**Search Engine Smarts**

**PREP WORK:**

* Read handouts on Search Engine Smarts
* Get to library early to test for technology failures
* Make you have enough copies of the handouts and the feedback forms

\*\*\*The library will print handouts for us.

**OBJECTIVES**

* Understand what a search engine is
* Name and indentify kinds of websites
* Develop search terms
* Practice Performing a search
* Evaluate sources/identify whether information is reliable
* Save reliable search results

**Before class:** Record attendance, make sure there are enough handouts for class, make sure you have feedback forms for the end of the course, check computers to make sure they are on and ready to use.

**LESSON OUTLINE**

1. **Introduction:**
* Introduce instructor, students, goals for the class
* Let students know they can take phone calls, but remind that to put phones on vibrate and answer them outside of class
* Inform students, they can leave for the restroom anytime—No need to ask
* Show/tell the class timeline to students
* Icebreaker Question: What is your experience with search engines? What is a search engine used for?

**II. What is a Search Engine?**

* **Search engines** are specialized websites that can help you find what you're looking for. They work by using algorithms (complex math equations) to comb through the internet and offer results based on keywords you’ve entered. You've probably heard of some of the most popular ones—including **Google**, **Yahoo!**, and **Bing**—even if you've never used them.
* With these three search engines in mind, you may be wondering, "What's the difference?" They all have access to the same **information** (i.e., the contents of the Internet), so they should return the same **results**, right? Not necessarily. Different search engines can yield different search results. **Google** is the most popular search engine because it's the most effective at finding what you're looking for.

**III. What kinds of information can found on the internet, and where can I find it?**

* Companies selling products, Organizations, News information, Wiki, Educational/School, Scholarly, Blogs, Databases, Social Services
* **Activity:** What’s the difference between a .com, .org, and .edu website? What kinds of information can be found on these different types of websites?

*Note: You’re welcome to use the websites below as examples, or find your own.*

Amazon.com, https://chapelhillpubliclibrary.org/, https://carnegiescience.edu/about

**IV. Developing Search Terms**

* **Search terms:** Search terms are words typed into a search engine to find results that are related to what you are looking for. For example, if you would like to adopt a cat, “cat” might become one of your search terms because this is the kind of pet you are looking for.
* Offer an example of a good search terms, verses search terms that are not helpful. For example, “Where can I get a pet” or “pet” or “Cat” likely will not be search terms that will let you find a cat to adopt in your local area.
* Search terms need to be specific to find good results. Search engines will have too many “options” with long questions, and not enough information with too few words. For example how many times does the word “the” likely appear online? This word is likely not a search term that would be useful.

**Activity:** *Developing Good Search Terms*

Imagine you and your family have just moved to Chapel Hill. You’re family has decided to adopt a cat, but you do not know where to go to adopt your pet because you have just moved to the area.

* Step 1: Creating Search Terms: What search terms could you use to look for a place to adopt your pet?

Here are some examples they might come up with:

Adoption agency

Shelter

Humane society

Rescue

\*\*\*Note, it can be good to let students see that they might need to include the word “cat” in their search to find effective results. If a student simply types in shelter, they might find an organization that helps people who are homeless, rather than an organization that helps pets find homes. This can be a useful thing to let students figure out so they know how many search terms they might include.

For example, it might be most useful to include three search terms in a Google search for a pet cat such as “Cat”, “Rescue”, and the name of a city. For example, Cat, Rescue, Chapel Hill, if you want to find a cat shelter in Chapel Hill.

* Step 2: Using our search terms: Now that you have composed a list of search terms, let’s type the terms into Google. What are your results?

Here are some answers that you **might** have gotten:

Orange County Animal Services

Animal Protection Society

Independent Animal Rescue

V. **Understanding Our Research Results and Evaluating Sources**

* How might we decide which of these search results are useful? In other words, from the choices you’ve found, where would you find your cat and why?
* On what criteria should we evaluate these sites?

Possible answers & ways to evaluate the value of your source:

* The number reviews or lack of reviews demonstrates credibility
* The location of the shelter to your home
* Whether or not the shelter has cats
* Are you interested in a taking a pet from a shelter where animals might be killed, or will you only go to a no kill shelter?
* Is the website up to date?
* Are these non-profits or do these organizations hope to make money from selling animals?

**VII. More Practice with Search Engines:**

Activity Two: Answering Questions with Google

Let’s try a second search just for practice. Let’s image that you are out with your family at barbeque for the 4th of July and the sports fanatics start to talk. They can’t remember the details of a football sports club. Here’s the question that Uncle Ahmed asked:

“The club that was established in 1935 to promote safety in the game of American football was named after a player with what nickname?”

\*\**\* Note: This question was taken from Google as a practice question for learning how to use the site.*

Here are the steps I would take to answer this question:

* Step 1: List our search terms. What would our search terms be based on this question?

“American Football Club” “1935” “Safety”

* Step 2: I would use these search terms to figure out the name of the club: Maxwell Football Club. Okay, now that we know what the name of the club is, what could our search terms be?

“Maxwell Football Club” “named after” “Player”

* Step 3: Okay! It looks like I found the answer!

 “The Maxwell Football Club was established in 1935 to promote safety in the game of American football. Named in honor of Robert W. (Tiny) Maxwell”--Wikipedia

* Step 4: But how do I know if this information is reliable?

The answer to the above question was found on Wikipedia. Wikipedia can a reliable source of information, but it can also be site where information is false.

One of the ways, to tell if the information is accurate is to think about what’s called the ABCs of research.

* Authority/Accuracy: Who wrote this information? Is an author listed on the website? Is the author part of an established education institution or other credible organization? Is the information free of spelling and grammatical errors?
* Bias/Benefit: What reasons would the author compose this material? Who does this information benefit? Is the writer giving the reader specific facts? Or is the writer offering only their personal opinion? Is the purpose of this information to sell a product?
* Currency: When was this information published on the web? Does the organization or author update the information? Is there potentially newer information on this subject matter that would offer more facts than presented on this source? Do all the links on the website work? Links that connect you to more information suggest that the website is regularly maintained.

**Test Knowledge:** How do we know this information about Maxell on Wikipedia is true?

Possible Answer:

* There are citations that we can verify. These citations led to the official Maxwell Website

**VII. Organizing your information or how to use the bookmark a page feature.**

* **Organizing Your Search:** Being search savvy isn't just about finding information online. It's also about being able to save and organize the sites you've searched for so you can easily find them later. The simplest way to do this is to **bookmark** a site. Every web browser lets you create bookmarks (sometimes called **favorites**), and they also let you rename and organize your bookmarks. Even though it takes a second to create a bookmark, it can save you time because you won't have to search the Web to find it again.

When it comes to using bookmarks, you may want to create folders for searches you often run in Google. For example, if you look for recipes online, you may want to have a bookmarks folder called “Recipes.” If you like to keep tabs on certain sports teams, you could have a folder dedicated to their websites, ESPN scores, etc.

* **Creating Bookmarks- A Quick Guide**

On page 10 of the student handout, there is a guide to book marking a website. Tell students about this guide and use this packet together for the next activity.

**Activity:** Ask students to create bookmark of the Orange County Animal Services website.

Closing:

* Review what has been covered
* *What final questions do we have about search engines?*
* Thank students for coming and announce the next class and/or direct them to schedule on the CWS website

Adapted from the Denver Public Library and GCFLearnFree.org