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Introduction Slide Show

Note to Home Students:

You can download the introduction slide show from our Class Resources page:

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Objectives

- What is the Internet & how does it work?
- Who controls the Internet?
- What is the World Wide Web (aka “the Web”)?
- What do I need to access the Web?
- Terminology

Show Slide 2



What is the Internet?

The Internet is a collection of millions of computers world-wide that are all connected to one another. While they do not share everything with each other, there is some limited amount of information a computer on the Internet can get from any other computer on the Internet.

People often think of the Internet as a cloud in space. In reality, every computer in the Internet, is connected by actual wires -- Ethernet cables, phone lines, and fiber optic wiring on the ocean floor to connect the continents!

Show Slide 4



What is a server?

There is a LOT of information on the Internet, but all of it comes from another computer somewhere. Special computers designed for transmitting information on the Internet are called *servers*.

Big Internet companies often own thousands of servers so that their websites are fast. To the right is a picture of one of Google’s many server rooms, located in Georgia. A *server room* is a large, air-conditioned room filled with thousands of servers. When you do a Google web search, your computer just might be “talking” to one of the servers in this server room.

Show Slide 5



Who Controls the Internet?

The Internet is a **cooperative endeavor**—no organization is “in charge” of it.

The Internet is an inherently **participative** medium. Anybody can publish information or create new services. For example, Google started out as two guys in a garage

When you connect your computer to the Internet, you become **part** of the Internet.

Show Slide 6



What is “the Web”?

 Show Slide 7

Many people use the words “**the Internet**” and “**the Web**” interchangeably, but they do not mean the same thing.

The “**Web**” (short for “World Wide Web”) is just one of the services that runs on the Internet. It is a collection of interconnected webpages, documents and other resources, and is the portion of the Internet we will focus on in this lesson.

There are other services that run on the Internet such as e-mail, or electronic mail. Some other aspects of the Internet include the ability to retrieve files from other computers (downloading) and instant messaging, multiplayer gaming, and streaming media (like videos and music).

What do I need to access the Internet?

 Show Slide 8

1. Computer Device

You need a computer, laptop, tablet, or smart phone (we can’t plug our brains into the Internet—yet).

2. Internet Connection

 Show Slide 9

There are several ways to obtain an Internet connection:

1. **Internet service provider (ISP):** Typically used by home and office computers. This type of connection is generally the fastest. Examples include Comcast and Verizon. The connection is accessed through a phone line (dial-up model), DSL line, or cable television system.
2. **Wi-Fi Hotspot:** These are accessible from a public place, such as a library, coffee shop, or hotel. They are often free and sometimes require credentials to connect, such as a password. In this case, you are connecting to the Internet though the ISP of the wi-fi hotspot’s owner.
3. **Cell Phone Carrier:** If you have a smart phone with a data plan, you can access the Internet over the phone’s cellular network (Sprint, AT&T, etc). Examples of cellular Internet technologies include 3G, 4G, and LTE.

3. Web Browser

 Show Slide 10

A web browser is software that allows you to view webpages. There are several web browsers that are available. All of them are free to download and use. We will talk about them next.

Common Web Browsers


 Show Slides 11 - 13

They all have similar features—they all let you access information on the Web and they are all free. You can have several brands of browsers installed on your computer at one time and discover a preference depending on how the browser behaves.






Teacher's note:

After describing **Google Chrome**, explain why we don't use it in class despite its popularity: Chrome does not let us assign a computer number to the bottom of printouts. However, all of the concepts we cover in class are relevant no matter what browser you are using.



U.S. Browser Usage for January 2017

source: <http://gs.statcounter.com>

	Chrome – Produced by Google, it is one of the fastest and most secure browsers available today.	48%
	Internet Explorer – Produced by Microsoft and bundled with the Windows operating system.	14%
	Safari – Produced by Apple and bundled with Apple products, such as Mac computers, iPhones, and iPads.	19%
	Firefox – Produced by Mozilla, a non-profit company, it is an open-source project.	11%
	Edge - Produced by Microsoft, this browser is only available on Windows 10. It is meant to replace Internet Explorer.	5%

What's a URL?


 Show Slide 14

The WWW is all the web pages on the Internet. When you visit a website, you are retrieving a web page file from another computer. To do this, you will need to use a “web browser” program such as Internet Explorer. In that program, you would specify an address, the URL (Uniform Resource Locator), of the computer that holds the information, such as:

`http://www.irs.gov`

Here is what each section represents:

- **http://**
protocol
Tells the browser what language it has to speak in order to display the web site. Most of the time, the “http” protocol is used, so you don’t have to type this part—the web browser adds it automatically.
- **www.irs.gov**
domain name
Is typically named after the organization that owns the webpage. Takes you to the organization’s main web site. Just like a mailing address is used to direct someone to your home, a domain name is used to direct someone to a specific web site.
- **.gov**
top level domain
The “category” of the web site. Below is a table describing some of the most common top level domains:
- **http://www.irs.gov/uac/Free-File:-Do-Your-Federal-Taxes-for-Free**
path
The path a specific webpage or resource within the website as a whole. If you do not specify a path, and simply give a domain name, you will land on the website’s main page.

Top-Level Domains

Show Slide 15



.com	Commercial (for-profit business)	www.google.com
.net	Originally for network providers, now used as an alternative to “.com”	www.comcast.net
.org	Organization (non-profit)	www.mc-npl.org
.gov	Government agency	www.irs.gov
.edu	Educational institution	www.mc3.edu
.mil	Military	www.army.mil
Web sites located in other countries have a <u>two-letter country code</u> for their top-level domain.		www.bbc.co.uk
Each country has its own list of <u>second-level domains</u> (comes before the top-level domain)		.uk = “United Kingdom” (top-level domain) .co = “commercial” (second-level domain)

What's a hyperlink?

A hyperlink is a graphic or a piece of text in a webpage that, when clicked, will send the reader to another webpage or document.

Hyperlinks often look like [blue underlined text](#) but can also appear as icons or other graphics.

Whenever you place your mouse cursor over a hyperlink, it will change into a pointing hand.



 Show Slide 16

What can you do on the Internet?



Send and receive email	www.gmail.com
Read newspaper	www.philly.com
Get driving directions	www.mapquest.com maps.google.com
Search for a job	www.monster.com
Shop or Sell	www.amazon.com www.ebay.com
Research	www.wikipedia.com
Watch videos	www.youtube.com
Watch TV shows	www.hulu.com www.netflix.com
Check Train/Bus Schedules	www.septa.org
Communicate with government	www.state.pa.us
Get free credit reports	www.annualcreditreport.com
Fact-check rumors	www.snopes.com

Getting Started



 Minimize Slide Show

As stated above, looking at web pages on the Internet requires using a **web browser**. A Web Browser is an application used to view web sites stored on other computers connected to the Internet. The most common method of browsing is called the Hyper Text Transfer Protocol (HTTP) which uses a series of **hyperlinks** (sometimes just called **links**) to connect pages together.

In this class, we will be using **Internet Explorer** (or "IE" for short). There have been several versions of Internet Explorer. **Version 11** is currently being used in the Computer Lab.

Hands-On Practice

Opening Internet Explorer

1. **Double-click** the icon  on the desktop or **use** the **Start Menu** to open Internet Explorer.
2. The first page that appears upon opening a web browser program is called the **home page** and can be set by the user.

Q: What did the Computer Lab select for a Home page?

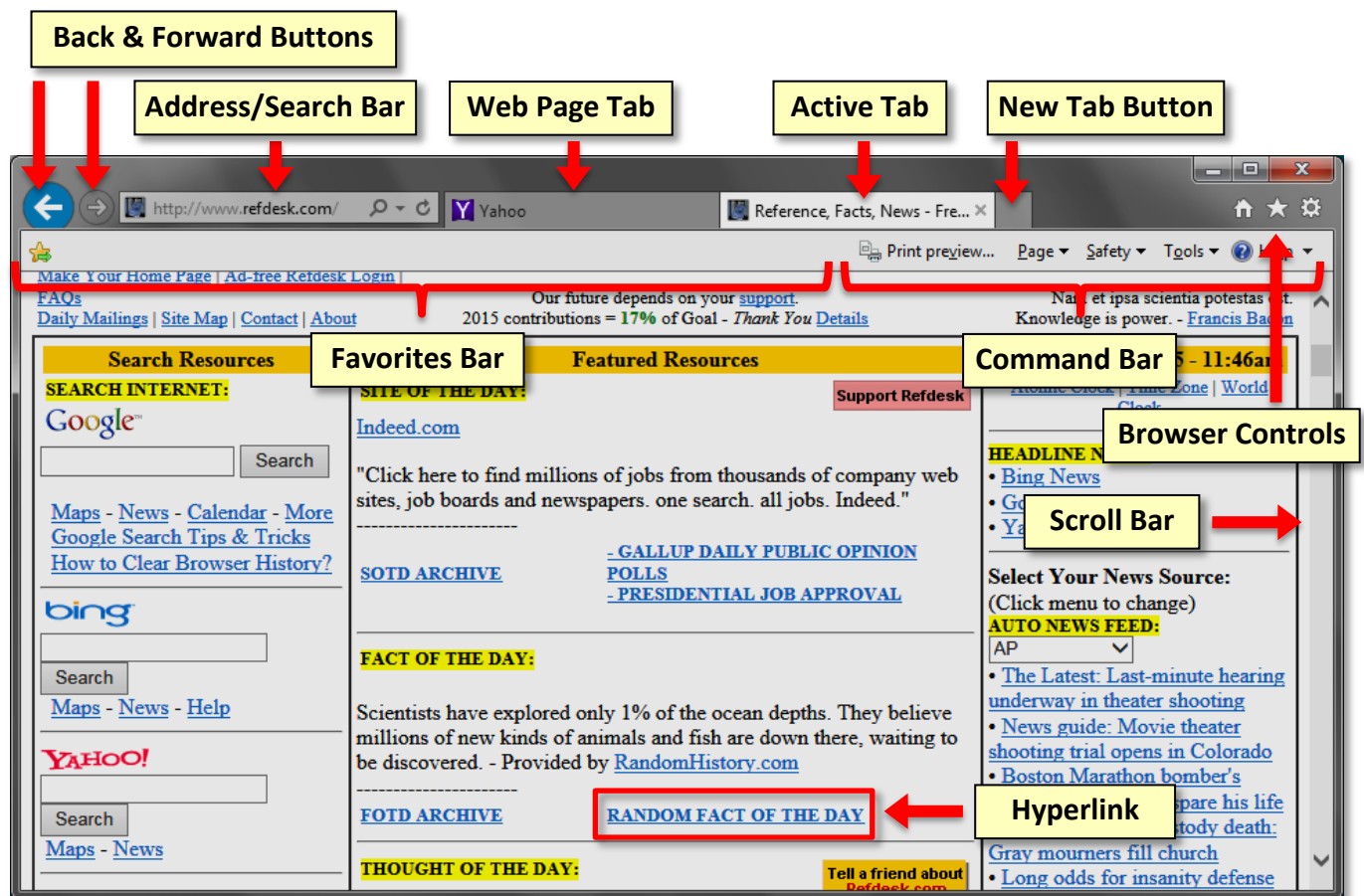
A: Google

The IE11 Window

Mention Handout 1 

1. **Look** around the screen and **use** your **handout** to find the different screen elements pictured above.

Teacher: Describe the different parts of the window.



2. Google is a very simple webpage that is comprised mainly of a search box. That is because Google is a **search engine**, a web site designed to find information on the Internet (we will learn more about this in the next lesson). It is a good homepage because it will load quickly into your browser.
3. **Notice** that the name of the page is on the webpage tab and the URL is in the address box.








The Address Bar - a closer look

Mention Handout 2

The address bar will display the URL of the webpage in the active tab.

There are some buttons at the right end of the address bar that are important to know about:



1.  The **magnifying glass** icon is only used when you want to do a **web search**. However, it's not really necessary in order to do a web search, so we recommend **avoiding it**. Clicking the triangle next to the icon allows you to change the search engine that is used.
2.  The **padlock** symbol appears when the URL you have navigated to is a secure website. We will talk more about secure websites in next the session.
3.  The twirly arrow is a **refresh** button. When clicked it will reload the current webpage into the browser so that it has the latest content.
4.   The **refresh** button will be replaced by a **different button** depending on what you are doing in the browser. In other words, if you are entering a URL or a search term, it will change to a Go button , to be used when you are finished typing. Additionally, when a webpage is loading, it will change to an , which is a button that will stop a page from loading. We'll see examples of these button changes as we conduct our searches.

Entering a URL

If you know the exact web address (URL) of the web site you want to visit, you should enter it into the browser's **address bar**.

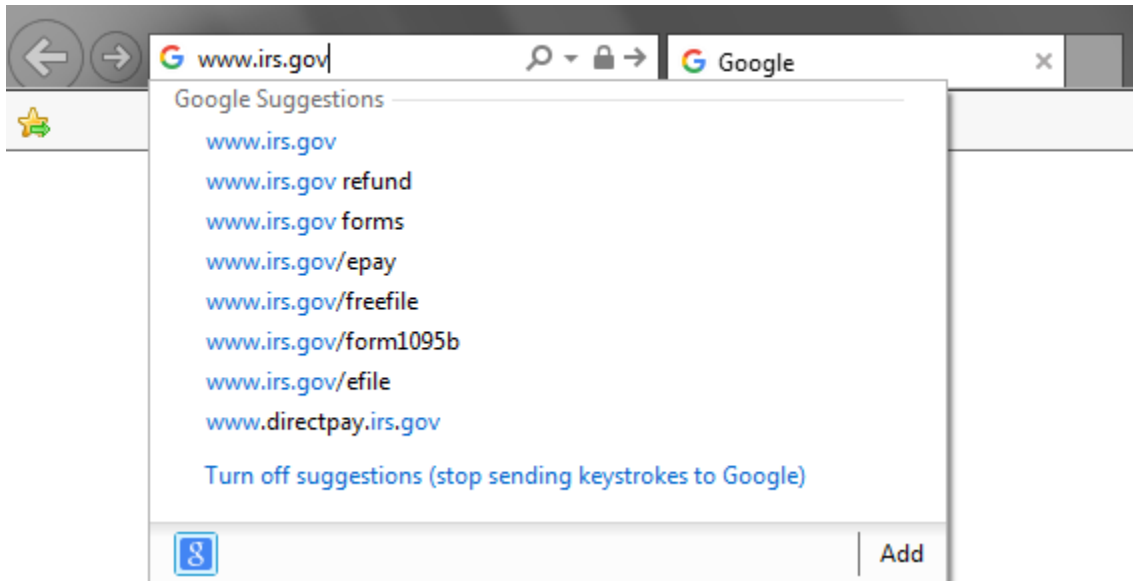
When you first open the browser in the lab, the insertion point is **not** positioned in the browser's address bar, but in a Google search box.

1. Using your handout, **find** the address bar.
2. **Notice** the **address bar** displays the **web address** (URL) of the page you are on: www.google.com.
3. **Click** into the **address bar**. When you do, **notice** that the web address is now highlighted in **blue**. When you start typing, it will **replace** the highlighted text.



4. **Locate** the **first URL** on your list of websites handout. **Type** **www.irs.gov** (just those 9 letters and 2 periods; no spaces, no other characters). The address bar acts **just like a textbox**—if you make a mistake or need to change any part of the address, you can use backspace, delete, arrow keys, etc. to edit the existing text.

5. **Notice** that as you type, **suggestions** appear below the Address Bar. These are **search engine suggestions**. We will talk more about search engines next session. For now, you can **ignore** this.



6. **Notice** that the Refresh button was replaced with the **Go** button.

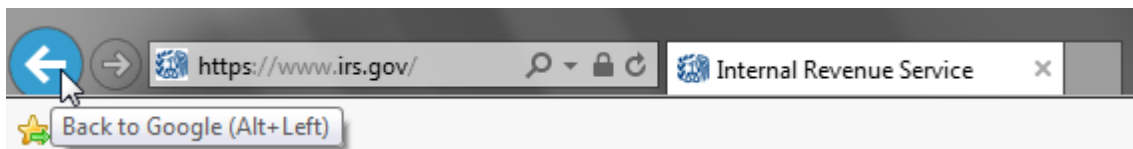


7. Now we are ready to actually visit that address. **But before we do, take note** of **three things** that will happen when we go to that address:
- A **“loading” animation** will appear to the left of the tab’s name, indicating that the web site is loading.
 - While the **loading animation** is twirling, the refresh button is replaced by an **X button** (the “Stop” button). If the page loading is taking too long, it can be stopped with this button.
 - The **web page tab name** will **change** to the name of the new web site.

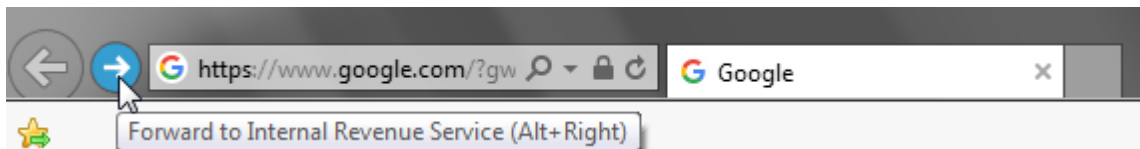


8. **Press** **Enter** or **click** the **Go button** to load the web page.
9. Once the page has loaded, the **irs.gov** web site will replace the Google web site within the browser window.

10. **Focus** on the **back button** which is now active. **Point** to it and note what the screen tip says. The browser's memory keeps track of where you go.



11. **Click** on the **back button** to **return** to the Google web page.
12. Now, the **forward button** will be active. **Point** to that button and **note** the screen tip.



13. **Click** on the **forward button** to return to the IRS web site.
14. **Close Internet Explorer.**

Practice

1. **Open Internet Explorer (IE).**
2. **Click** into the address bar and **enter** this URL: **www.visitpa.com (#2 on slip)**
3. **Press** or **click** the **Go** button.
4. **Click** the **back button** to go back to Google.com.

Tabbed browsing

Teacher's note:

Use prop to demonstrate what tabs are.



Tabbed browsing allows you to open multiple websites within the same window and use tabs to move between them. Tabs are ideal for when you want to go to another website without losing your current website.

1. **Click** on the **New Tab Button** to open a new tab.



2. **Notice** that the address bar says **"about:blank"** and the words are highlighted in blue. There are two webpage tabs and one says Blank Page, which is what you are now seeing in your window. Because the text is blue, you do not have to click in the address bar. Merely start typing the URL. Once you begin typing, what you type will replace the words "about blank".



3. **Type** **www.refdesk.com** (#3 on slip)
4. **Focus** on the **tab button** that you just opened. **Press** or **click** the **Go** button and **watch** for the connecting indicator as your page "loads" into the web browser.



5. **Notice** that there are now **2 webpage tabs visible**, one labeled "Google" and the other "Reference, Facts, News" (Refdesk). The address bar shows the URL for Refdesk because that is the **active tab**. The active tab is the website that you are viewing. The active tab is generally **lighter** in color.



6. **Click** on the tab labeled **Google**. What website is in view? What URL is displayed in the address bar? Clicking on the **webpage tab** is the way you **switch** between the websites.

Using Links on a Webpage

Entering a specific URL is only one way to navigate on the Internet. Most of your navigation will be done by clicking on **hyperlinks** (or “links” for short). Clicking on a link will take you to another page on the site you are on or onto another website altogether.

1. **Click** on the tab for **Refdesk**. This website (refdesk.com) has many reference materials on it, but in particular notice the section in the center of the screen partway down (that you may have to scroll to reach) marked “**Site of the Day.**” Every day, refdesk.com will pick a new website to feature, and the name of it will be just under the words Site of the Day. Notice that those words are **blue and underlined**. What does this normally mean?
2. **Point** to the **Bing logo** on the left side of the screen. **Note** that hyperlinks **do not always** have to be blue and underlined. Nonetheless, your mouse pointer does change to the shape of a hand, so you can be sure this is a hyperlink.



3. While you are pointed at that link, a **screen tip** will appear in the bottom-left corner of the window. This screen tip displays the exact web address of the website where this hyperlink will take you.

<http://www.bing.com/>

4. **Click** on the **Site of the Day** link.
5. **Click** the **back button** to go back to refdesk.com.
6. **Q:** What do you notice about the color of the link?

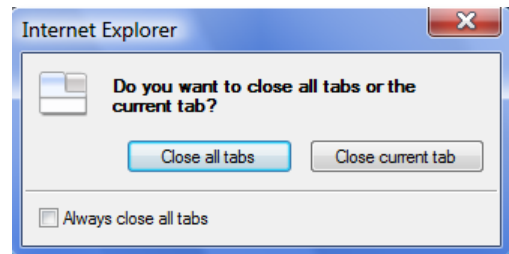
A: It’s a different color now.

This is a handy method of keeping track of links you’ve already clicked on.

7. Now, let’s go to a different link on the Refdesk page. **Optional**
 - a. **Find** the link that says **Thought of the Day Archive**.
 - b. Instead of just clicking on it, let’s **right-click** on the link and **select Open in new tab** from the context menu.
 - c. This will open the web page that the link points to in a **new browser tab**.
 - d. **Note** how doing that **does not take you to the new tab**; you will have to **click** on the new tab to view the content.

Closing the browser

1. **Take note** of the fact that we now have **two** tabs open and let's **close** the **entire browser window**.
2. Unless this option is turned off, a dialog box will ask you if you want to close **all the tabs** or the **current tab**.
3. **Click Close all tabs**.



Practice

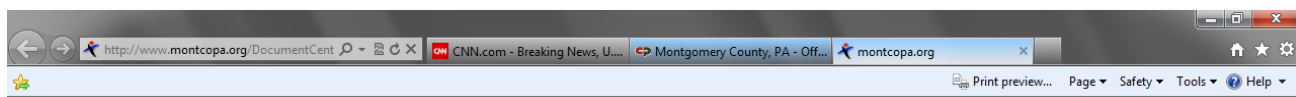
1. **Open** Internet Explorer.
2. **Click** on the address bar and **go** to this URL: **www.cnn.com** (#4 on slip)
3. **Click** on the **New Tab** button.
4. In the new tab, **go** to this URL: **www.montcopa.org** (#5 on slip)
5. Sometimes links are not called out as blue and underlined text, but the sure fire clue is when your *cursor changes into a hand*. **Find** the link for **Parks, Trails & Historical Sites** but **don't click just yet**.

Note: The menu headings may be really small. This is a deficiency of the website because it doesn't know how to handle our screen size.





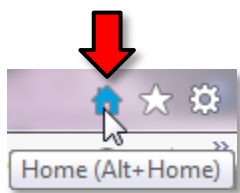
6. **Note** that just pointing opens a **menu** of other links.
 - a. Under the **Parks** sub-heading, **click** on **Norristown Farm Park**.
 - b. If you did everything right, you will see information about the Farm Park in the center pane.
7. **Find** the link for the "**Map of Park**" and **click** on it (you will need to scroll down the page). A map will appear on the screen.
 - a. Q: How do we go back?
A: Click the Back button
 - b. Q: Why is the Back button disabled?
A: Because the link automatically opened in a **new tab**, and this is the only webpage this tab has visited (remember, each tab has its **own memory** about what pages it has visited). It's important to know that, sometimes programmers will specify that certain links open in a separate tab or even a separate window. So, always check your tabs if you are having trouble going back to a previous page.

You should now have **three tabs** open and your active tab should be displaying a map.

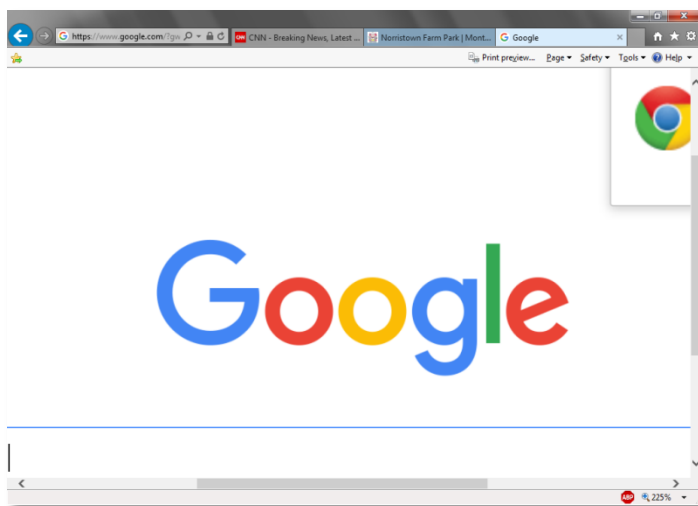


Using the Zoom controls

1. **Move** the cursor so it's on top of the map. **Notice** how it changes to a magnifying glass with a "plus" in the middle (pictured at right). This means that clicking on the map will **zoom in**. 
2. **Click** on the map to zoom in. Use the vertical and horizontal scrollbars to see different parts of the map.
3. **Move** the cursor so it's on top of the map again. **Notice** how it changes to a magnifying glass with a "minus" in the middle (pictured at right). This means that clicking on the map will **zoom out**. 
4. **Click** on the map to zoom back out.
5. There are also **keyboard shortcuts** for zooming in and out. This feature comes in handy when the font on a webpage is too small to read. **Press** **Ctrl** **+** to zoom in and **Ctrl** **-** to zoom out.
6. To bring the zoom level back to normal, **press** **Ctrl** **0**.
7. It's important to note that the zoom level is remembered across webpages.
 - a. **Press** **Ctrl** **+** about **5 times**.
 - b. **Click** on the button that looks like a house. This is the **Home** button. Clicking it will load the **home page** into the active tab.



- c. **Notice** how the zoom level is very high. **Press** **Ctrl** **0** to reset the zoom level.



8. **Click** the **Back** button to go back to the park map.

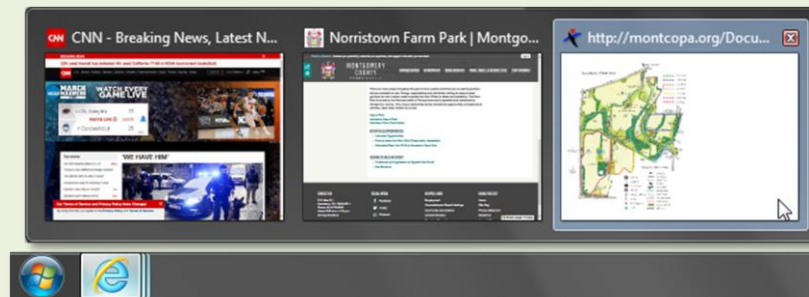
Review

1. If you look at the three tabs that are opened, you will notice that on one of them you can see a close button on the right side of the tab. This is an indication that this is the **active tab**.
2. **Click** on the tab for **CNN**. Do you see the close button on that tab now? (**Note:** If you point to a tab, the close button will become visible but will not stay visible when you point away.)
3. Now that CNN is your active tab, you have an active back button. **Click** the **back button**.
Q: What website are you now viewing?
A: Google
Q: What is the web site's URL?
A: google.com
4. **Click** on the **middle tab**. What website are you now viewing? What is the URL displayed in the address bar?

Using the **back** and **forward** buttons is the way to switch between sites that have been opened in the same tab (remember that each tab keeps its **own memory** of what webpages it has visited).

Clicking on the **tabs** is the way to switch between websites that have been opened in different tabs.

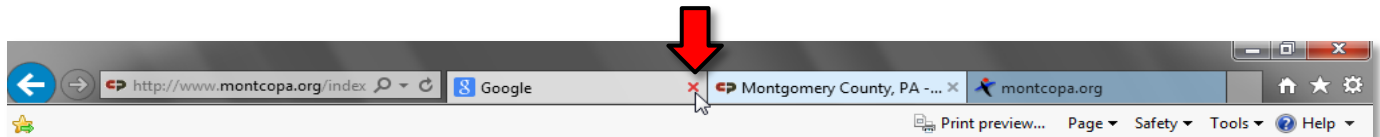
Tip: Another way to switch between tabs is to use the **preview windows** on the **task bar**. This might be easier if you have many tabs open and the tab label is very truncated.



Closing and Reopening [a] Tab[s]

You can close one of the tabs without closing the browser. The tab does not even have to be the active tab.

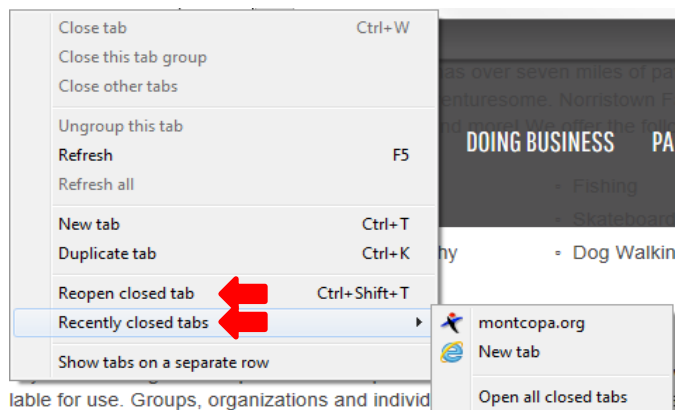
1. Right now, our **middle tab** is active. **Verify** this by looking at the tabs (make sure you are not pointing at any one of them) and **noting** the **visible close button**.
2. **Point** to the tab that says **Google**. Even though this is not the active tab, you can see a close button.
3. **Point** to the close button and **click**.



4. **Notice** how that tab closed and you now have **2 tabs remaining**.



5. Now **close** the tab with the Norristown Farm Park map.
6. Sometimes you may close one or more tabs by accident and need a way to reopen them easily..
7. You can choose to reopen the most recently closed tab, or choose from a list of recently closed tabs. Start by **right clicking** on an existing tab.
8. On the context menu that appears, choose **Reopen closed tab** to reopen the most recently closed tab.
9. To choose among a list of recently closed tabs, **hover** your pointer over **Recently closed tabs** and **select** from the list. You can even **choose** to **Open all closed tabs**, which will reopen every tab you've closed since opening Internet Explorer.



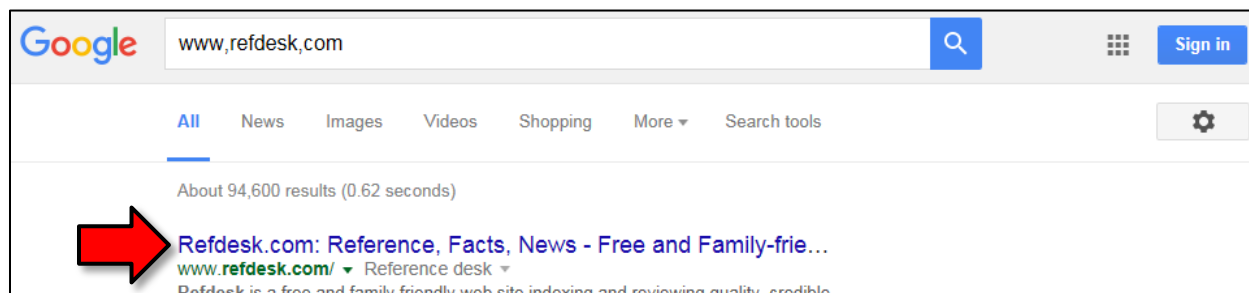
10. **Close** the browser (remember to respond to the dialog box by **clicking Close all tabs**).

Typing an incorrect or incomplete URL into the address bar

In the next lesson, we will be exploring searching and search engines. But before we end this session, let's see what happens if we make a mistake when typing into the address bar.

Remember, to get to the website we want, we must enter the web address (URL) exactly. Making any kind of mistake or omission will produce a very different result than what we expect.

1. **Open Internet Explorer.**
2. The following is a very common typo that people make when typing in a URL. Instead of typing a **period** (dot) they will type a **comma**.
3. **Click** into the **address bar** and **type www(comma)refdesk(comma)com (#6 on slip)**
4. **Press** the key and watch what happens.
5. Internet Explorer will attempt to find the website but will be unsuccessful. So instead, it will display a list of **search results** that it hopes will fill your need. In this case, the address bar is acting like a **search bar**. In the computer lab the search provider connected to the address bar is **Google**.
6. **Click** on the link in the **first result** to go to refdesk.com. There will be more about searching in the next lesson.



7. Sometimes you might mistype a URL and end up on a page that doesn't show what you expect, and instead just has a list of ads or "Related Links."
8. **Click** into the **address bar** and **type www.moncopa.org (#7 on slip)**
9. **Notice** that you've just got a list of "Related Links" that may seem useful. **DON'T CLICK ON ANY OF THESE LINKS, AS THEY COULD LEAD YOU TO A SCAM OR MALWARE INFECTION.**
10. If you see a website like this, the safest thing to do is **close** your browser window and **start over**, double-checking the spelling of your URL.
11. **Close Internet Explorer.**

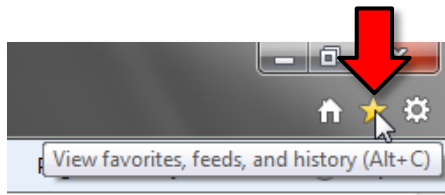
Saving Favorite Websites

Favorites (also called **bookmarks**) can remember websites for you, like **speed dial** on your phone (you don't have to remember or type anything). They are good for:

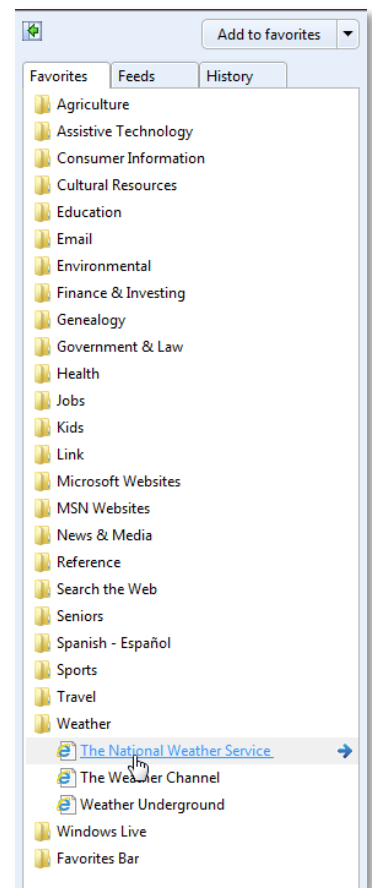
- Remembering websites that you visit often.
- Remembering websites that you may want to visit at a later time in the future.
- Remembering websites that have very long URLs.

Anatomy of an IE11 Favorites Center

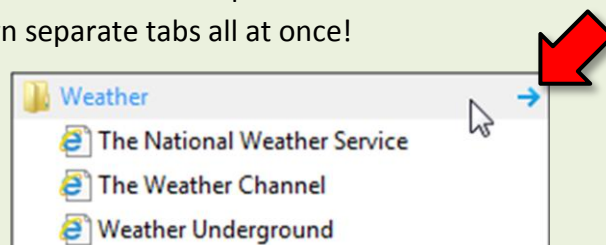
1. **Open Internet Explorer.**
2. **Go** to **www.refdesk.com.** (#3 on slip)
3. **Point** to the **gold star** that is part of the Browser Controls and **note** the **screen tip**.



4. **Click** on the star and **note** the **Favorites Center** that appears (pictured at right).
5. The Favorites Center has three tabs. **Click** on the **Favorites** tab if it is not the foremost tab. You will see a list of **folders**. These folders contain **links** to websites. Most of these favorites were added to the library's computers—you will not see so many favorites on your home computer!
6. **Find** the **Weather** folder and **click** on it. The folder "opens" to show the website links inside. (**Note** that the icons are now the IE icons rather than a folder icon).



Warning! Do **NOT** click on the tempting blue arrow to the right of a folder as it will open all the links in a folder in their own separate tabs all at once!



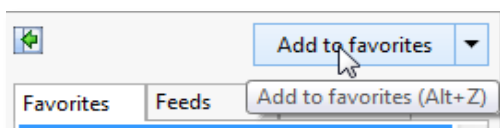
7. **Point** to the **first** website listed under Weather and **observe** that your cursor changes to a **hand**.

8. **Click** on this link and the **National Weather Service website** will load in the **Active tab**.
9. **Click** the **Back button** to return to **www.refdesk.com**.
10. **Notice** that we now have both active back and forward buttons. Why? **Remember** that when we first opened the browser it opened to Google, then we typed a URL into the address bar to go to Refdesk and finally, we used one of our saved favorites to go to the National Weather service. The back and forward buttons allow us to revisit each of these sites.

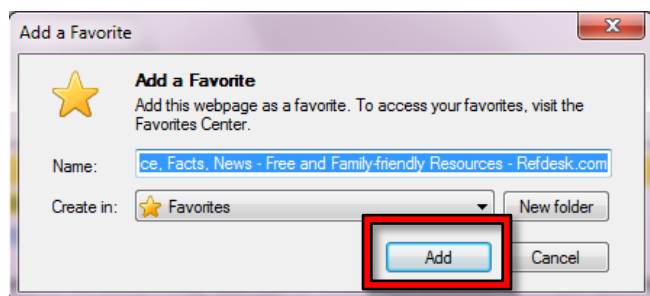
Adding a Website to Your Favorites List

We are going to add a favorite for Refdesk to our favorites list.

1. **Make sure** you are looking at Refdesk's web site.
2. **Click** on the **Star** and **click** then on the **Add to Favorites button** which is above the tabs.



3. A **dialog box** will appear asking us for some information about our new favorite.
 - a. The **first textbox** asks us what **name** we want to give this favorite. By default, it assigns the webpage's title to this field. The downside to this is that webpage titles are often very long. Let's change it to something shorter.
Type "Refdesk".
 - b. Next, it asks us what **folder** we would like to place it in. For today, we are not going to choose a folder.
 - c. **Click** on the **Add button** to create the favorite.



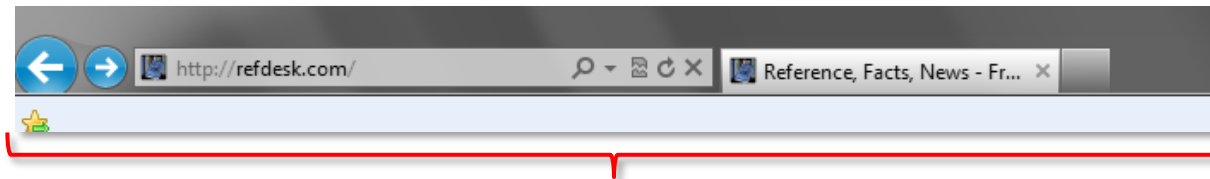
4. **Click** on the **Favorites button** to open the Favorites Center and **see** the new link in the list (it will be at the bottom).

Tip: By default, the list of favorites in the Favorites Center is sorted in the order the favorites were added. To sort them alphabetically, right-click on any favorite or folder and click "Sort by name".



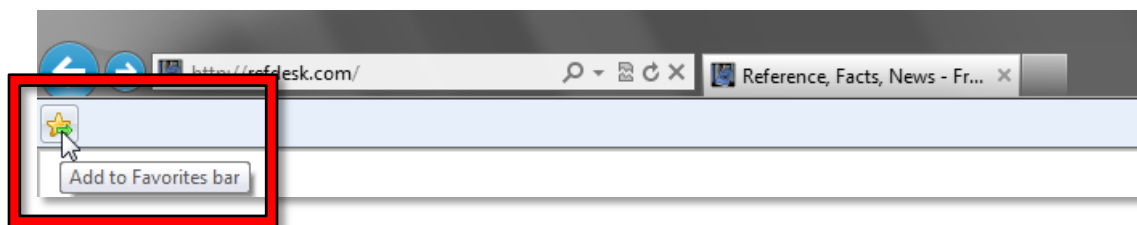
Adding a Favorite to the Favorites Bar

To get even quicker access to a favorite website, you can utilize the **Favorites Bar**. This bar is an optional toolbar in IE11 which we have enabled in the computer lab and appears directly below the IE browser tabs. It allows you to create **buttons** that you can click to go to your favorite websites. We will show you how to enable this and other toolbars later in this lesson.

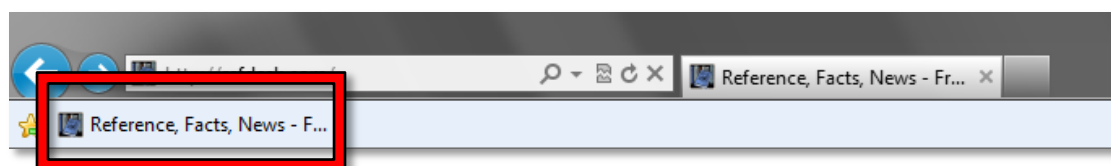


Let's add **Refdesk** to the Favorites Bar. **Remember:** To add a favorite, you must be **looking at that site**.

1. **Make sure** you are looking at the **Refdesk website**.
2. **Point** to the button on the left side of the Favorites Bar and **observe** the **screen tip**. This is the **Add to Favorites Bar button**. **Click** on it.



3. **Note** that you now have a button for **Refdesk** on the Favorites Bar.



4. **Close Internet Explorer**.

Practice

1. **Open Internet Explorer**.
2. **Use** the button on the Favorites Bar to open Refdesk.
3. **Find** the link on Refdesk for **Thought of the Day ARCHIVE** and **click** on it. (Hint- remember, your mouse cursor will change to a **hand** when you are pointing at a link)
4. **Add** this to your favorites folder (Hint – click on the Star and then Add to Favorites)
5. **Close** Internet Explorer.
6. **Open** Internet Explorer.

7. **Open** the **Favorites Center**, **scroll** down to find the link for Refdesk -Thought of the Day and **click** on it.
8. **Notice** that you can save a favorite that goes to a specific page on a website and not merely to the main page.



Good stopping point for Session 1.

Session 1 Review

Before we go into new territory, let's review some of the basics from the last session:

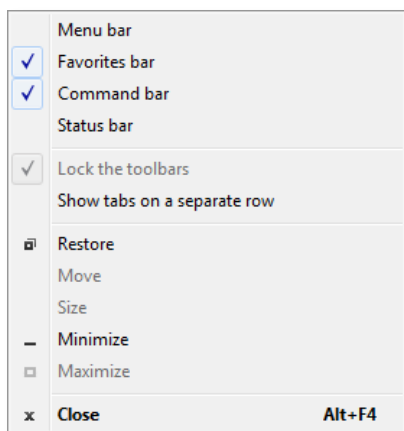
- To be able to view pages on the World Wide Web, we need to open a program called a **web browser**
- **Q:** Can you name the two web browsers that are on the lab computers?
A: Internet Explorer and Firefox
- **Q:** We will be using Internet Explorer (IE). How will we open this program?
A: Double-click on the **Desktop icon** or use the **Start Menu**.
- **Open** Internet Explorer
 - **Q:** What do we call the website that loads when we first open a browser?
A: Home Page
 - **Q:** What is the home page on the Computer Lab's computers?
A: Google.com
 - **Q:** What is a URL?
A: An address for a web site
 - **Q:** Where do you type a URL?
A: Into the **address bar** of the browser
- **Click** into the **address bar** and **go** to **www.refdesk.com**. (#3 on slip)
 - **Q:** How do we get back to the previous website?
A: Back button
- **Use** the **Back button** to **view Google's** website.
- Now **use** the **Forward button** to **return** to Refdesk.

We'll be reviewing more as we go along, but next let's look at a new concept.

Customizing the IE11 Toolbars

We have just been working with the favorites bar but that bar is not visible in IE11 unless we elect it. By default, there are no toolbars visible in IE11. However, they are available if you want them.

1. **Point** to the title bar and **right-click** to view the options available. The menu bar, favorites bar and command bar can be enabled by clicking on those options.



2. Conversely, clicking on an **enabled** toolbar will **disable** it.
3. **Uncheck** Command bar and **note** what happens. The Command bar **disappears**.
4. **Open** the menu again and **check** Command Bar to bring it back.

Pop up blockers

Sometimes when you click a link on a webpage it will automatically open another, usually smaller, window. This new window is referred to as a **pop-up window**. Pop-up windows are traditionally associated with unwanted advertising so most modern web browsers have a built in feature to block them.

Teacher's note:

If the demonstration website is still in existence, then do the "Live Demo" section. Otherwise, show the slide that contains a screenshot of a blocked popup.



Live Demo

Teacher's note:

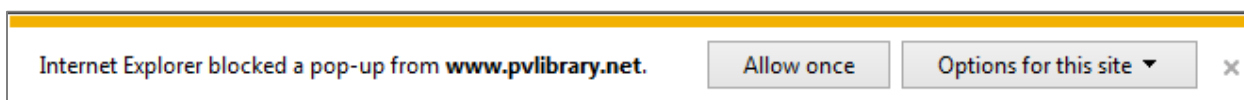
The orange bar at the bottom of the screen will **disappear** after ~20 seconds.

- **Refreshing** the page will make it appear again.
- **Pointing** to it with the mouse will make it stay visible.



1. **Type** pvlibrary.net/popup-demo (**#12 on slip**) in the address bar and **press** .

- Notice** the orange bar at the bottom of the screen. This is telling us that the browser blocked a popup the website was trying to show.



- Point to it with the mouse.** This is to prevent it from disappearing before we are done talking about it.
- Notice** the “Allow once” button. Clicking it will ONLY show the popup that was blocked. All other popups will continue to be blocked.
- Click** the “Options for this site” button and **notice** the menu that appears. If we wanted to turn the popup blocker OFF for this website, we would click on “Options for this site” and then select “Always allow”. This is usually what you want to do if the website makes legitimate use of popups (for example, a banking website or an online course).



Teacher's note:

Make sure they DO NOT click “Always allow”. This will cause the browser tab to close and the popup to open, which means they won't be able to click “Back” to return to Refdesk.



- Click** the browser's **Back** button to return to refdesk

Alternative to Live Demo

Show Slide 19

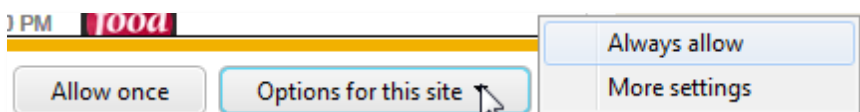


In Internet Explorer 11, a bar that looks like this will appear above the task bar when a pop-up window is blocked.



Sometimes pop-up windows are used legitimately (that is, they actually contain content you are trying to reach, for example a popup from your bank or from an online course you are taking).

If you see the pop-up blocked message and think that you want to see the window that was blocked, you can override the block by clicking one of the options. Unless it is a website you visit frequently, you probably want to click the “Allow Once” option. If it is a site you use often, you can click “Always Allow”, which is available by clicking the “Options for this site” button.



Printing

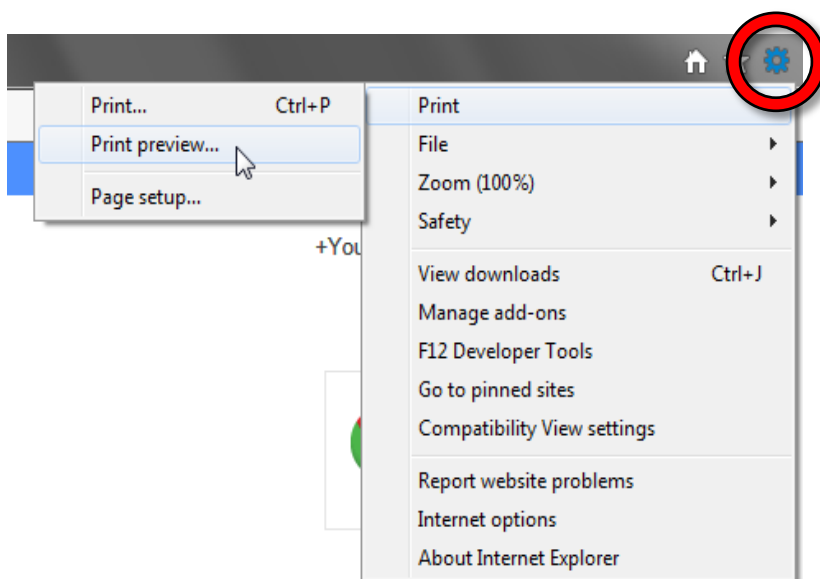
Switch to IE



Oftentimes we want to print what we are viewing to have for long-term or just to read on paper. If you want to print what you are viewing, there are a few things to be careful of. Sometimes the browser doesn't print a webpage exactly as it's seen on the screen. It could end up printing more pages that you expected, or not even printing what you wanted.

Therefore, before you print from the Internet, you should **always perform a print preview** first. This will give you a view of exactly what will be printed and is the best way to avoid unwanted pages and the wasting of costly paper and ink. We will print the page we are currently viewing, **Refdesk's Thought of the Day Archive**.

1. **Make sure** you are on the **Refdesk Thought of the Day Archive** page.
2. When you want to print a webpage, the first thing you should do is look for a "Print" button or icon somewhere on the **webpage itself**. These buttons are often programmed to generate a **printer-friendly version** of the website.
Try to **find** a Print button on the webpage. Can you find one? **Answer: No**
3. Because the webpage doesn't have its own print functionality, we will have to use the **web browser's** print functionality. Access the print options by **clicking** on the **browser control button** shaped like a **gear**.
4. **Hover** over the **Print** menu item and a **flyaway menu** will appear with the Print preview command. **Click** on **Print preview**.



5. The webpage will open in a **Print Preview window**. (If RefDesk doesn't load into Print Preview, refresh the RefDesk webpage then try again—an advertisement may be causing the Print Preview to load slowly).

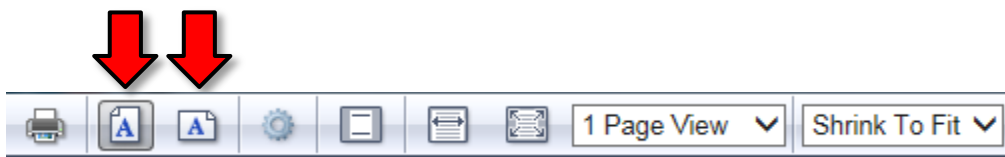
6. The bottom center of the window will tell you how many pages will print. Clicking on the arrows will allow a view of each page so you can choose the pages you want to print. **Click** the **Next Page arrow** and **look at** each page.



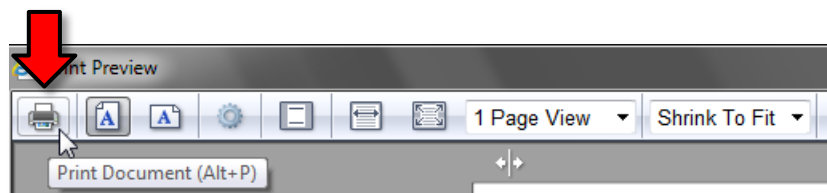
7. **Notice** how the last page hardly has anything on it. We might want to **exclude** this page from our final printout.
8. You can also make the text on the printout **larger** or **smaller** using the **Change Print Size** dropdown list at the top of the screen. Its default setting is "Shrink to Fit".

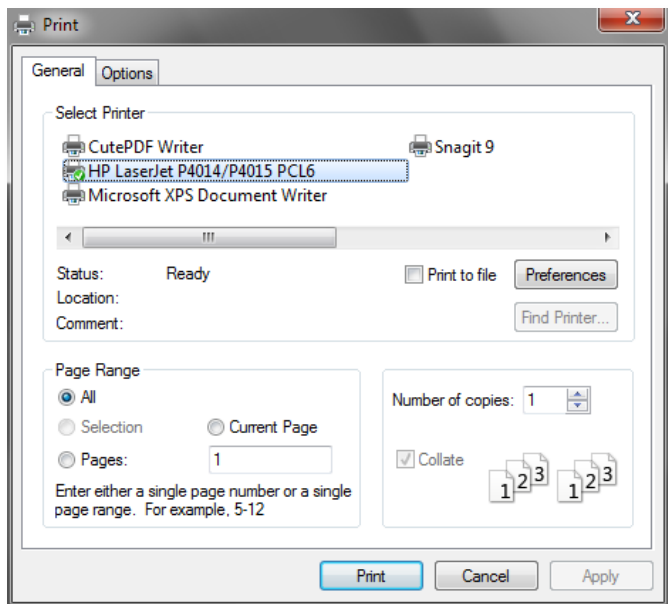


- Select** "70%" from the dropdown list.
Notice how the text is **smaller**.
Notice how there is a total of **3 pages** now, instead of 4.
 - Select** "125%" from the dropdown list.
Notice how the text is **larger**.
Notice how there is a total of **5 pages**, instead of 4.
 - Change** the setting back to "**Shrink To Fit**". This setting works well for most webpages.
9. You can also change the **orientation** of the page using the buttons in the toolbar. The default orientation is **portrait**.



10. Once everything looks the way you want, and you've determined what pages you want to print, **click** the **Print Document button** in the toolbar.



11. The **Print dialog box** will appear.

- a. **Select Printer:** Allows you to choose the printer you want to print to.
 - i. At home, you probably only have 1 printer, but in an office environment, you might have more.
 - ii. Some “printers” are not actual printers, but programs that save your printout to a file. “CutePDF Writer” is one such printer in the Computer Lab.
- b. **Page Range:** Allows you to choose the pages you want to print.
 - i. Note that, even though there is a “1” in the “Pages” textbox, by default **All** the pages will print (because the “All” radio button is selected).
 - ii. To print only certain pages of a document, click in the **Pages** radio button in the Page Range section, and type the **page numbers** you want to print.
 - To print an individual page, type the page number. For example: “4”.
 - To print a range of pages, type the first page, followed by a dash, followed by the last page. For example: “2-4”
 - IE cannot print multiple non-consecutive pages (for example: “1,3,6”). Must print one page at a time instead.
 - iii. The **Current Page** option will print whatever page you are seeing in the Print Preview.
- c. **Number of copies:** Allows you to print multiple copies of your printout.
- d. Finally, you would normally click the Print button, but we are not actually going to print this out. When you click **Print**, the Print Preview window closes and you are returned to the webpage. If you decide not to print, you would click **Cancel**. If you cancel you must close the Print Preview window.

12. **Click Cancel** to close the Print dialogue box.
13. **Click the close button** in the upper-right corner of the screen to close the **Print Preview window** (it may look like we are closing the browser, but we're actually only closing the Print Preview window). This will return us to the web page.



14. **Close IE.**

Safety on the Internet

Show Slide 20



Secure websites

There are times when you will need to share personal information over the web.

- If you are **shopping online**, you will need to input your credit card information.
- A **job application** may ask for all sorts of personal information.
- Your **bank** may ask you to set up a series of security questions with personal information to gain access to your account.
- Doing your **taxes** requires that you enter sensitive information, such as your social security number.

Before sending any sensitive or financial information online, you want to know that you are communicating with a **secure site**. Secure sites make sure that all information you send is **encrypted** so that cybercriminals can't intercept it as it travels across the Internet.

The **https** protocol in the website address and your browser's **security symbol** are two signs that indicate you are on a secure site.

Show Slide 21



Accessing a Secure Website

1. **Open IE.**
2. **Click** into the address bar, **type** **www.wellsfargo.com (#8 on slip)** and **click** the **Go** button.
3. **Look** at the Address Bar. **Notice** how the URL begins with "https" and NOT "http" (without the "s"). If the address is **https** then the information you send to it is **encrypted** and will look like gibberish if intercepted by cybercriminals.
4. Also notice the "padlock" icon in the Address Bar. This is another indication that you are on a secure website.

Switch to IE



Teacher's note:

If the "padlock" icon doesn't appear, refresh the webpage.




Never enter personal information on a non-secure website!

Strong Passwords

Mention Handout 3Show Slide 22

Once you start using the web, you will go to many different sites or services, like email, Facebook, Amazon, your library account, and so on, that will ask you to create an account. These accounts will want you to create a password. If someone guesses your password, they can gain access to your information, so it should be very hard to guess.

Next Slide

The first defense against this is a **strong password**. Websites will often enforce some of these rules to help you choose a strong password (such as length and variety of characters). But there are some rules they cannot enforce (such as being a word from the dictionary). Below are some characteristics of a strong password:


See this article for more password tips:

<http://www.prnewswire.com/news-releases/users-perceptions-of-password-security-do-not-always-match-reality-300266692.html>



Most important:

1. Is significantly different from your other passwords
2. Is at least 8 characters long (the longer, the better)
3. Is NOT a word from the dictionary
4. Is NOT a proper noun (name of person, place, business, etc—**real or fictional!**—for example, “Darth Vader”)
5. Does NOT contain personal information such as your user name, real name, address, or mother’s maiden name.
6. Does NOT contain characters from adjacent keys (e.g. “zxcvb”)

Click to display each bullet

Also important:

7. Does NOT contain professions of love (“ilovedogs”)
8. Does NOT **start** with an uppercase letter or **end** with numbers.
9. Does NOT contain “clever” substitutions for letters or words (“@” instead of “a”, “4” instead of “for”)

10. Mix of different types of characters, though this does not always increase the strength of your password. For example, “rosebud16” is less secure than “rosebudgu”

Category	Examples
Uppercase letters	A B C
Lowercase letters	a b c
Numbers	1 2 3
Special characters	# % - (space)

11. Passwords are **case-sensitive**. For example, it treats an upper-case “A” and a lower-case “a” as **completely different letters**.

You should try to make your password easy to remember. But note that, the more random a password is, the more secure it is.



- **rOsEs21forEver** (“roses forever”)
- **giraffeEats75diced*peArs** (4 random words from the dictionary formed into a sentence with capitals, numbers & symbols “giraffe eats 75 diced pears”)
- **there are 100 speCies of roses** (passwords don’t have to be words—they can be phrases)
- **qaH5RbM1ib** (random letters and numbers)

Here are some examples of very bad passwords.

Can you tell me why they are bad?

1. **elephant** (single word from the dictionary)
2. **f8#Za** (too short)
3. **1qaz2wsx** (adjacent keys)
4. **ilovemusic64** (profession of love, ends in numbers)
5. **\$uperm@n** (proper noun, “clever” substitutions)
6. **BillClinton** (proper noun, starts with capital letter)
7. **4-13-1970** (birthdate, personal info)
8. **143-maple-ln** (address, personal info)

What if I forget my password?

Most websites provide an option for resetting your password via email, so it’s not the end of the world if you forget a password. However, as a consequence, it is very important that you **never forget your email password**. Think of your email account as your “**Internet passport**”—it essentially acts as your online ID card.



If you forget the password to your email account, there are still ways to reset it. Most email services allow you to enter the following information to help you gain access your email account, should you forget your password:



- A cell phone number
- An alternate email address
- One or more security questions (like “Name of my first pet”).

Of course, you must enter this information into your account **before** you lose your password. If you haven’t entered any of this information and you’ve lost your email password, you’re pretty much out of luck!

2-Factor Authentication



Security is always a concern with passwords, and hackers are constantly finding new ways to steal passwords and other personal information. In an effort to fight this problem, many websites have introduced a new layer of security to verify it’s really you.

Sometimes when you log into your e-mail or bank website, you’ll be prompted to set up this extra layer of security. We recommend you always set this up, as it helps keep your information safe.

This method, often called 2-Factor or Multi-Factor Authentication, combines your password with a unique code that can be texted, sent to your primary (or an alternate) e-mail address, or even communicated to you with an automated phone call.

It works by first logging in with your normal username and password. Then you’ll see an extra screen asking for the security code. This code will be sent to your mobile phone via text message, email, or automated call. Once you enter the security code on the website, you’ll be logged in.

Can I write my passwords down?

Yes. In fact, we recommend it. But be sure to store your list in a safe place. And it’s best not to carry the list around with you in case you lose it.



Other ways to store your passwords:

- Use a **password storage program** like KeePass. They store all your passwords in a file on your home computer. These programs encrypt all your passwords with a single, master password, so there’s no way to view your passwords without first entering the master password. The downside is—if you forget the master password, you’re out of luck! They also can generate random, secure passwords for you.
- Store your password list in a **secure cloud service**, like Google Drive or Dropbox. The benefit to this approach is that you can access you password list from anywhere. But make sure the password to your cloud account is secure so nobody can break in!

Scams

Phishing

Show Slide 31



Phishing is a technique used by scammers to steal your personal information. They will send you an email that looks like it is coming from a legitimate organization, like your bank. The emails tell you to click a link, which takes you to a website that might look like your bank's website, but is NOT your bank's website. The website will then ask you for your personal information, such as your name, social security number, or your username and password.

Watch video: <https://www.commoncraft.com/video/phishing-scams>

Show Slides 32 - 34



Teacher: Show examples of phishing emails

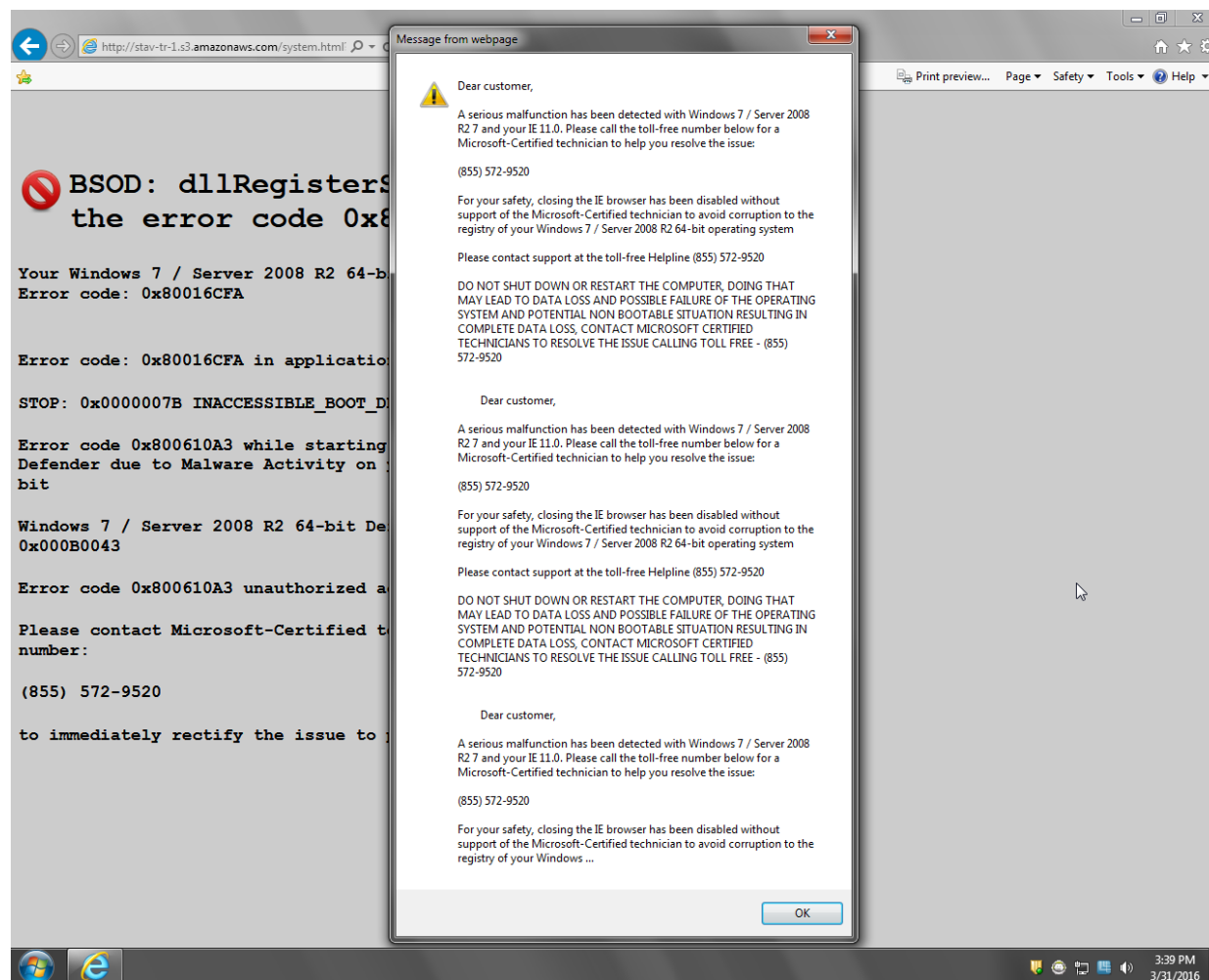
Phony Error Messages

Show Slide 35



Just like in real life, there are people on the internet who want to make a quick buck off you. A scam that has been circulating recently is one that tells you there is something wrong with your computer, and that you have to call a phone number to fix it. Never call this phone number! When they ask you to call a phone number, this is a sign that it is a scam.

One of our volunteers fell for a scam like this. They charged her credit card \$550 and installed phony anti-virus software on her computer. With help from her bank and her anti-virus company, she got her money back and got her computer back to normal.



Phony Websites

Sometimes, you will end up on a website that claims to offer a ridiculously good product and appears to be from a legitimate organization. The website below claims to offer a dietary supplement that builds your muscles without you even needing to exercise.

Show Slides 36 - 38

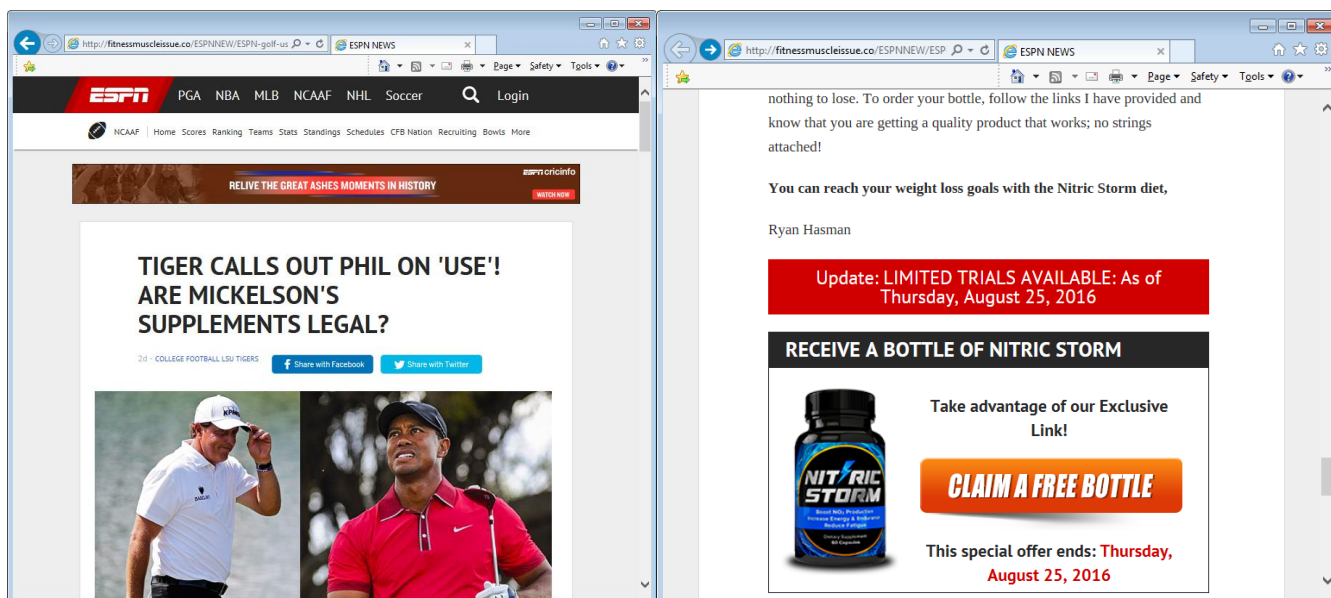


The website can be found at:

<http://goo.gl/KYHS3p>



Looking at the website header, we appear to be on ESPN's website (a respected sports magazine). Plus, the article is written to sound like an ESPN journalist is reviewing the product, making it seem more legitimate.



But look at the Address Bar. Do you see “espn.com” anywhere? Looking at the URL in the Address Bar is a good way of telling if a website is phony or not.



This advice also applies to government-related websites—if the domain name doesn't end in “.gov”, then that's a sign you might not be in the right place.

And just remember the age-old saying, “If it sounds too good to be true, it probably is!”

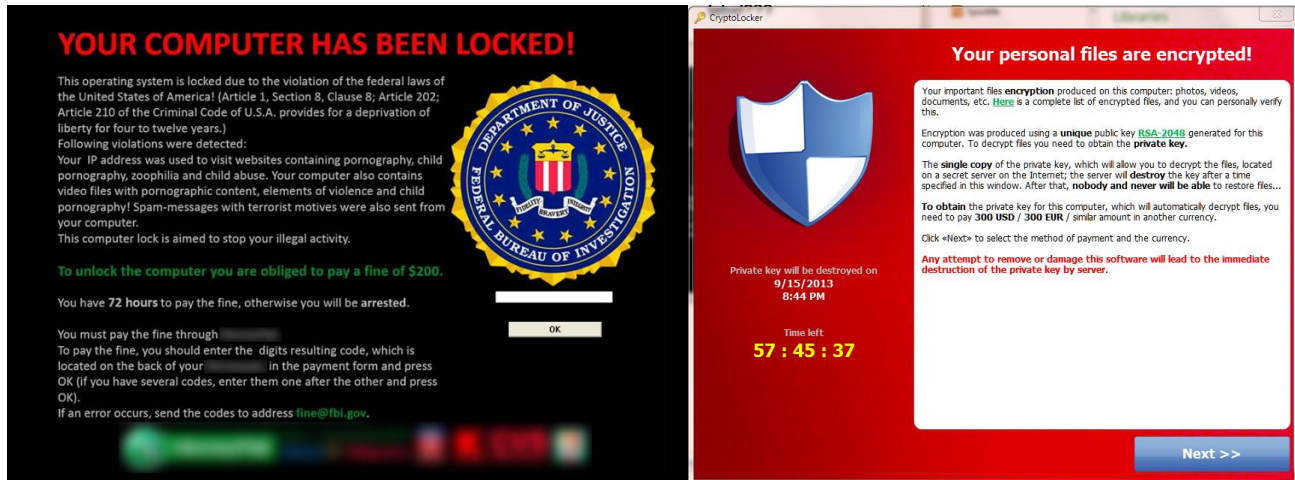
Ransomware

Show Slides 39 - 41



The word “ransomware” is a play on words—it combines the words “ransom” and “software”. Ransomware is a kind of virus that uses modern encryption technology to lock you out of the files on your computer. The only way to unlock them is to pay money, typically around \$500.

Anti-virus programs can remove some types of ransomware, but not all. Because of the way encryption technology works, the only way to get your files back is to obtain the master password, which only the scammers have.



How to protect against ransomware:

- Avoid downloading suspicious email attachments. This is the most common way ransomware spreads.
- Backup your data regularly.
- Unplug flash drives and external hard drives as soon as you are done using them. If external storage is connected to your computer at the time of infection, those storage devices will be infected too.
- Have anti-virus software installed on your computer.
- Avoid clicking links in suspicious emails.
- Avoid clicking on banner advertisements on websites.

Show Slide 42



See this article for information on ransomware:

tinyurl.com/je9yzf7

#13 on slip



Tip: If you’ve been a victim to any of these scams, file a complaint with the FBI’s **Internet Crime Complaint Center (IC3)**:

www.ic3.gov #14 on slip



Show Slide 43



Searching for Information on the Internet

Show Slide 44



There is a lot of information on the Web. According to <http://www.worldwidewebsite.com/> the Indexed Web contains **at least 4.46 billion pages** as of 5/8/2017. Regardless of exactly how many pages there are...a lot of stuff is available! Good and bad, reliable and not. So how do you find what you are looking for?

Search Engines

Show Slides 45 - 46



This is where Search Engines come in handy. Search Engines work by using thousands of clustered computers to download essentially **every** web page on the Internet. They use computer programs called **crawlers** (aka “spiders” or “bots”) to do this.

It’s a complex process and the owners of search engines are often secretive about the inner workings of their software—especially how it decides which pages are the most relevant to a particular search and therefore should appear at the top of the list of results. This is called the search **algorithm**. The word “algorithm” refers to the **logic** a computer uses to perform a specific task.







Being highly ranked is so important to businesses that there is an **entire industry** focused on how to design websites to make them appear at the top of search results—it’s called **Search Engine Optimization** or SEO.

Search engines do not find everything though, and each search engine will find somewhat different results. But they are usually very good at finding what you want if you remember some general searching tips.

Top Search Engines (www.alexa.com/topsites - 1/23/2017)

Show Slide 47



1		Google: The most popular, by far.
2		Baidu: A Chinese search engine. Contains mostly Chinese-language websites.
3		Yahoo!: The third most popular.
4		Bing: A search engine created by Microsoft.
5		Ask: The fifth most popular.
*		DuckDuckGo: Takes privacy very seriously. Most search engines track the searches you perform in order to improve accuracy and increase ad revenues. DuckDuckGo does not track anything. Downside: Search results are probably not as good because they are a small company and don’t have the infrastructure that Google has.

Searching Tips

- Imagine what words would likely appear on the pages you are looking for.
 - For example, instead of searching for *my head hurts* search for *headache*
- Start with only a few words and make them the most meaningful that you can think of.
- If you do not get useful results, add alternate keywords and phrases that describe your topic. For example, use “migraine” instead of “headache”
- You can also try using a different search engine if you are not getting useful results.
- Be careful when looking for words with multiple meanings. Add words to help the search engine know what you are looking for. For example:
 - *penguins animal vs. Pittsburgh penguins*
 - *turkey the country vs. turkey the animal vs. turkey the food*

A Simple Search

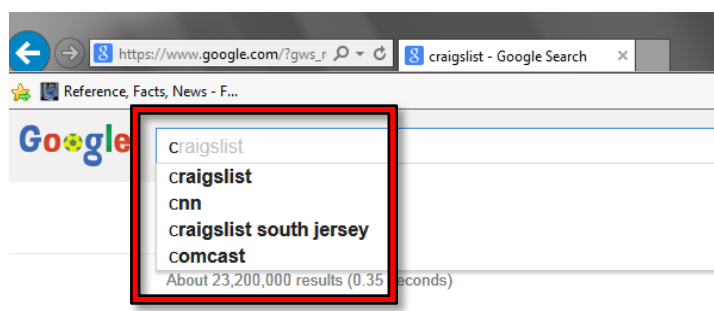


Let's use Google to do a simple search and examine the results.

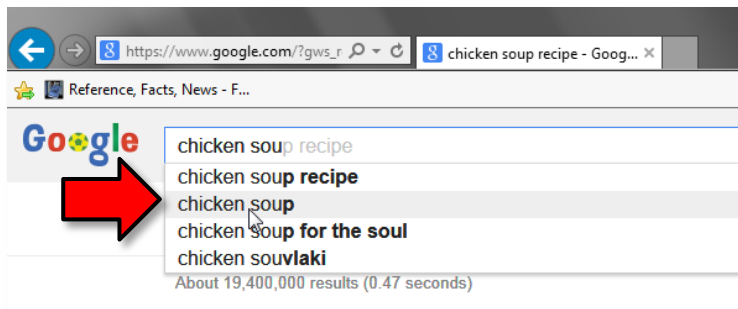
1. **Use** the **home button** to return to **Google**. **Notice** that the insertion point is already blinking in the search bar. We are going to do a search for **chicken soup**.



2. To start, just **type** a **C** and **watch** what happens. **Notice** the search bar **relocates** and a list of suggestions starts to appear beneath.




- Continue typing** “chicken soup” until you see a suggestion that says “chicken soup”. **Remember**, we want the computer to do as much work for us as possible so to save ourselves from some typing.
- Click** on the suggestion that says “chicken soup” to **commit** the search.




Even though Google performs searches as you type, it's best to **commit** your search before clicking on any of the search results.

There are three ways to commit a search:

- Clicking on a suggested search query
- Pressing **Enter** on the keyboard
- Clicking the “Search” button 

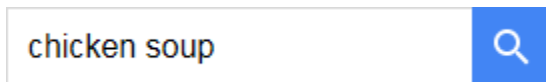


The Search Results Page

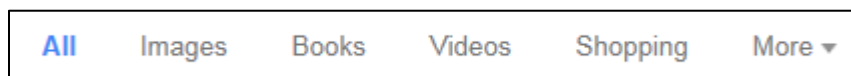
Mention Handout 4 

Let's start at the top and work our way down.

- Search query:** At the very top is a textbox that contains your search query. You can use this textbox to refine your query (we will demonstrate this shortly).



- Search Categories:** You can narrow your search by searching for particular types of resources, such as pictures or videos. By default, “All” is selected, which means that Google will search websites.



- Statistics:** Displays the total number results Google found, along with how long it took for Google to perform the search. Note that the total is an estimate, not an exact number.

About 3,900,000 results (0.48 seconds)

Teacher's note:

The next couple items may not appear on the webpage in the same exact order that they appear in the lesson plan.



4. **Advertisement:** Google often places advertisements inside of the search results, usually at the top and/or bottom of the page. They look very much like regular search results and are even related to your search term. You can identify an advertisement by looking for a **green "Ad" icon**.



5. **Knowledge panel:** We also have a knowledge panel near the top of our search results. It contains a generic recipe for chicken soup, along with a link to the website where it got the information.



- Knowledge panels contain general information about the topic you are searching for. Not all searches will display a knowledge panel.
 - Google gets this information from a website on the internet that it has deemed a reliable source of information about the topic you're searching for.
 - If this information is important to you, **do not rely on it!** Always back up your research with information from **other sources**.
6. **Side knowledge panel:** We have another knowledge panel on the right-hand side of the page. It contains various **photos** of chicken soup, along with a **definition** and **nutrition facts**, almost like what you'd find in an **encyclopedia**. Again, if this information is important to you, always back up your research with information from other sources.



Refining a Search

Most of our search results are about chicken soup **recipes**. Let's **refine** our search and search for chicken soup **books**.

1. **Click** into the search box at the top of the page (remember: your insertion will go to whatever point you click).
2. **Click** after the word "soup", **press** the Space Bar and **type** the word **book**.
3. Commit your search by **clicking** the **Search** button or **pressing** Enter.
4. **Note** how your results change. **Change** your search again by adding the word "Mexican" before the word "chicken".

Opening a Search Result

1. **Look** at your **results list** and **choose** one you would like to visit.
2. **Click** on the title to go to the website.
3. **Use** the **Back button** to return to your results page.
4. **Notice** that the title of the page you just visited has changed color. This helps you keep track of links you have previously followed.

Tip: Instead of clicking on a search result, try opening a search result in a new tab instead. This allows you to keep your search results "open" while you visit each one of the search results.



A Final Tip about Browsers

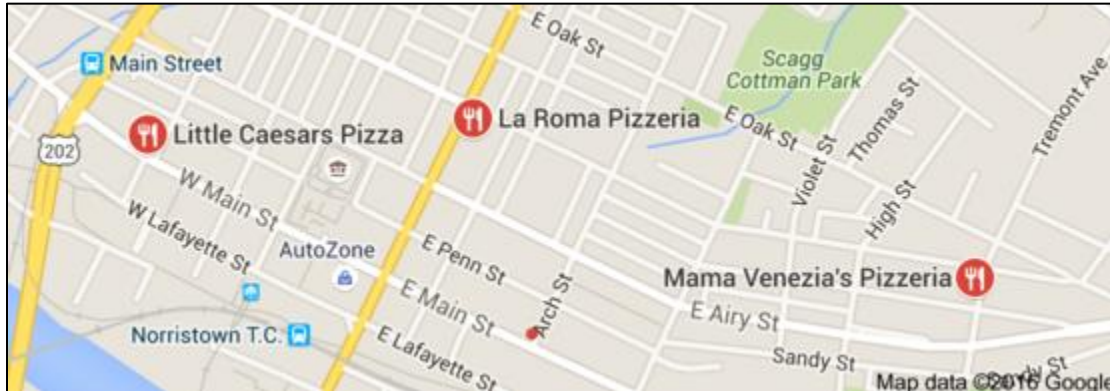
To start our search, we typed into the search box on the Google page. However, we could have simply **typed** our search term into the **address bar** of the browser. In IE11, as in most other browsers, the address bar is also a search bar. The default search engine in IE is Bing but, in the computer lab, we have changed it to Google. We could have started our search by typing "chicken soup" in the address bar and then clicking the go to button.

- **Close** IE

Practice

1. **Open** IE.
2. **Click** into the address bar, **type** the word **pizza**, and **click** the **Go** button.

3. **Notice** the map that appears. **What is this a map of? Norristown.** Google is able to determine our general location and is providing us search results specific to our location. This is either cool or creepy, depending on your perspective!



4. Let's make our search a little more specific:
 - a. **Click** after the word pizza in the Google search bar.
 - b. **Press** the Space Bar on the keyboard.
 - c. **Type** 19401.
 - d. **Click** the search button.
5. **Try** another search
 - a. See if you can find when and where the next **summer Olympics** will be held.
 - b. Think about what your search terms should be?

Improve Your Search Experience

Mention Handout 5

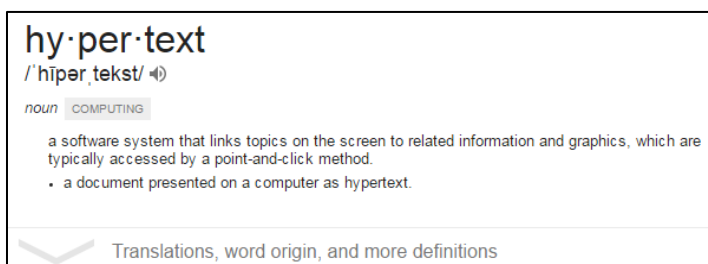
In addition to providing easy access to billions of web pages, Google has many special features to help you to find exactly what you're looking for. Some of the most popular features are listed on your handout for this lesson.

1. **Open** a new tab and **go** to **www.google.com**. (#10 on slip)
2. Try typing the following search queries into the Google search box:

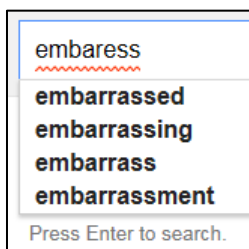
- **time Tokyo:** Get the local time of anywhere in the world.



- **define hypertext:** Get a dictionary definition of any word.

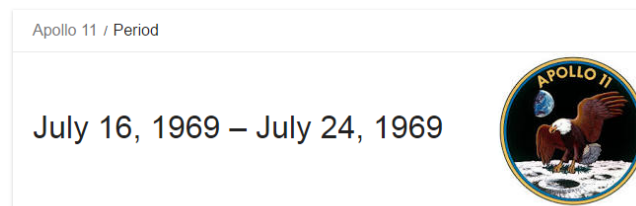


- **embaress:** Use Google as a spell checker. The correct spelling of the word will often appear in the suggestion list.



3. You can also use Google to give you answers to **specific questions** (instead of having to visit a website to find the answer). These are called **knowledge panels**. Note that Google is not always clear about where it got this information, so if the information is important to you, always back up your research with data from **other sources**. Simply **type** your question into the search box. For example:

- where was George Washington born
- when was the first moon landing



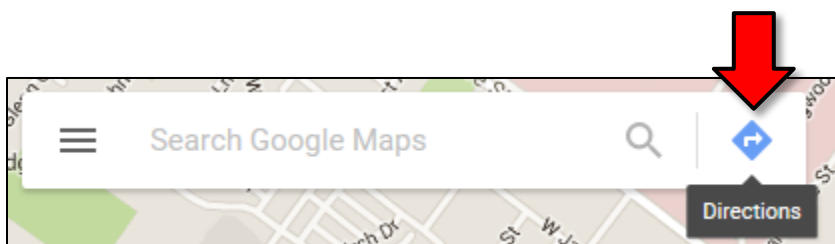
Finding directions

There are three popular sites that you can use to search for directions:

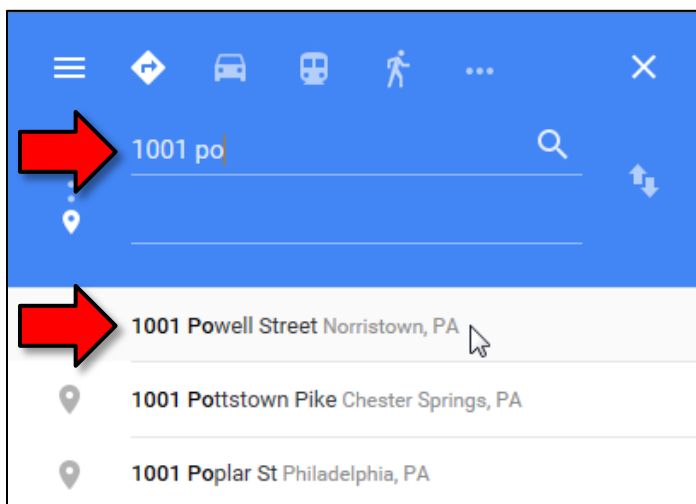
Mapquest www.mapquest.com	This site was the first mapping website to come out years ago.
Google Maps maps.google.com	This site is excellent not just for driving directions, but for simply exploring a place.
Yahoo! Maps maps.yahoo.com/beta	This site works very similarly to Google's map site.

We will use **Google Maps** to find directions from the Library to "Facenda Whitaker Bowling Alley".

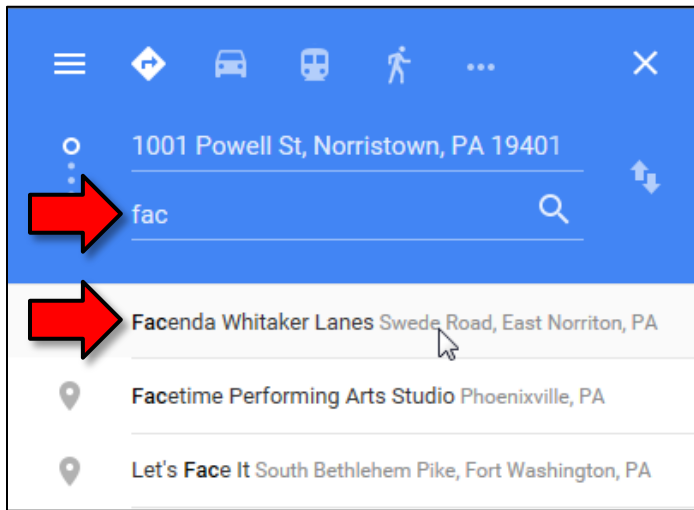
1. In the address bar, **type maps.google.com**. (#9 on slip)
2. **Point** to the middle of the map and **click and drag** in any direction. This is how you **move around** the map.
3. **Roll** the mouse's scroll wheel **away** from you. This is how you **zoom in**.
Roll the scroll wheel **toward** you. This is how you **zoom out**.
4. **Click** "Directions".



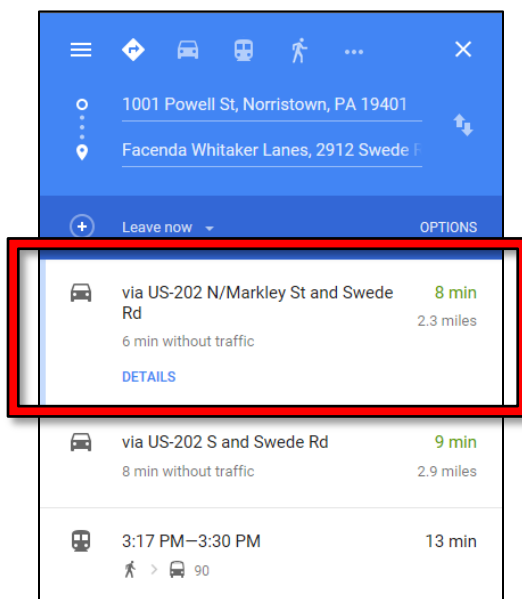
5. In top text box, **start typing** the library's address, **1001 Powell St, Norristown, PA** (#1 on bottom of slip), but continue to **watch** the computer screen as you type for the autocomplete list. As soon as you see the correct choice, **click** on it.



6. In the bottom text box, **start typing Facenda Whitaker (#2 on bottom of slip)** and **use** the autocomplete list to complete the entry.



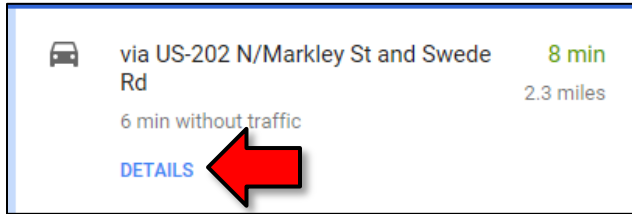
7. Once both addresses are in place, route options will appear below. The top option usually is the fastest.



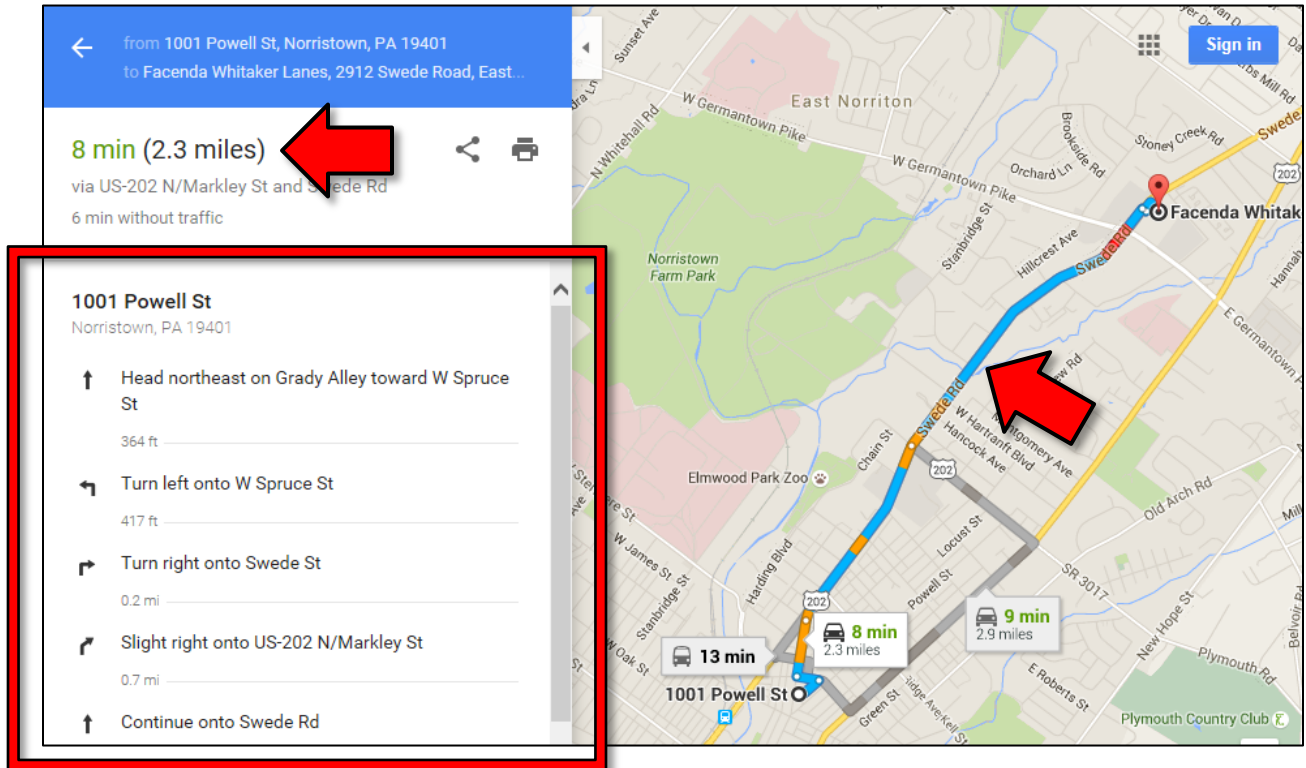
Tip: By default, Google Maps will usually give you driving directions. But you can also get **public transit** directions and even **walking** directions by clicking the appropriate icons at the top.



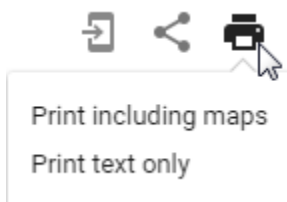
8. To see turn-by-turn directions for a route, **click** “Details”.



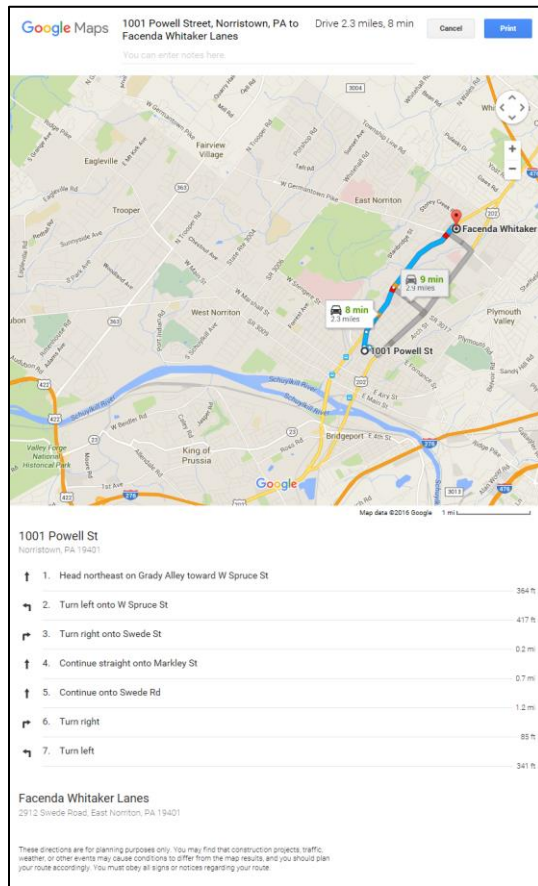
9. **Notice** how the step-by-step **directions** appear on the left, along with a map of the **travel route** on the right. **Also notice** that the **estimated travel time** and **total distance** is displayed at the top.



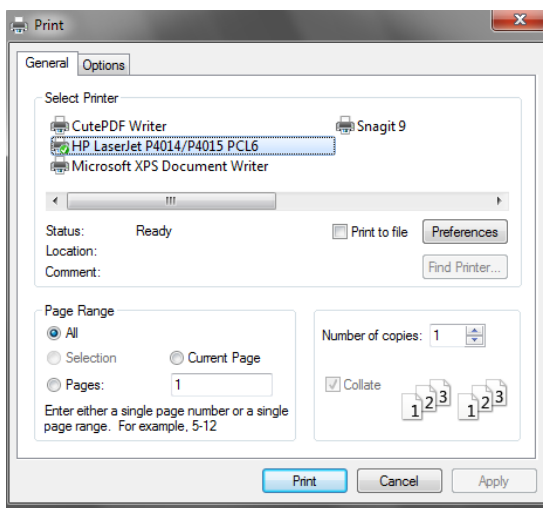
10. If you would like to get a printout, be sure to use the print button embedded on the page. **Click** the **print button**. An options drop down appears, allowing you to choose to include the map or print the text only.



11. **Click “Print including maps”**. A page is displayed that gives you an idea of what you are printing. A map is at the top and the directions are at the bottom.



12. **Click** the blue **“Print”** button in the top-right corner. This launches the print dialog box without giving you the option of print preview. We at the Computer Lab consider this a serious deficiency, because you don’t know what your print will look like!



13. Since we don’t want to print, **click Cancel**.
14. **Close IE**.

Narrowing Web Searches (supplemental)

Here are a few tricks that occasionally come in handy when you want to search for something very specific.

Phrase Search

When you type multiple words into a search query, what it's actually doing is searching for webpages that contain all of the words that you've typed **somewhere** within the page—the words do NOT have to appear together. When you want to search for a specific *phrase*, like a quote, enclose the search term in double quotes (teachers often use this technique to look for plagiarism).

Example:

"The Internet, referring to the specific global system of interconnected IP networks, is a proper noun and written with an initial capital letter."



Site Search

This technique will search one specific site on the Internet, instead of the entire Internet.

1. **Type** "site:www.cnn.com olympics" into the search field.
2. **Notice** how we are not getting search suggestions as we type. This is because we are doing an advanced search.
3. **Commit** the search query by pressing or clicking the blue button.

Exclude Search Terms

You can exclude pages that contain a search term by putting a hyphen before it.

Let's search for a **book** called "Rolling Stones" using this technique.

1. **Type** "rolling stones" into the search field and **commit** the search.
2. **Notice** how most search results are about the **band** or the **magazine**.
3. Let's exclude the keyword "music" from our search.
 - a. **Click** into the search box.
 - b. **Type** "<space> -music". **Commit** the search.
4. What other keywords can we exclude? Keep excluding terms until you get a search result about a book. Examples: magazine, band, rock

Tip: Exclude a **website** from a search:

`-site:www.cnn.com olympics`

Tip: Exclude a **phrase** from a search:

`rock and roll -"the rolling stones"`

Working with Fillable PDF Files (supplemental)

The scenario: We lost our vehicle registration card so we need to learn how to get a replacement. We are going to see if the Pennsylvania Department of Motor Vehicles can make it easy for us online.

1. **Open** Internet Explorer.
2. In the address bar **type Pennsylvania** and look at the Google suggestions list that drops down. For many states, the DMV will automatically populate this list, as will "lottery".
3. **Click** on the suggestion and **examine** the results list. Which one looks like the official website?
Beware of imitators.
4. **Examine** the offerings on the homepage of official site to determine the likeliest location for our need - Most Requested Forms/Publications
5. **Read** the publication names and note that **MV-44** is the correct document.
6. **Point** to the link to the file and use the URL screen tip above the task bar to note the document is in the .pdf format. What does this mean?
PDF is a file format that requires software to open it. The software, made by Adobe, is free and easy to download. You might want to check your programs menu first to see if it already on your computer. Bottom line, if you click on the file and it opens, you have Adobe Reader already, or at least an Adobe Reader **plug-in**.



What is a plug-in?

A plug-in is an add-on to a web browser that enhances functionality. Some browsers may come with certain plug-ins already installed. Adobe Reader is a very common and popular plug-in. Plug-ins may not contain all the features of a full program but for many uses, they are sufficient.

7. **Click** on the file link and the file will open in a new tab or a new window. The file is opened within the browser but note that it comes with its own toolbar with tools such as "Print" and "Save".
8. **Note** the file is able to be filled out. This is something that is usually called out somewhere near the top of the document, but the different appearance of the fields can also be an indication.
9. Filling out this form is different than filling out an online form. Information entered into an online form is typically able to be submitted electronically, whereas fillable pdf files are meant to be printed or saved to storage media or both.
10. **Enter** some numbers into the Title number and VIN fields.
11. **Locate** the print button and **click** it. Note the content in those first two fields.
12. **Cancel** the print dialogue.

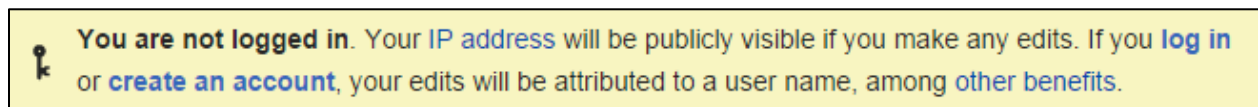
13. Saving the filled-in form:

- a. When you have gone to a lot of trouble filling in a form, it might be wise to save the form electronically, in case the printed version becomes lost or mishandled. If it has been saved you have the option of printing it again if needed.
- b. **Press** the save button and a **Save As dialogue box** will appear. You will need to choose a location to save your file to. In the case of the computer lab, files can be saved to the **Temporary Patron Drive**. **Click** on **Temporary Patron Drive** on the left side of the dialogue.

Using Wikipedia (supplemental)

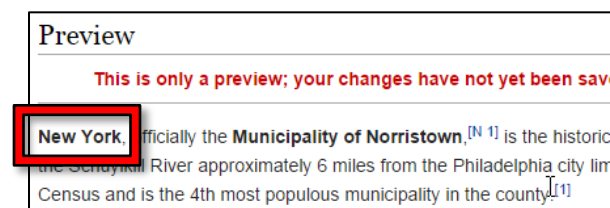
Wikipedia is a **user-contributed encyclopedia**. The articles are written by volunteers around the world. It's fairly easy to create or edit a page on Wikipedia. Because of this, information on the site can be inaccurate or outdated, so care must be taken when using its content. I'm going to show you how you would edit a page.

1. **Go** to en.wikipedia.org (**#11 on slip**) (the "en" stands for "English"—Wikipedia is written in many different languages) and search for "Norristown". A page entitled "Norristown, Pennsylvania" should load.
2. **Click** on the "Edit" link on the top of the page. This will take you a page that allows you to edit the article.
3. **Notice** the yellow banner at the top of the page. It warns us that we are not logged in. Many articles on Wikipedia can be edited without creating a Wikipedia account. Some of the more popular articles *require* a user account to edit them in order to prevent vandalism.



4. **Note** the large textbox in the middle of the page. This contains the article's content. It uses what's called a **markup language** to do things like make text bold or insert images. The markup you are looking at now is used to define a sidebar that contains statistical information about Norristown.
5. **Scroll down** until you see the text below. This is the beginning of the actual article content.


```
'''Norristown''', officially the '''Municipality of Norristown'''
```
6. **Change** the words "Norristown" to "New York".
7. **Scroll down** to the bottom of the page.
8. **Note** the "Edit Summary" textbox. This is where you would type a short description of your changes. This will be logged to the article's History for everyone to see.
9. Now, **click** the "Show preview" button. Do **NOT** click the "Save page" button. That button will actually save our changes and make them visible on the page. We do not want to do this because it is inaccurate information.
10. After a few second's a preview of the page will load, and you will see a preview of your changes.



Working with Internet Forms (supplemental)

Many websites will ask you to **create an account** in order to use their full functionality. This will usually require to you create a username to login with and a password. Depending on the site they may also ask for other information such as your real name, address, and payment information. Be mindful of what type of information you give to sites.

The computer lab has created a form to give you practice in some of the elements you may find on an online form. The form is available on the Class Resources page under the “Internet” class section. It’s called “Optional Form Exercise.

<http://www.mc-npl.org/class-resources>

Evaluating the Reliability of Website Content (supplemental)

With so much information so readily available, **how do we know what information is reliable and accurate and what is not?**

Sometimes it is not all that important where information comes from; if you are trying to remember the names of the seven dwarfs in Snow White, you might not care whether the information comes from the Disney web site, Wikipedia or some other trivia site. However if you are doing a research paper on the history of animated fairy tales, then you will need to make sure you get the information from a reliable source. If you are looking for medical information, help with your taxes or a job application, you definitely want reliable information. Where the information comes from will matter!

When it comes to evaluating information on a web site, use the same deductive reasoning skills you use in evaluating other information like you find in magazines, newspapers, TV ads, or political debates. Do not be intimidated just because it is on the web.

When you look at a web site, here are some things to consider:

- **Who produced the site?**
 - Look at the URL. Is it from a government agency (.gov) or an educational institution (.edu), which should be more credible than a business or individual's web site? Anyone can get a .com, .org or .net domain and sometimes pretend to give you reliable information when actually they only want to sell you something.
 - Is there an "about" or "contact" page that identifies who created the website and why? If the web site does not tell you who created it, then you have no way of judging if the person (or organization) is knowledgeable about the topic.
- **Is the information believable?** If you find a site selling a product that will make you feel 30 years younger, is that really believable? Something that is too good to be true probably is not true.
- **Is the information up to date?** Look for a date on the web site (often at the bottom of the page). Depending on your topic, you may want information that was created in the last year or even the last few days. Note that some search engines will allow you to narrow your search results by date.
- **Can you find the same information in multiple places (and from multiple sources)?** If not, then question the information more closely. On the other hand, don't necessarily believe something just because you find it in many places, it might just have been repeated incorrectly.