

Activities/ Resources for Outcome #5

Create strong passwords

Strong passwords are important protections to help you have safer online transactions.

Keys to password strength: length and complexity

An ideal password is long and has letters, punctuation, symbols, and numbers.

- Whenever possible, use at least 14 characters or more.
- The greater the variety of characters in your password, the better.
- Use the entire keyboard, not just the letters and characters you use or see most often.

Create a strong password you can remember

There are many ways to create a long, complex password. Here is one way that may make remembering it easier:

What to do	Suggestion	Example
Start with a sentence or two (about 10 words total).	Think of something meaningful to you.	Long and complex passwords are safest.
Turn your sentences into a row of letters.	Use the first letter of each word.	laccpasikms (10 characters)
Add complexity.	Make only the letters in the first half of the alphabet uppercase.	IACpAsIKMs (10 characters)
Add length with numbers.	Put two numbers that are meaningful to you between the two sentences.	IACpAs56IKMs (12 characters)
Add length with punctuation.	Put a punctuation mark at the beginning.	?IACpAs56IKMs (13 characters)
Add length with symbols.	Put a symbol at the end.	?IACpAs56IKMs" (14 characters)

Test your password with a password checker

A password checker evaluates your password's strength automatically. Try our secure password checker.

Protect your passwords from prying eyes

The easiest way to "remember" passwords is to write them down. It is okay to write passwords down, but keep them secure.

Common password pitfalls to avoid

Cyber criminals use sophisticated tools that can rapidly decipher passwords.

Avoid creating passwords using:

- **Dictionary words in any language.**
- **Words spelled backwards, common misspellings, and abbreviations.**
- **Sequences or repeated characters.** Examples: 12345678, 222222, abcdefg, or adjacent letters on your keyboard (qwerty).
- **Personal information.** Your name, birthday, driver's license, passport number, or similar information.

<http://www.microsoft.com/security/online-privacy/passwords-create.aspx>

Key Terms To Understanding phishing:

phishing

The act of sending an e-mail to a user falsely claiming to be an established legitimate enterprise in an attempt to scam the user into surrendering private information that will be used for identity theft.

spear phishing

A type of phishing attack that focuses on a single user or department within an organization.

spyware

Any software that covertly gathers user information through the user's Internet connection without his or her knowledge

security

In the computer industry, refers to techniques for ensuring that data stored in a computer cannot be read or compromised by any individuals without authorization.

<http://www.webopedia.com/DidYouKnow/Internet/2005/phishing.asp?page=5>

Malware, "malicious software", is software developed for the purpose of doing harm.

Malware can be classified based on how they get executed, how they spread, and/or what they do. The classification is not perfect, however, in the sense that the groups often overlap and the difference is often not obvious.

Classes of malicious software

Viruses

The first type of malware to evolve was the computer virus. Viruses work and spread (within the infected system) by attaching themselves to other pieces of software (or in the case of macro viruses, to documents), such that during the execution of the program the viral code is executed. Viruses spread across computers when the software or document they attached themselves to is transferred from one computer to the other.

Computer worms are similar to viruses but are stand-alone software and thus do not require other pieces of software to attach themselves to. They do modify their host operating system, however, at least to the extent that they are started as part of the boot process. Worms spread, either by exploiting some vulnerability of the target system, or by using some kind of social engineering to trick users into executing them.

Trojan horses are similar to viruses in that they get executed by being part of an otherwise useful piece of software. However, Trojan horses are attached to the host software manually, they cannot infect other pieces of software the way viruses can, nor can they replicate themselves. To spread, Trojan horses rely on the useful features of the host software, which trick users to install them. One of the most insidious types of Trojan horse is a program that claims to rid your computer of viruses but instead introduces viruses onto your computer.

A Backdoor is a piece of software that allows access to the computer system, bypassing the normal authentication procedures. Based on how they work and spread there are two groups of backdoors. The first group works much like a Trojan, i.e., they are manually inserted into another piece of software, executed

via their host software and spread by their host software being installed. The second group works more like a worm in that they get executed as part of the boot process and are usually spread by worms carrying them as their payload.

Spyware is a piece of software that collects and sends information (such as browsing patterns in the more benign case or credit card numbers in more serious ones) on users. They usually work and spread like Trojan horses. The category of spyware is sometimes taken to include adware of the less-forthcoming sort.

An Exploit is a piece of software that attacks a particular security vulnerability. Exploits are not necessarily malicious in intent — they are often devised by security researchers as a way of demonstrating that a vulnerability exists. However, they are a common component of malicious programs such as network worms.

A Rootkit is software inserted onto a computer system after an attacker has gained control of the system. Rootkits often include functions to hide the traces of the attack, as by deleting log entries or cloaking the attacker's processes. **Rootkits** may also include backdoors, allowing the attacker to easily regain access later; or exploit software to attack other systems.

Phony or Hoax Viruses

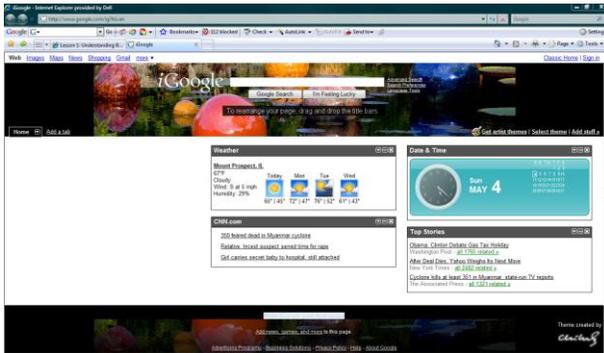
There are many instances where hoax virus warning messages have been sent which suggest that the recipient may have a particular virus, together with helpful instructions about how to confirm and eliminate the virus. These messages almost invariably tell you to look for a particular file and if it is present, delete it. In most cases the file which they mention is a Windows system file which if deleted, will cause serious running problems. If in doubt, run an internet search on Google for the filename, and you will almost certainly find information about it, and any recent scam.

<http://www.spyware-removal-info.com/malware.html>

**Activities/
Resources
for
Outcome #6**

Internet

The Internet is a network of computers spanning the globe. This communication structure is a system connecting more than fifty million people in countries around the world. A global Web of computers, the Internet allows individuals to communicate with each other. Often called the World Wide Web, the Internet provides a quick and easy exchange of information and is recognized as the central tool in this Information Age.



Internet Browser

An Internet browser is a software program that enables you to access and navigate the Internet by viewing Web pages on your computer. The label Internet Browser describes a software program that provides users with a graphical interface that allows them to connect to the Internet and "surf the Web." Simply speaking, a browser is a software program that enables you to view Web pages on your computer.

Firefox (Mozilla) and Internet Explorer (IE) are the two browsers most commonly used for viewing the Internet. Firefox and Internet Explorer share many of the same functions, and it is possible to use both.. It does not take many users long to develop a preference and "adopt" a browser. You may have already made the choice. Which are you using?

Web Site

A site or area on the World Wide Web that is accessed by its own Internet address is called a Web site. A Web site can be a collection of related Web pages. Each Web site contains a home page and may also contain additional pages. Each Web site is owned and updated by an individual, company, or organization. Because the Web is a dynamically moving and changing entity, many Web sites change on a daily or even hourly basis.

Web Page

A Web page can be explained as one area of the World Wide Web. Comparable to a page in a book, the basic unit of every Web site or document on the Web is a page. A Web page can be an article, an ordering page, or a single paragraph, and it is usually a combination of text and graphics.

Home Page

The term home page has a couple of meanings. It is the Web page that your browser uses when it starts, and also the Web page that appears every time you open your browser. Clicking the home page icon on your browser screen will take you to the specific page you have set as your browser's home page.

Home page also refers to the main Web page out of a collection of Web pages. On each site, often you will see home page as a choice on a Menu Bar. Clicking on the word Home on a Web page will take you to the home or main page of that particular Web site.

Title Bar



Let's take it from the top. The name of the Web site or title of the page you are viewing is found on the top left hand corner of your screen. Traditionally, this horizontal blue bar runs across the entire width of your screen. This blue bar that contains the name of the Web site is called the Title Bar. The Title Bar will serve as a trusty anchor, always letting your know where you are by sharing the title of the Web site you are visiting. This bar does not take you anywhere, but it always lets you know where you are.

Menu Bar , Address Bar, Tool Bar, Back/Forward, Stop and Refresh Icons, Home Page Icon



URL (Uniform Resource Locator)

That unusual word at the top of the page in what is known as the locator box or address box is the address of a Web page. Each Web page has a unique address called a Uniform Resource Locator or URL. The URL (pronounced U-R-L) is the specific address of a Web page.

There is a special system for addressing Internet sites. The URL or Web address is typically composed of four parts:

- A protocol name (a protocol is a set of rules and standards that enable computers to exchange information)
- The location of the site
- The name of the organization that maintains the site
- A suffix that identifies the kind of organization it is

Address Bar

The Address Bar is an excellent tool that can be used for navigating the Web. If you know the address of a page you want to visit, type the URL in the Address Bar. Then press Enter on the keyboard or click on the word Go on the right side of the Address Bar.

The power of the computer really shines through with a feature called AutoComplete which is built into Internet Explorer. If you start typing a Web address that you have previously used, a list of matching addresses appears. The addresses of all the Web sites that you have visited are kept in the computer memory. Your browser will locate an address that you have previously typed in the Address Bar by searching for similar addresses trying to find a match. As you type each letter, the list is refined to match your typing. You can choose one of these addresses by simply moving your mouse over the name and clicking.

Hyperlinks

An easy way to move around on the World Wide Web is by hyperlinks, which are sometimes called hot links. Whatever you call them, these links provide a connection between Web pages that allows for amazingly easy access to other Web pages. A link or hyperlink can be text, an icon, a picture, or an icon that

moves a user from one Web page or Web site to another. A hyperlink has an unseen Web address imbedded in it.

Positioning your cursor on a hyperlink and clicking your mouse will take you to the Web page whose address is embedded in the hyperlink. So, if I am writing something about the *Encyclopedia Britannica*, I can simply add a hyperlink to the text and it will become the *Encyclopedia Britannica*. You can tell that this text has a hyperlink hidden in it because it is a different color and because it is underlined. Just click on the hyperlinked word and presto—you go off to the world of the underlined word, in this case, the *Encyclopedia Britannica* Web site. Hyperlinks are a great way to easily find out more about a particular word or concept. There seems to be no end to the information on this Information Highway!

Underlined link

Apply Your Knowledge.

You will find that knowing which pages you have visited by looking at the color of the link can be very powerful information when you want to revisit interesting sites.

A text link appears as an underlined word and often is indicated by a color different from the rest of the text on the page. When you click this underlined word, you will instantly jump from one place to another. Once you click on a hyperlink, it changes color to indicate that you have previously used the hyperlink.

Hand Icon

If you want to see if an item on the page you are viewing is a hyperlink, move the mouse pointer over the item. If the pointer changes to a hand, the item is a link. This hand icon is a symbol letting you know that word, picture, or graphic is a hyperlink.



Navigating Within a Web Page

So far, our main focus has been moving from Web page to Web page or navigating between Web sites, but that is only half the picture. Once you have moved from Web site to Web site and selected a Web page you want to concentrate on, there are convenient ways to move around that particular page itself.

Apply Your Knowledge.

A common practice in the Web World is to make a logo a hyperlink that will transport you to the site's home page.

Often a Web page holds more information than can fit on one screen. A Web page appears aligned to the upper left hand corner of your screen. There is often information that you cannot see farther down after the last line on the screen. Sometimes there is also more information to the right of the screen.

Scrolling is an easy way to navigate on a Web page. You can scroll up and down and side to side by using either the horizontal or vertical onscreen scroll bars on the bottom and right side of the screen. To scroll using the onscreen scroll bars, simply position your cursor on the slider on the scroll bar. Hold the mouse button down and drag the slider up and/or down on the vertical scroll bar (or side to side on the horizontal scroll bar). You can also position your cursor over the arrows at the top and the bottom of the vertical scroll bar (left and right sides of the horizontal scroll bar) to move one line at a time.

Using Arrow Keys

Apply Your Knowledge.

The Arrow and Page Up/Page Down keys work the same way in many programs like word processing programs and spreadsheets.

The keyboard holds some other choices for helping you move around a Web page. The first are the Page Up and Page Down keys on your keyboard. Pressing these keys while on a Web page will move you up and/or down the screen one page at a time. The Arrow keys on the keyboard are convenient tools for moving the focus of your computer screen up, down, left, or right. These keys will move the screen more slowly, moving one line at a time.

Using Wheel Mouse

I thought the scroll bars were the Cadillac of navigation until I tried a wheel mouse. What is a wheel mouse? He is a very helpful little critter that you will be happy you met. You can purchase a mouse with a wheel located between the two buttons. This wheel is programmed to move the screen; and you can customize its movements. The most common use of the wheel mouse is for scrolling up and down a Web page. With this little fellow in hand you can really fly up and down the screen. All you do is click on the page and then turn your wheel in an upward or downward motion and you will get the same effect as using the scroll bar, but the movement is faster and much easier. Web pages today can be very long so a wheel mouse is a special friend.

Printing pages

With all this navigating and exploring of Web pages, you have probably seen information that you would like to save in the old-fashioned way — with a printed-paper copy. As you viewed pages on the Web, did you find information that you'd like to save for future reference or share with others?

The computer world gives you the option of saving an entire Web page or any part of it: text, graphics, or links in printed form. Printing Web pages is very easy, thanks to that helpful Tool Bar. See the printer icon on the Tool Bar? That is the answer if you want a paper copy of a Web page you have found useful. A thoughtful gesture is to share Internet information by printing Web pages for people who don't have access to the Web or a computer.

To print a Web page, just click the printer icon on your Tool Bar. The page will print according to all your default options, which is usually what you want anyway.

There is another, more detailed way to print material from the Internet. Go to the Menu Bar and click on File. You will now see a dropdown menu offering a variety of choices, one of them being Print. Click Print. You will now be able to print a Web page, a portion of a Web page, or several copies of a Web page by making specific selections. You can select the printing options you want.

A nice way to double-check yourself is to preview how a Web page will look before you click the Print command; just click Print Preview.

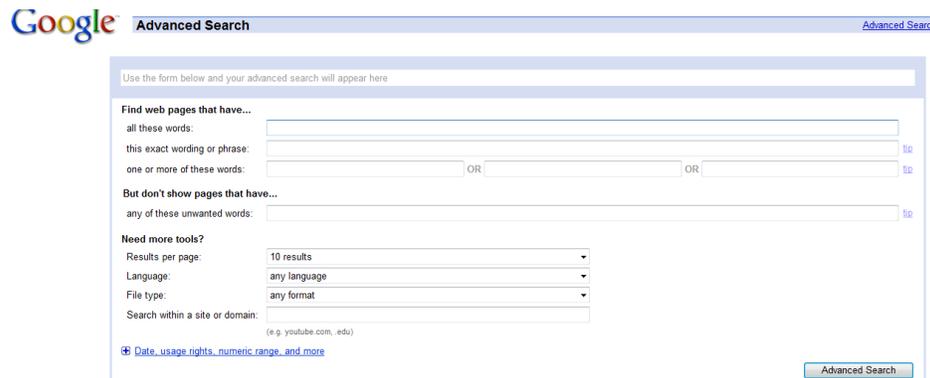
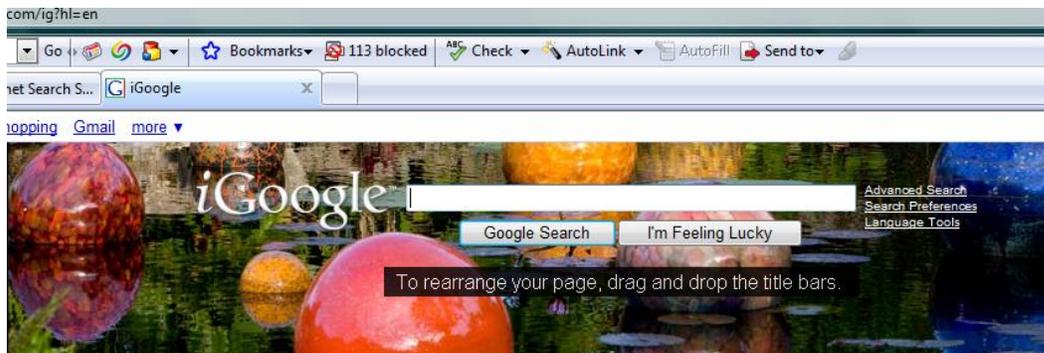
Print-friendly Version



A Web page with Print format

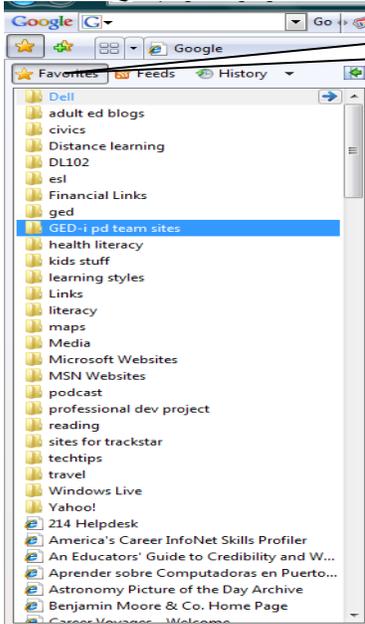
You will feel like a real computer pro in no time when you learn many of the tricks of the trade. One very helpful trick is the print-friendly option found on so many Web pages. This printing choice gives you a printed copy of the page or article that omits many of the graphics and fancy formatting. A text-only version will be printed for you simply by selecting the printer-friendly version.

Search



Favorites

The sites you want to keep so that you do not have to type them each time you want to go the site.



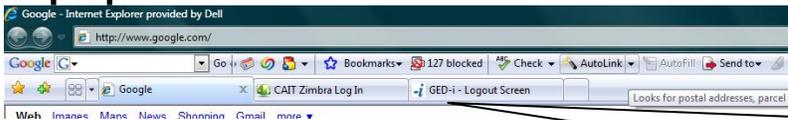
This icon allows you to see all the web pages you have opened.

To add a site to your favorites: Click on the icon with two stars and your site will be added to the list.

History

This shows all the sites that you have visited recently, usually up to 30 days.

Pop Up Ads



Google will stop pop up ads and so will Internet Explorer

Page Not Found

Page Not Found can mean several things:

- The computer is not connected to the Internet
- The URL was not typed correctly
- The site no longer exists.