**Instructional Days:** 5-7

**Topic Description**: Search engines and how they work are explored through trying various internet search techniques. A selection of Internet resources that are useful for finding information are introduced as well as a selection of Web 2.0 applications. Several websites are evaluated by using a rubric to determine if they are “good” websites.

**Objectives:**

The student will be able to:

* Perform searches and explain how to refine searches to retrieve better information.
* Identify resources for finding information in addition to ranking based search engines.
* Differentiate between ranking based search engines and social bookmarking (collaborative) search engines.
* Use a variety of Web 2.0 applications.
* Develop and use a rubric to evaluate websites.

**Outline of the Lesson:**

* Journal Entry (5 minutes)
* Internet Scavenger Hunt (25 minutes)
* Discussion of other resources for finding information (10 minutes)
* Experimentation with these resources (15 minutes)
* Jigsaw activity involving Web 2.0 applications (55 minutes)
* Journal entry (5 minutes)
* Web site evaluation criteria (20 minutes)
* Hands-on evaluation of web sites (30 minutes)

**Student Activities:**

* Complete journal entry.
* Perform internet searches using varying levels of refinement.
* Identify other resources for finding information.
* In groups use the other resources to find relevant information.
* In groups complete jigsaw Web 2.0 activity and presentations.
* Complete journal entry
* Identify evaluation criteria and work in groups to evaluate websites using the rubric.

**Teaching/Learning Strategies:**

* Journal Entry: List at least three ways in which you currently use the internet.
  + Have students share their responses with their elbow partner.
* Have student groups complete an internet scavenger hunt.
  + A sample is provided, but you may want to create your own that is more specific to the interests of your students or have the groups create their own and exchange with another group.
  + Make sure any suggested websites are accessible using screen reader software for visually impaired students.
* Other resources for finding information
  + In discussing the results of the scavenger hunt have students identify at least three resources other than search engines that they use to find information on the internet along with advantages (or disadvantages) over a general search engine.
  + Some examples might be:
    - Sites such as Google Maps or Mapquest to get directions or see satellite or street view images of anywhere in the country.
    - Address and telephone number lookup sites such as Switchboard or Yellow Pages to get personal and business information.
    - Sites such as the Internet Movie Database to get information on movies and television shows.
    - Sites such as Dictionary and Thesaurus to look up the meaning or spelling of a word or to find a synonym of a word.
    - Encyclopedic sites such as Wikipedia, Encyclopedia Britannica, or How Stuff Works to find an overview of a particular topic.
    - The Wayback Machine which stores snapshots of websites on various dates so that you can “go back in time” to see a site as it used to be.
    - Video-based information sources such as YouTube and Howcast
* Experimentation with these resources
  + Have the students work in groups to use the resources identified above in ways that are relevant to them. For example,
    - Use Wikipedia and Encyclopedia Britannica to find information on a topic they’re studying in another class. Have them compare the two articles and decide which provides more information.
    - For a camp setting, use a timely topic in history, geography or science.
    - Use the Wayback Machine to view an early version of their school’s website. Compare how much it has changed from the school’s current website. An alternative is the university’s website or a website for the local paper.
    - Use IMDB to locate information on a popular actor/actress to see all of the movies/TV shows he/she has been in.
* Jigsaw activity involving Web 2.0 applications
  + Divide students into groups to work on each of three different Web 2.0 applications. (Depending on the size of the class, more than one group may need to work on each application.) : Applications should include a social bookmarking site (delicious.com or stumbleupon.com), a blog site (blogger.com or tumblr.com) and a wiki (Wikipedia.org). You should provide the students with premade demo accounts so that they do not have to sign up with their own information. Each group should:
    - Explore the site and its features.
    - Prepare a presentation on their site for the remainder of the class.
  + During the student presentations, ensure that the following questions/issues are addressed:
    - What are the differences between ranking based and social bookmarking search engines?
    - What are the advantages and disadvantages of a website that anybody can edit?
    - What issues might there be with creating accounts online? (Lead into a discussion on privacy—what information should be kept private and why? Discuss encryption.)
* Journal Entry: Why do you need to evaluate websites?
* Web site evaluation criteria
  + Direct students to <http://zapatopi.net/treeoctopus/> . This website pretends to be a credible source of information about the “Pacific Northwest Tree Octopus” but it is really a joke about a non-existent animal.
  + This particular site is obviously misinformative and intended to mislead viewers. However, it is important to be able to tell when a site is more subtly biased.
  + Brainstorm criteria that they could use to evaluate websites. As a group develop an evaluation rubric. (You can use the Sample Website Evaluation Rubric as a reference.)
* Hands-on evaluation of web sites.
  + Have the students work in groups and ask them to use the website evaluation rubric to evaluate websites they might need for a school project or an assignment from another class.
  + Discuss the results of their evaluations.

**Resources:**

* Sample Scavenger Hunt
* The Wayback Machine: http://www.archive.org
* Wikipedia: http://www.wikipedia.org
* Encyclopedia Britannica: http://www.britannica.com
* Yahoo: http://maps.yahoo.com/
* Internet Movie Database: http://www.imdb.com
* Switchboard: http://www.switchboard.com
* Yellow Pages: http://www.yellowpages.com
* How Stuff Works: http://www.howstuffworks.com
* YouTube: http://www.youtube.com
* Howcast: http://howcast.com
* http://www.delicious.com
* http://www.stumbleupon.com
* Website Evaluation Rubric
* https://www.twitter.com
* https://www.wikipedia.org

**Sample Scavenger Hunt**

In your group, use the internet to find the following items. For each item include the steps you took to find each item. Useful websites that are known to be accessible have been suggested.

1. Find a tweet by Bill Gates on Twitter (mobile.twitter.com/billgates)
2. See if your favorite restaurant has a website (Google.com or Bing.com to search)
3. Find a review of your favorite restaurant, written or video! (Yelp.com, YouTube.com)
4. Find out how many people live in your city (Wikipedia.org)
5. Find a recipe for your favorite food or using your favorite food
6. Find a trailer for an upcoming movie (YouTube.com, IMDB.com)
7. Find a website for a politician
8. Find someone singing a cover of a song (YouTube.com)
9. See if your favorite comedian has any upcoming tours
10. Find the address for the Rochester restaurant Mark’s Texas Hots
11. Find a definition for sonification (Wikipedia.org)
12. Find a technology-related blog
13. Look up when and where the next Olympics will be held
14. Find the application page for a college that you’re interested in
15. Find out the current exchange rate for converting the US dollar to the Canadian dollar (Try searching on google.com for “1 USD to CAD”)
16. Find out what year the game company Nintendo was founded. (Wikipedia.org)
17. Find a poem by Robert Frost.  It cannot be “The Road Not Taken”!
18. Find an animal that has gone extinct and the estimated year of extinction. (Wikipedia.org)

**Website Evaluation Rubric**

For each question respond with yes, no or unsure

Sample Website Evaluation Rubric

|  |  |  |  |
| --- | --- | --- | --- |
| **Authority** |  |  |  |
| Is the author identified? | Yes | No | Unsure |
| Does the author have appropriate qualifications with respect to the information being presented? | Yes | No | Unsure |
| **Purpose** |  |  |  |
| Is the purpose to inform or give factual information? | Yes | No | Unsure |
| **Coverage** |  |  |  |
| Is the information primary or secondary in nature? | Yes | No | Unsure |
| Is the information presented comparable to information on the same topic presented by other sites? | Yes | No | Unsure |
| **Accuracy** |  |  |  |
| Is the information free of factual errors? | Yes | No | Unsure |
| Do the conclusions appear to be well-reasoned and supported by the facts presented? | Yes | No | Unsure |
| Is the information properly referenced? | Yes | No | Unsure |
| **Objectivity** |  |  |  |
| Is the information free from obvious bias? | Yes | No | Unsure |
| Does the author avoid the use of emotional or inflammatory language? | Yes | No | Unsure |
| Does the author avoid trying to sell something or persuade the reader of a particular viewpoint? | Yes | No | Unsure |
| **Currency** |  |  |  |
| Is the information up-to-date? | Yes | No | Unsure |
| Are there creation and revision dates? | Yes | No | Unsure |
| **Appearance** |  |  |  |
| Does the site have a professional appearance? | Yes | No | Unsure |
| Does it use proper grammar, spelling, and composition? | Yes | No | Unsure |