies. Home or small business users often connect to the Internet through a dial-up access. With dial-up-access you can use either a computer or a modem and a regular telephone line to dial into an Internet Service Provider or Online Service Provider.

Note: Access to Internet is gained in accordance with the provider's operating procedures.

IDENTIFYING INSTALLED INTERNET SOFTWARE

Accessing information on the Internet, also known as *surfing the Internet,* is achieved through the use of an application software called a browser (as shown in the diagram). This software comes as a part of the operating system and the icon that represents it is usually found on the desktop.

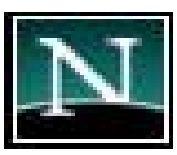
Figure 1

Note: See explanation of URL on pages 13-14

Web browser – software that interprets hypertext mark-up language (HTML), one of the languages used to code web page context

Among the many Internet browsers available, the two most popular ones are:

- Microsoft Internet Explorer
- Netscape Navigator - The icons are displayed below



Netscape Navigator:

- The first popular browser
- Takes less disk space
- Displays HTML files, performs e-mail and file transfers and other functions

Internet Explorer (IE):

- Powerfully integrated with other Microsoft products
- Takes more disk space
- Displays HTML files, performs e-mail file transfers and other functions

CHECKPOINT

- What is the name of the Internet software that is required to access information on the Internet?
- What are the two most popular Internet Browsers?

ACTIVITY

Discuss with your learning facilitator:

- How to differentiate between installed Internet software and other application software.

Examine your desktop and identify your Internet software:

- Do you have one of the more popular ones?

The Web and the Internet

The term Web and the Internet are often used interchangeably; however, they are not synonymous. The World Wide Web is a collection of standards and protocols used to access information available on the Internet. The Internet is the network used to transport information. The Web uses three standards:

- URL (Uniform Resource Locators)
- HTTP (Hypertext Transfer Protocol
- HTML (Hypertext Mark up Language)

These standards provide a mechanism for WWW servers and clients to locate and display information available through other protocols.

URL (Uniform Resource Locators)

URLs are a standard for locating Internet documents. They allow an addressing system for other Internet protocols. URLs specify three pieces of information needed to retrieve a document:

- The protocol to be used
- The server address and port to which to connect
- The path to the information

The format for a URL is: protocol://server-name:port/path e.g**.** http://home.netscape.com/home/welcome.html

TIPS!

- Do not capitalize the protocol string, e.g. http:// not HTTP://
- The port number can be omitted. If the port number is not present, the default is used
- Use a slash (//) after the server address even if no path is specified, e.g. http://home.netscape.com/ rather than http://home.netscape.com

HTTP (Hypertext Transfer Protocol)

HTTP is a protocol used to transfer information within the World Wide Web. Web documents begin with the http protocol:
http://home.netscape.com/

Note: An address beginning with http connects you to a World Wide Web site

HTML (Hypertext Mark-up Language)

HTML is the programming language used to create a Web page. This includes the text of the document, its structure and links to other documents. HTML also includes programming for accessing and displaying media such as images, video and sound.

CHECKPOINT:

- Can you distinguish between the Internet and the World Wide Web?
- What are the three standards used by the World Wide Web?
- What is the importance of the U. R. L?

Refer to: Freshin, Cynthia (1996). *Internet Adventures Version 1.2*, Allyn and Baker

Starting the Installed Internet Software

Now that you know how to identify the installed Internet software, it is time to start the program.

- Go to your desktop and look for one of these icons, and if necessary, ask your learning facilitator for assistance.

- Double click on the icon – this should open the browser and your desktop should look somewhat like the browser diagram on page 10.

Note: There may be another site designated than http://www.yahoo.com as displayed.

Cyberspace - a metaphor for describing the non-physical terrain created by computer systems. Unlike real space, though, exploring cyberspace does not require any physical movement other than pressing keys on a keyboard or moving a mouse.

The browser has now ushered you into what is known as cyberspace. All documents in this space are located at websites, and each website has a unique address called a Uniform Resource Locator (URL). The Yahoo site, for example, in the browser diagram on page 10 has URL http://www.yahoo.com. The browser provides an address bar in which you can type the particular URL and the browser will seek to locate the site wherever it is in cyberspace.

What if you want to find some information but do not know the particular website that has it, what do you do?

You could find the information with the help of a search engine. Search engines exist to assist you to search for such websites and Yahoo is one of such search engines.

Note: The use of search engines will be discussed in greater detail in Element 2.

Refer to:
http://www.webopedia.com/DidYouKnow/Internet/2003/HowWebSearchEnginesWork.asp

CHECKPOINT:

What is a cyberspace?

ACTIVITY:

- Open the browser and spend some time exploring the toolbars and pull down menus provided.
- Discuss with your learning facilitator the application of these functions.
- Type http://yahoo.com in the Address Bar and press the 'ENTER' key on the keyboard.

USE APPROPRIATE INTERNET SOFTWARE OFFLINE OR ONLINE

At this stage you should have mastered the skill in starting up the Internet software using the correct procedures. One of the key indicators showing that you are online or offline is that the Home Page you seek to access on the World Wide Web is displayed on your monitor.

Note: You are considered online when you are connected to a computer service via the Internet

You should be able to identify the components of the homepage and the web page of a document. Ensure that you can identify the unique address of the web page. This address, as you would have learnt earlier, is called the Uniform Resource Locator (URL), which consists of a protocol, a domain name and sometimes the path to a specific webpage or location in a web page. For example:

Refer to: http//www.sportsline.com/tennis/index.html this means
http//-protocol
www.sportline.com – internet address/ omain name
tennis – path
index.html – Document name

Let us define some of the terms used above:

Website – a site (location) on the World Wide Web.

Each Website contains a homepage, which is the first document users see when they enter the site. Typically, the homepage serves as an index or table of contents to other documents and files at the site. Each site is owned and managed by an individual, company or organization.

Web page – a document on the World Wide Web.

Every web page is identified by a unique URL (Uniform Resource Locator).

It follows, therefore, that when you are offline, you are unable to access any information on the Internet. This means that you are locally connected. On the other hand, once you are connected, you are able to access information via the links of the servers connected to the WAN (Wide Area Network).

CHECKPOINT:

- How do you know when you are online?
- On what occasions would you use the browser offline?

ACTIVITY:

- Visit the following website for a definition of WAN:http://www.webopedia.com/TERM/N/network.wan
- Ask your training facilitator to assist you in accessing online and offline information with the use of a computer connected to the network

ACCESS WEBSITE AND DOWNLOAD FILES

You have two options for browsing the Internet. If you are using Internet Explorer, the quicker way is to click on the **Search** button on the Internet Explorer toolbar. The other option is to use a Search engine.

Remember: A search engine is software that helps the user to locate web sites; as such you must have the correct address of the search engine before you are able to access the engine.

If you know the Web address of a site, you do not need to use a search engine to find it. Simply:

- Click on the address bar
- Type in the Web address
- Press **ENTER** on your keyboard

Internet Explorer will go directly to this site from whatever document you were currently viewing. This is much faster than going to a search engine and trying to locate the site you want in their directories, or searching for it with a query.
To effectively access and browse the Internet you must be able to do the following:

- Manipulate web links across the World Wide Web (WWW)
- Manipulate icons in home pages and web pages

Below is an example of a home page. You should be able to manipulate icons on the page:

- Use website domain names to locate electronic files such as web pages
- Use address toolbar and other icons to locate electronic files such as web pages
- Switch between web pages to access information

Figure 2 Home Page

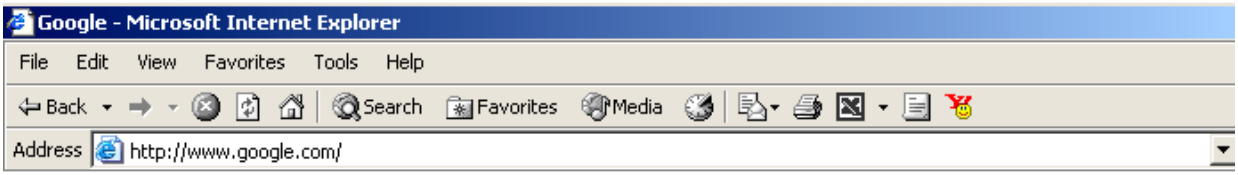


Figure 3 Address Toolbar

You must be able to use the desired search engine to be able to switch between web pages. Below is an example of MSN search engine and links allowing you to click on them and switch between web pages.

Figure 4

Using the MSN home page you can click on these options to go to other web pages

Download Files

Download – process of copying a file to your computer from a remote site

Very often, rather than viewing a file onscreen while using the Internet, you may want to look at it later. Many of these files are software applications, graphic images or large text files that are freely available for you to transfer from the remote computer to your computer. Thereafter, you can access the files using the appropriate software program. File Transfer Protocol (IFTP) is a way to download files of software, text and graphics.

Once you have found your website or web page on the web server, you must be able to copy files from the Website by means of "copy and paste", or copy files to the appropriate storage area.

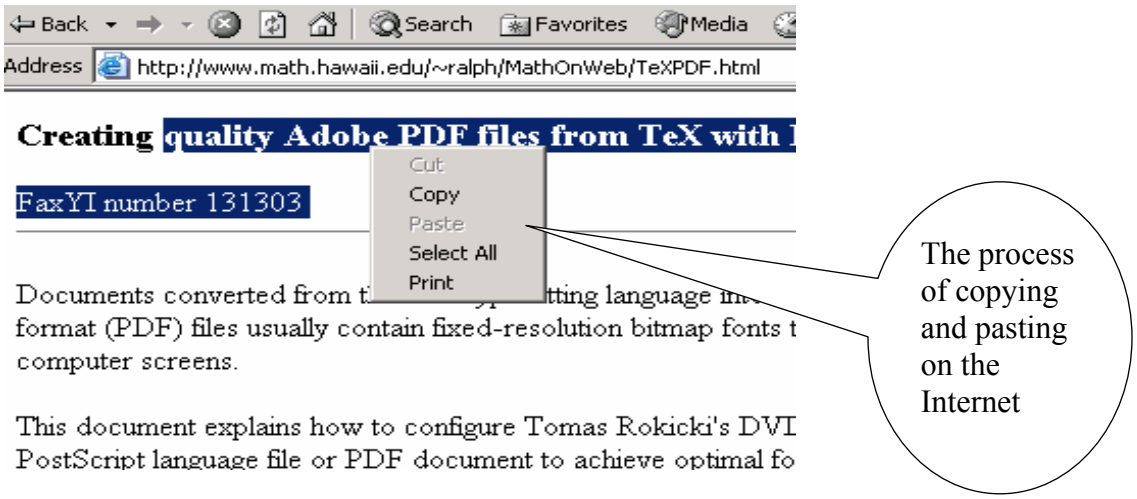


Figure 5

Refer to: http://www.webopedia.com/TERM/F/FTP.html for information on File Transfer Protocol

CHECKPOINT:

What does the term "downloading" mean?

SCAN DOWNLOADED FILES FOR VIRUS

Virus – a set of executable destructive programs or instructions designed to infect other programs and databases.

Data stored on computers can be damaged, destroyed or altered by vandals (also called hackers, crackers, or cyberpunks), who create viruses, which can create havoc on a computer system. A virus is usually loaded onto your computer without your knowledge or wishes.

When it attaches itself to a host program; its purpose is to replicate itself via files that are transferred from one computer to another. A virus can propagate via shared floppy discs or other media, and needs a host in order to do so.

Note: A 'simple' virus is dangerous because it will quickly use all available memory and bring the system to a halt.

Far more dangerous, is a type of virus that is capable of transmitting itself across networks and bypassing security systems.

Some people distinguish between general viruses, worms *and Trojan horses.*

Refer to: http://www.webopedia.com. (for more information on worms and Trojan horses)

CHECKPOINT:

What is the difference between a virus and a worm?

Symptoms of an infected file

Since every computer is vulnerable to attack, you must familiarize yourself with the symptoms of a virus attack. Once your file or data is behaving abnormally such as loss of words, letters, and the document refuses to open or "pop up" messages, your data may be infected with a virus.

Antivirus software

Since 1987, when a virus infected ARPANET, a large network used by the United States Defence Department and many universities, many antivirus programs have become available. These programs periodically check your computer system for the best-known types of viruses.

Your antivirus software should contain a virus scanner that has a memory-resident option that runs in the background, checking every new file that enters your computer no matter where it comes from (whether a floppy drive, CD-ROM drive, an Internet download, or elsewhere).

Web Pages must be scanned by antivirus software that is configured to check all downloaded web pages, because it is possible to visit a web page that contains a malicious program that will be automatically executed upon download.

Examples of anti-virus software are:

- Data Fellows F-PROT antivirus toolkit
- Norton 2004
- McAfee anti-virus software

Precautions:

- Set the software to scan all program files on your computer whenever you turn it on, and make sure it is always running in the background
- Update your antivirus software regularly, at least once per month or use version- less antivirus software instead, which is updated for you automatically over the Internet
- Keep floppy diskettes out of your floppy drive unless you are actively working with the files on a floppy disk. Boot sector virus hides on floppies and is triggered when your machine routinely checks to see whether it should run up sequence from the floppy drive. If the floppy's boot sector is infected, the virus will kick into action.
- Encrypt all files that contain sensitive information or store them off line on floppies or other removable media
- Do not leave your computer connected to the Internet any longer than necessary

Refer to: webopedia.com for information on encryption

CHECKPOINT:

- What are the symptoms of an infected file?
- What is encryption?

ACTIVITY:

Check your computer to see which antivirus software is installed.

E-mail Viruses

From time to time you will see warning on the Internet about viruses in e-mail messages. These warnings tell you never to read anything with a specific subject or field content, and tells you to be sure to pass this warning along to everyone you know. Such warnings are a hoax. You cannot get a computer virus from reading a plain text mail message. If this warning pops up, verify its accuracy by visiting the computer virus myths web site. Under no circumstances should you forward this message to your friends or associates.

E-mail messages that contain attachments can carry viruses, and reading a mail attachment can cause a virus to 'kick' into action. If you are reading your e-mail on a Mac or a Windows machine (or any other platform with Windows software installed), be careful about mail attachments. You should first save the file to your hard drive ***before*** you open it and then check it with a virus scanner before you read it. If an up-to-date scanner detects no viruses, then the file is 99.9% safe to open.

Note: You still might receive a new virus before the antivirus software vendor has had a chance to add it to its scanner data files

Mail attachments are a problem because they are not always only data files. Some mail attachments contain executable code in the form of script**.**

Script – a small computer program written in a scripting language such as Microsoft Visual Basic™

Other mail attachments contain executable code in the form of macros.

Microsoft Word and Excel spreadsheet documents have been frequent sources of computer viruses. Opening a Word file that comes to your mailbox from an unknown party is unwise. But it is not enough to know and trust the person who sends you the attachment. Word and Excel users can pass a macro virus on without realizing it.

What to do when you receive an E-mail Attachment:

- If you receive an unsolicited e-mail attachment from an unknown person, delete it without opening it first
- If you receive an e-mail attachment accompanied by an empty message body, delete it. Even if you recognize the return address the absence of a message is cause for suspicion
- If you receive an unexpected e-mail attachment from someone you know and the message body looks generic, contact the sender to make sure that the sender has sent the message to you
- If you do decide to open a mail attachment, make sure that you scan it with antivirus software first, even if you have confirmed the sender and you trust the source
- To be 100% safe, disable all macros before opening any Microsoft Office document

Note: When possible, avoid using e-mail attachments in your outgoing e-mail messages

Refer to: Lehnert, Wendy (2001). *Web101, Making the Net Work for You*, Addison Wesley.

CHECKPOINT:

What steps should you take prior to opening an e-mail attachment?

ACTIVITY:

Access the Internet and under the supervision of your learning facilitator, download files and scan them for viruses.

RETRIEVE INFORMATION AND FILES ACCORDING TO GUIDELINES AND REGULATIONS

In addition to scanning files for viruses, there are other guidelines for you to follow. The nature of the Internet is such that your conduct will be visible to others as well as monitored by various network administrators (and others who will be invisible to you). Not only do you have rights, but you also have responsibilities.

When you log on to the Internet, you need to understand and follow behavioural codes that are specific to the Net, and also to minimize your personal risk. A set of rules called *Netiquette* has been developed to enable all users of the Internet to communicate with one another in a civilized manner. Since no one individual or organization owns or controls the Internet, Netiquette is an informal code of practice that is not covered by government legislation. Some countries do however legislate to stop information of a pornographic or violent nature from being stored or downloaded.

It is important that you understand some of the rules of Netiquette so that you can become a more efficient user of the Internet. You will speed up communications with others and make working online a pleasurable experience for all involved by following the Netiquette code of practice.

View these sites for a more detailed explanation of Netiquette and the codes of conduct:
http://www.albion.com/netiquette/corerules.html
http://www.sofweb.vic.edu.au/internet/netiquet.htm
If you have difficulties accessing these sites enter "netiquette" as the search text in your browser.

Acceptable Use Policies

All computer accounts and some public Internet servers are subject to an Acceptable Use Policy (AUP), a policy that outlines appropriate use of the Internet and is enforced by system administrators. Your Internet access privileges can be withdrawn if you violate the rules and restrictions specified by the AUP. AUPs are posted on the Web and should be easy to locate.

Terms of service – restrictions that apply to ISP accounts.

Whenever you open a computer account or join an online discussion group, take the time to locate and read the AUP that governs your use of those facilities. University AUPs, for example, prohibit the use of university resources for commercial profit, and any form of academic dishonesty.

TIP: Check your AUP periodically to see if any new restrictions have been added. You are expected to know your AUP and any of its restrictions that apply to your online activities.

CHECKPOINT:

What is the meaning A.U.P.?

ACTIVITY:

With the help of your learning facilitator, locate an A.U.P.

Software Piracy and copyright infringements

Software piracy – wilful reproduction or distribution of one or more copies of one or more copyrighted works that collectively have a total retail value of more than US$1,000.00

Software piracy is a criminal offense and is punishable by fines and/ or a prison term.
Purchasing software does not make you the owner of the software, rather, you purchase only licensee rights to that software. It allows you only the right to use the software subject to specific restrictions. It is your responsibility to understand the applicable licensing restrictions of the commercial software that you use.

You need to exercise even greater care with software that is distributed over the Internet. Legitimate software is always accompanied by a licensing agreement, even when distributed for free.

Copyright Laws

Copyright laws exist to protect the creative and economic interests of writers, musicians and artists. A copyright confers certain rights and privileges to its owner and is granted to the author of a book or to an artist, musician, or other individual who creates some intellectual product.

A copyright protects not only the creator's economic interests but also the integrity of his/her work. It does so by authenticating its originality. No one can copyright a work that has prior copyright protection. However, the validity of an original copyright can be challenged if the challenger can prove that the work was stolen, plagiarized, or adopted from an existing work and modified in minor ways.

Copyright laws convey to the copyright owner certain **intellectual property rights** – a broader category of legal protections that include the protection of patents and of trademarks. A copyright normally protects a written document whereas a patent protects an invention.

Copyright can be transferred to another person or company with a written contract. For example, the author of a book transfers his /her copyright to a book publisher in exchange for a publishing contract. Sometimes, copyright privileges are automatically granted to a person's employer when a work had been generated as part of his/her job.

Protected by Copyright

- Web pages are all copyrighted and subject to copyright restrictions, unless the Web page author expressly places them in the public domain. In this case, the author would include a statement which says, in effect "I grant this to the public domain."
- Copyright laws regardless of whether or not they contain copyright notices protect all works. Always assume that copyright protection applies.

Given the copyright law, what can you do legally on the Web?

- You can print one copy of online materials for your use only. You should seek the permission of the author or owner of the copyright if you want to print copies for your friends. This step is unnecessary, however, if the material contains an explicit statement about allowable distribution.
- You can store files on your computer, but you cannot distribute them to others nor make them publicly available.
- You can e-mail an URL to your friend if you see a Web page you would like to share. To mail a printed copy would require permission from the author.

Specific Rights Statements

A Web page might include a statement like the following:

Permission is granted freely to copy (unmodified) these documents in electronic form or in print as long as you're not selling it. On the WWW, however, you must link rather than put it on your own page.

This statement effectively allows anyone to reproduce and post an exact copy of the document online in almost any fashion.

Another commonly posted copyright provision is:

This work may be redistributed freely, in whole or in part, but cannot be sold or used for profit or as part of a product or service that is sold for profit.

If no such statement is included, you must assume that no such privileges apply. In the event where redistribution rights are granted, you must identify the author, source and publisher.

Pornography

Search engines make finding adult content online easy and all sorts of characters can be found in chat rooms devoted to pornography.

However, before you are tempted to view or send materials of a pornographic nature, you should be aware that your employers can monitor your e-mail messages that pass through the company's computers. If company policy prohibits offensive, materials on office computers, pursuing these activities could cost you your job.

Refer to: Lehnert, Wendy (2001). *Web 1091, Making the Net Work for You*, Addison Wesley
McKeon, P.G. (1995). *Living With Computers*, Version 5, Dryden Press

CHECKPOINT:

- What are intellectual property rights?
- What is a specific rights statement?

ACTIVITY:

Browse the web for information and observe the guidelines posted for retrieving files.

READY TO PROVE YOUR COMPETENCE?

Now that you have completed this element, check to see whether you have fully grasped all the components by doing the following self-assessment:

Checklist 1		**Yes**	**No**
1.	I know how to identify and start up installed Internet software applications using the correct procedures	( )	( )
2.	I can explain how to use the appropriate Internet software offline and online following the correct procedures	( )	( )
3.	I understand how to access the desired site and download files	( )	( )
4.	I can outline how to scan files for viruses using installed software according to guidelines	( )	( )
5.	I know how to adhere to guidelines and regulations in the retrieval of information and files	( )	( )

Checklist 2		**Yes**	**No**
1.	Installed Internet software applications are identified and started up using the correct procedure	( )	( )
2.	The appropriate Internet software are used offline or online in accordance with the correct procedures	( )	( )
3.	Access is gained to the desired site and files are downloaded	( )	( )
4.	Files are scanned for viruses using installed software according to guidelines	( )	( )
5.	Guidelines and regulations are adhered to in the retrieval of information and files	( )	( )

ELEMENT 2: IDENTIFY AND USE REMOTE RESOURCES

LEARNING OUTCOMES

As you go through this element you will acquire the knowledge, skills and attitudes necessary to identify and use remote resources. Your learning facilitator is there to assist you with the various activities. Upon completion you should be able to:

1. Access files and documents with the use of Internet search engines using the correct procedures
2. Browse the internet to find related sites via links according to procedures
3. Send, download, read and respond to e-mails following organizational and operational procedures
4. Retrieve files attached to incoming e-mails and send documents as attached files

ACCESS FILES AND DOCUMENTS ON THE INTERNET USING SEARCH ENGINES

By now you should know that search engines are the tools that provide subject access to websites. There are many search engines available, but all of them search differently and none of them searches the entire World Wide Web. Four basic types of search engines are:

- Directory search engine
- Robot search engines
- Spider search engines
- Meta search engines

Directory Search Engine

These search engines operate like a library card catalogue. Although they allow word or term searching, the websites included in the directory have been studied and organized into topics and subtopics. Two of the best search engines to select for a beginning search are:

Figure 6

Robot/Spider Search Engines

The majority of the existing search engines employ a technology in which a robot or spider searches through the Web or the search engine's own database to capture search terms. As a result, a large number of responses are provided to the searcher, many of which are not useful.

The largest of the search engines, and the one that is best for searching with multiple terms and provides an image search and a foreign language translator, is AltaVista. A good choice for middle ground search engines that are not directories such as Yahoo and not as large as AltaVista, are Hotbot and Lycos.

Google is a particularly good search engine that is great for research. See Google Answers and Google Answers FAQ

Figure 7

Meta Search Engines
Meta Search engines search a number of search engines at the same time. This simplifies the work of the searcher and also allows for comparison between search engines on their work with a particular topic. One of the most powerful meta search engine is Dogpile

Figure 8

Search Engines	Address
INFOSEEK	http://www.infoseek.com
WEBCRAWLER	http://www.webcrawler
YAHOO	http://ww.yahoo.com
EXCITE	http://www.excite.com
GOOGLE	http://www.google.com
ALTAVISTA	http://www.altavista.com
HOTBOT	http://www.hotbot.com
ALLTHE WEB.com	http://alltheweb.com
MSNSearch	http://search.msn.com
Lycos	http://www.lycos.com
Teoma	http//www.teoma.com
WiseNut	http://www.wisenut.com
Overutre	http://www.overture.com

Figure 9

Wide ranges of search engine sites are listed on your Reference and Internet Search Page. Click on any of the site links to go to the site and start your search. You can also type a search engine's site's URL in the address bar, for example, www.google.com.

To find a page(s), enter a word or phrase called the search text or keywords in the search engine text box e.g. yahoo.com, msn.com etc.

Remember: You must have the correct address of the search engine in order to gain access.

- Read search engine help files
- Visit search engine home page links with names like how to
- Search Help and Advanced Search for searching tips

These links lead to detailed information about how to get the best results from it.

Note: No one search engine keeps track of all the content on the Internet. Therefore, you may have to try several search engines to see which produces the most useful results for the information you want. Whenever a search engine fails to produce the results you want, try another.

Refer to:
http://www.webopedia.com/DidYouKnow/internet/2003/howWebSearchEnginesWork.asp.

CHECKPOINT:

Can you name the different types of search engines?

ACTIVITY:

- Select one of the search engines listed on page 31.
- Search for information on "The Internet"

BROWSE THE INTERNET TO FIND RELATED SITES VIA LINKS

Browsing – the process of reading Web pages and traversing links to more Web pages.

You can browse the Web pages for entertainment or information. When you do not know beforehand exactly where a link will take you, you are browsing. It is analogous to daydreaming.

Link – (in hypertext systems such as the World Wide Web) reference to another document.

Such links are sometimes called 'hot links' because they take you to other documents when you click on them.

Although a simple concept, the link has been one of the primary forces driving the success of the Web.

A link has two ends. They are called:

- Anchors
- Directions

The link starts at the "source" anchor and points to the "destination" anchor, which may be any Web resource (e.g., an image, a video clip, a sound bite, a program, an HTML document, an element within an HTML document, etc.).

Links on a Web page might be underlined, boldfaced, or a different colour (usually blue) so that you can easily see them. Different browsers use different display conventions. Clicking hyperlinks allows you to easily weave through multiple documents according to your interest and preferences. You decide whether you want to digress and visit related documents.
You can even jump from document to document and never return to the original one. You can traverse many links in only a few minutes of browsing. In the event you want to, after traversing many links, all Web browsers maintain a **history list** of all visited pages. Just ask the browser to pop up the history list and then you can retrace your steps.

Alternately, you can use the browser's **Back button** to retrace the pages in the history list, one step at a time.

View History command also allows you to view the complete history list and the links to any pages that you may have put on hold while you were distracted by other links of each web site.

CHECKPOINT:

- What does it mean to 'browse the web'?
- What is the purpose of a link?

ACTIVITY

- Visit the website: http://www.weopedia.com
- Enter a computer term and follow some of the links

SEND/DOWNLOAD/READ AND RESPOND TO E-MAILS

You can create, send, receive, forward, store, print and delete messages using an e-mail program. Most search engines and Internet Service Providers provide email service.

When you receive messages, it is placed in your mailbox. This mailbox is usually found within a mail server. An e-mail address is made up of a username/user I.D. and a domain name e.g. JaneDoe @yahoo.com. In this case, Jane Doe is the username, and yahoo.com is the domain name.

In order to send or retrieve e-mails you first need an e-mail address, which would allow you to have a mailbox for yourself. You would also need the e-mail address for the person to whom you are writing.

Your Internet Service Provider or the person responsible for running the network within your organisation often assigns you an address. However, there are free e-mail accounts that give you a small amount of storage space and features. Others can be obtained at a cost but with much more storage space and features.

Here are types of yahoo e-mail accounts.

Figure 10

How e-mail works

When someone sends you an e-mail message, that message is sent to the server that you use for your Internet connection and is stored there. When you log on and check your mail, the message is sent from that server to your PC. Likewise, when you send mail, you send a message to the recipient's server. The message is stored there until the recipient checks his or her mail and then the mail is sent to the person's PC.

Each e-mail message contains two parts:

- Header
- Message body

The header contains information such as who the message is from and to whom the message is being sent, the time that the message was sent and a subject line describing the content of the message.

Refer to: http://e-mail.about.com ;http://everyhtingemail.net/ for additional information on e-mail (follow the links).

CHECKPOINT:

- Can you name three advantages of e-mail?
- What potential problems do e-mail pose?

ACTIVITY:

- Click on the following link to create an Email account through the internet search engine company called YAHOO http://mail.yahoo.com.
- Carefully read and follow the on-screen instructions to create an Email account of your own.

Accessing e-mail using Outlook

To start Outlook:

- Double click on the Outlook icon
- Click Start
- Click Programs
- MS-Outlook

The window that opens will be split in two. On the left is a list of all the folders in which your mail can be stored, as follows:

- ***Inbox*** - this is where all your incoming e-mails are stored
- ***Outbox*** – this can hold all your outgoing e-mails
- ***Sent times*** – this can hold copies of all the emails you have sent out
- ***Deleted Items*** – this is where all e-mails that you have deleted are stored
- ***Drafts*** – this is where you store any e-mails that you have not finished composing

In the top right pane – the inbox contains message headers. The bottom right pane has the contents of the selected message.

Viewing your inbox

The first thing that you are likely to do when you open your account is to check for new mail. New mail is stored in your inbox upon downloading. The inbox is like your regular mailbox in which new mail awaits your retrieval.

Some servers will take you directly to the inbox at start-up. Others might require you to load the inbox in order to see your new mail.

The inbox displays a list of each piece of mail received and not deleted, with a single descriptive line for each mail message. This line displays the:

- Subject
- From

These are fields that allow you to see what each message is about, who sent it to you and the date the message arrived.

Each message in this inbox display is given a header line that indicates

- The subject header for the message
- Whether the user has marked the message for deletion
- Whether the message has been read
- The name of the writer
- The date received
- The size of the message

Reading e-mail

When you view your inbox, you see only a short header for each message. To read the message:

- Click the message header to open the message

You will then see a screen display that contains an abbreviated version of the full message header followed by the message body. A very long message will not fit in a single screen display. However, you can navigate both forward and backward by using the vertical scroll bar on the right border of the window.

To check if you have received any mail, simply:

- Click the 'Send' and Receive button on the toolbar at the top of the screen.
- Mail that you have received will be listed in the box at the top right of your screen. The message that you highlight will be previewed in the box below

To read your message, simply:

- Double click on it and a new window will appear displaying the message

The diagram below shows the copy of an electronic page inside of a yahoo e-mail address. You should be able to use the icons shown and manipulate data within the address.

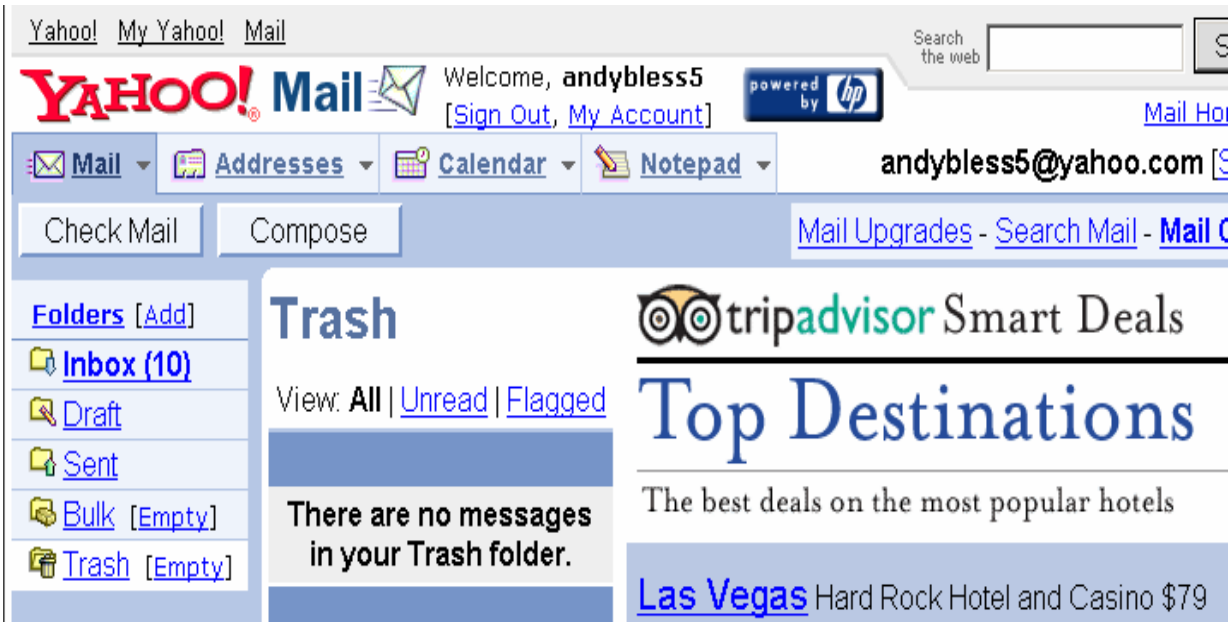


Figure 10

Sending an e-mail message (new)

To create a new message you should click on the compose icon, after which an electronic window will appear allowing you to compose email document. (See screen capture below).

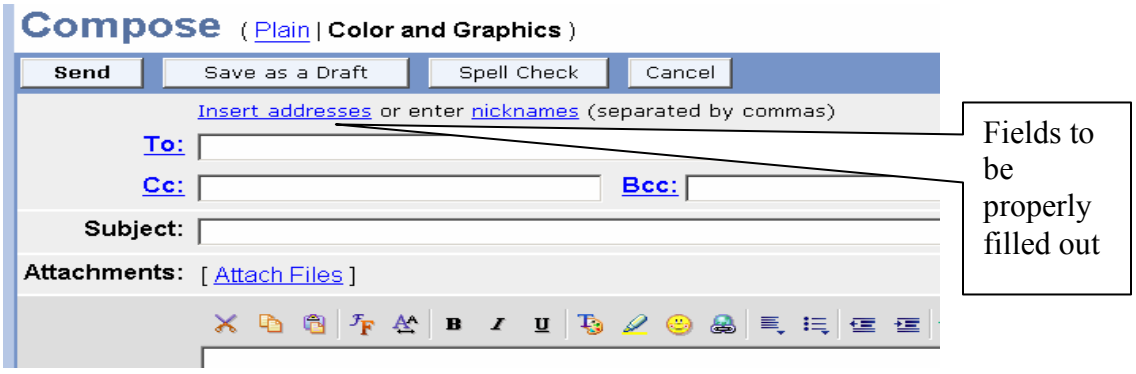


Figure 11

When addressing an email, you must ensure that every character in the email address is correct, otherwise the message will be returned.

There should not be any spaces in the email address. If a space is required, the underscore or full stop can be used. The email address is mostly written in lowercase.

An email address comprises three parts:

- username
- locator represented by the @ sign
- domain address – part of the URL that indicates the name of the organization (domain), the type of institution and the country. E.G. bestcollege.edu.uk

An example of an email address could be: joebloke@jol.com.jm. This comprises:

- joebloke - indicates the username
- @ - is the locator, separating the username from the domain address
- jolt – indicates the name of the ISP
- com.- indicates that the domain level to which it belongs is a commercial organization
- jm – indicates that the country is Jamaica

When the New Message window is opened, the insertion point is automatically positioned in the 'To' text box. This is where the recipient's email address is typed. If the message is to be sent to more than one person, each email address should be separated by a semi colon.

If the email message is also to be sent to someone else for information, locate the 'Cc' box - short for Courtesy Copy and type the recipient's email address.
The next step is to locate the 'Subject' text box (by pressing the Tab key) and type in the subject of the message. This should be kept as brief as possible - preferably one or two words.

The final step is to locate the Message Area (by pressing the Tab key) and type details of the message to be sent.

Responding to e-mail

To respond to e-mail that someone has sent you:

- Click on the **REPLY** button

A window will appear with the following features:

- ***A message window*** - Addressed to the sender and displaying the original message. Your reply will be inserted above the original message

- ***The subject box*** – This will automatically be the same as the original with **RE** added, but you can change this by clicking in the subject box and type in a new subject

When you are finished typing your new subject:

- Click send

In a work situation, most organizations have guidelines regarding e-mail usage and content. It is your responsibility as an employee to be aware of, and abide by, any such guidelines. Before adding text to any email messages, consideration should be given to:

- basic responsibilities of email users
- organizational guidelines

Basic responsibilities of e-mail users

- Ensure that the content of the message does not offend the recipient
- Do not type the entire message in uppercase
- Surround text with asterisks to add emphasis
- Keep the subject heading and message short
- Delete unwanted messages to free up disk space

Organizational guidelines

- Use e-mail for work purposes only
- Check e-mail regularly
- Do not give your user ID or password to another colleague
- Be professional when creating messages – avoid offending recipient
- Do not disclose confidential information
- Do not disclose information about other staff or clients
- Preferably have one subject per message to enable ease of handling by recipient
- Be careful with the use of acronyms, using too many can cause confusion
- Remember that e-mail messages are not guaranteed as private or secure
- Do not retain private messages on your system
- Be aware of copyright issues
- Ensure that stored messages are clearly identified

ACTIVITY:

Visit the websites listed below and make notes on the following:

- techniques in managing address of contacts to improve their accessibility for use
- techniques in protecting your account from unwanted messages, also known as *spam* mail
  - http://e-mail.about.com
  - http://everythingemail.net/

CHECKPOINT:

What are the steps involved in sending and downloading e-mails?

ACTIVITY:

Working in pairs, send e-mails to each other and then practise downloading, reading and responding to your mail.

RETRIEVE FILES ATTACHED TO INCOMING E-MAILS AND SENDING DOCUMENTS AS ATTACHED FILES

An email attachment is a file that is sent with an email message. The contents of the attachment are hidden until the attachment is opened. When a document is created in a word processing, spreadsheet or other type of program, any formatting within that document, represented by hidden codes, cannot be typed into an e-mail. It is for this reason that the formatted file is attached to, rather than displayed within, the email message.

From time to time you may encounter problems when sending an e-mail attachment. This is due to the fact that for various reasons not all files can be attached. Therefore, when attaching a file to an email message, consideration should be given to the format in which it is saved. The following checklist may help if problems are experienced when sending attachments:

- Is the size of the file too large? It may be better to compress or zip the file. Such files would have a '.zip' extension and automatically unzip when opened
- Does the recipient have the program loaded to enable the attachment to be opened?
- Have the attached files been saved with the correct extension?
- If it is a Microsoft Word file, has the Fast Save option been turned off?
- Have 'graphics' and 'sound' files been saved using well-supported formats? For example: .gif, .jpg, .bmp
- Does the attachment exceed the size limitation enforced by your ISP?

By choosing the correct options in diagram shown below you would be able to identify and select files to be sent

Figure 12

Follow the proper procedures relating to sending an attached file from your e-mail to another e-mail address

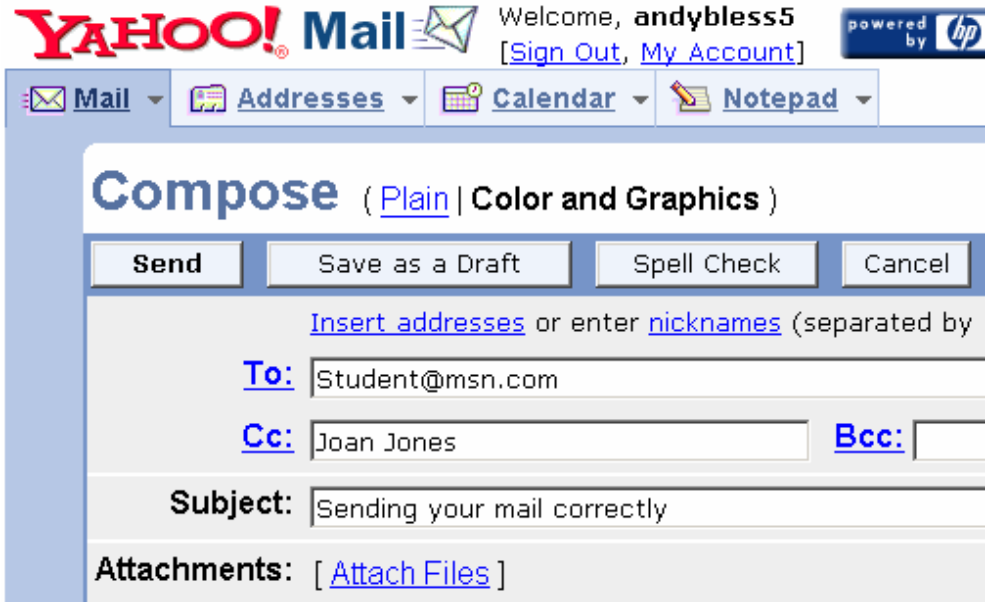


Figure 13

If nothing works, try saving the file as plain text (excluding all formatting) and then incorporate the file within the message instead of attaching it.

Opening an attachment

To open an attachment:

- Double click on the attachment icon displayed in the message you are reading
  - A window will appear, asking what you wish to do with the file.
- Select the option you prefer

Refer to: Fall, B. (1994). *The Internet Roadmap – Second Edition*, SYBEX Inc
McKenon, P.G. (1995). *Living with Computers – Version 5,* Dryden Press
Long, N., Long, L. (2002). *Computers Information Technology in Perspective*, Prentice Hall

CHECKPOINT:

What would influence your decision to send an attached file rather than in the body of the image?

ACTIVITY:

With the aid of your learning facilitator:

- Create the proper file formats and using the proper procedures to send your attached files to the desired address
- Practise opening attachments on your incoming mail

READY TO PROVE YOUR COMPETENCE?

Now that you have completed this element, check to see whether you have fully grasped all the components by doing the following self-assessment:

Checklist 1		**Yes**	**No**
1.	I know how to use the correct procedures to access files and documents with the use of Internet search engines	( )	( )
2.	I can explain how to browse the Internet to find related sites via links according to procedures	( )	( )
3.	I understand how to send, download, read and respond to e-mails following correct procedures	( )	( )
4.	I can explain how to retrieve files attached to incoming e-mails and send documents as attached files	( )	( )

Checklist 2		**Yes**	**No**
1.	Files and documents are accessed with the use of Internet search engines, using the correct procedures	( )	( )
2.	Internet is browsed to find related sites via links according to procedures	( )	( )
3.	E-mails are sent, downloaded, read and responded to following the correct procedures	( )	( )
4.	Files attached to incoming e-mails are retrieved and documents sent as attached files	( )	( )

Learning Management Services Department
Learning Resources Development Unit
Learner Guide Feedback Form

Your feedback on the Learner Guides is important to us. Please complete the form below to indicate areas for review as you see necessary. For each component tick [√] the appropriate column.

Learner Guide Title:_____

Learner Guide Code:_____

LEARNER GUIDE INVESTIGATION				
Area of Concern	**Good**	**Fair**	**Weak**	**Element/Page**
[ ] Self Assessment Checklist	[ ]	[ ]	[ ]	
[ ] Content	[ ]	[ ]	[ ]	
[ ] Activities	[ ]	[ ]	[ ]	
[ ] Checkpoints	[ ]	[ ]	[ ]	
[ ] Element Checklists	[ ]	[ ]	[ ]	
[ ] Graphics	[ ]	[ ]	[ ]	
[ ] References	[ ]	[ ]	[ ]	
Details of Concern:				
Other Issues:				

Your contact details:

[ ] Learner [ ] Instructor **Institution:**_____

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Please cut along the dotted line and submit to:

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Version Control 1