Stay on the Path Lesson Two: All That Glitters is Not Gold

This lesson is part of USE, UNDERSTAND & CREATE: A Digital Literacy Framework for Canadian Schools: http:// mediasmarts.ca/teacher-resources/digital-literacy-framework.

Overview

This four-lesson unit on search skills and critical thinking teaches students how to *target* and *specify* their online searches to avoid unwanted results, how to judge whether a link, search result or website is legitimate or phony, and how to find legitimate sources online for media works such as music, videos and movies.

In this lesson students learn how to authenticate online information by comparing "facts" from the website www.allaboutexplorers.com with more authoritative sources.

Learning Outcomes

Students will:

- learn how to avoid unwanted search results
- use advanced search techniques
- learn how to judge the legitimacy of a result or a website

Preparation and Materials:

- Arrange for computer and internet access for all students
- Read the *Search Skills* Teacher Backgrounder
- Photocopy the *Reliable Sources* Student Handout

Procedure

Online Authorship

If you have not completed the first lesson of this unit, *Stay on the Path Lesson One: Searching for Treasure*, you may want to start with a brief discussion on who can put information online and how (anyone with internet access can put up a blog, images, websites, etc.) and explain to students that although some people and organizations on the internet do check their facts, there is no one person or organization that monitors all of the information that's online to make sure it is true, accurate, and valid: you have to be your own fact-checker.

Put students into groups and have them select an adventurer from the website http://allaboutexplorers.com/ (this is an educational website that helps students learn about misinformation).

Next, have them identify three differences between the facts they've found about their explorer on allaboutexplorers.com and facts they've found from Kpedia (https://kids.kiddle.co/).

Students should notice major differences in the information they've gathered from the two websites. Ask the class what they would do to confirm the reliability of both these websites and the people who are behind them. Write the answers on the board: for Jacques Cartier, for example, the birthdate, birthplace and his route to the New World are different. Students might also notice that some information is given on one site but not the other. For example, allaboutexplorers.com mentions that Cartier came to the New World to sell watches while Kiddle makes no mention of this. You may also want to point out the gross factual errors on the All About Explorers website. For example, Jacques Cartier never sailed with John Glenn and definitely did not sail "westward from France across the Arctic Ocean".

Misinformation or Disinformation?

Distribute the *Reliable Sources* handout and review it with students. Highlight any verification methods in the handout that were not identified by students.

Using Kpedia as an example of a reliable website, apply the questions in the handout and show where and how this information can generally be found.

Using All About Explorers as an example of an unreliable website, answer the same questions and highlight where the information is missing or suspect.

Next, visit http://www.atlasobscura.com/places/oak-island-money-pit and http://www.oakislandtreasure.co.uk/index.php, ask the groups to find out if they can be considered reliable sources. Encourage students to investigate:

- What is the purpose of the site? How do they know? *Remind students that if a website's name gives too many different results, such as "Oak Island Treasure," they can search for the web address instead.*

- Who is the author of the article? Are there reasons to think they're an expert? How do they know? *Remind students that with common names, they may have to add the topic to their search, such as "Joanna Atherton" "Oak Island".*

Have each group present their results to the class. Fill in any missing information.

Ask students to explain their rationale (and give examples) for their conclusions about the legitimacy of the websites.

Search Skills Teacher Backgrounder

General searching best practices

Search engines don't index the entire Web — a lot of the information that's available sits in databases or behind pages that require users to log in. Furthermore, all search engines index the internet using different algorithms, which means each will have a slightly different "snapshot". With this in mind, you will get better results by using different search engines concurrently.

Your search results are only as good as your search terms: sometimes you have to do a few searches with different keywords to find what you are looking for.

To do truly powerful searches, use special keywords (search operators) that allow finer filtering of the results. Here are a few of the most useful:

NOT or **–** eliminates results including the word that comes next (e.g. dog NOT poodle, or dog –poodle)

OR gives you results with both of the search terms on either side of it. This is good when you have two different options or when you're looking for two things that a search engine wouldn't recognize as synonyms. (For instance, if you were trying to decide whether to go camping in Ontario or Newfoundland you could use the search string camping Ontario OR Newfoundland. Without the OR you would only get results that included both Ontario and Newfoundland.)

Quotation marks give you results that include words in a particular order. If you were looking for references to Blackbeard the Pirate under his real name, Edward Teach, you'd get a lot of results that had both "Edward" and "teach" that weren't relevant. By putting "Edward Teach" in quotes you only get results where the two words appear in that order.

Most search engines also have an "advanced search" feature where all you need to do is to fill out a more advanced search form and choose a few options.

This 3-step Web search strategy was adapted from Google's *Search Education* course and other best practices on the Web:

Pick the right search keywords

1. Focus on just the key ideas of your question.
2. Think about how an author of a webpage might have presented/written the information.
3. Sometimes you need to do a few searches and explore your results in order to find the information you are looking for.
4. Use specific keywords related to the context of your search to help to refine it.
5. Use reverse dictionaries or a thesaurus to find other search terms.
6. Try applying specific terms in your search that are often used in the context of your question. For example, using common sentence structures related to your question might help you to find information, such as using "Once upon a time" with your keywords when looking for fairy tales.

Ask yourself:

1. What unique terms can I use that will help me search effectively?
2. How can contextual terms help me target my search for what I need?

Understand your search results

1. Look at the number of results that your keywords return: if it's in the millions, you might need to choose better keywords.
2. Each result "block" has a lot of useful information to help you decide if it is what you want. Look at the title, the URL and the text summary.
3. Remember that the summary is not a full summary of the page but an extracted snippet of the page (by a program) and it may not give an accurate representation of what is in the site.
4. The URL can also give you specific information such as the country where the site is hosted (".ca" for Canada), or if it is hosted by an academic institution (".edu").

Evaluate the credibility of your search results

Remember that search engines don't base the order of the results on credibility. That means you have to double-check to make sure the site you've found is reliable. To do that., open a new tab and do a search on the source itself. Skip anything that source tells you itself and look at what other sources, including Wikipedia, have to say about it:

1. Do they really exist?

"About Us" pages and profiles are easy to fake, so use a search engine or Wikipedia to find out if other people say they really exist. Pay the most attention to things that are hard to fake.

2. Are they who they say they are?

It's easy to pretend to be someone else online, so once you know the source really exists, you need to find out if what you're looking at really came from them. Make sure the web address you're on matches what you find when you search for them.

3. Are they trustworthy?

For sources of general information, like newspapers, find out if they have a process for making sure they're giving you good information, and a good track record of doing it.

For more specialized sources, find out whether they're experts or authorities on that topic. Do a search and make sure that they are an authority in the right field.

You also want to make sure their position isn't biased, but don't mix up bias and authority. A biased source starts with what they believe and then chooses or interprets the facts to fit those beliefs. Someone who is actually an expert on something will probably have stronger opinions about it than someone who isn't – but they'll be better-informed opinions.

Pre-filtering the Web

There are some ways that you can pre-filter your results or that your results may already be pre-filtered:

- Your school or school district might use filtering software that automatically blocks access to certain websites (usually pornographic sites).

- You can install commercial software on a specific computer that will block access to specific sites.

- It should be noted that in the two cases above, although access to some sites is restricted, they may still show up in your search results.

- All major search engines have a "safe search" option that filters out inappropriate websites from search results. However, this feature does not restrict access to those websites – it merely filters them out from search results.

- Finally, another way to restrict unwanted websites is to create or use a list of bookmarks to appropriate and relevant websites.

Reliable Sources

The internet has plenty of places to find information, but not all of them are created equal. A website's purpose may be:

- to give information
- to entertain or persuade you about something
- to sell you something
- to make you laugh

One way to find out is to do some research on the source. Go to a search engine like Google, or an online encyclopedia like Wikipedia, and search for the site.

If a search for the site's name gives you too many different results, you can search for its web address instead.

This search will also help you find out if the source is reliable. Once you've found some information about the source that *isn't* from its own website, ask these three questions:

1. Do they really exist?

It's easy to make fake pictures, fake websites and fake social network profiles that look just as real and professional as anything out there.

"About Us" pages and profiles are easy to fake, so do a search to find out if other people say they really exist. Pay attention to things that are hard to fake: for example, it's easy to make a fake website, but if other websites you know are real and reliable link to it, then it's a sign *they* think the source is real.

2. Are they who they say they are?

It's easy to pretend to be someone else online, so once you know the source really exists, you need to find out if what you're looking at really came from them.

To find out if you're on an organization's real website or social network profile, do a search for them and compare the top result to the site you're on.

3. Are they trustworthy?

For sources of general information, like newspapers, ask if they have a process for making sure they're giving you good information, and a good track record of doing it. How often do they make mistakes? If they do make mistakes, do they admit them and publish corrections? Are they willing to publish things their owners, or their readers, wouldn't agree with?

For more specialized sources, you want to do a search to find out whether they're experts or authorities on that topic. Being an expert is more than just being a doctor, a scientist or a professor: make sure they are an expert in the area that they are talking about. (For common names or people who aren't particularly famous, you may need to add the name of the website or the topic they claim to be an expert on.)

You also want to make sure their position isn't *biased*, but don't mix up bias and authority. A biased source starts with what they believe and then chooses or interprets the facts to fit those beliefs. Someone who is actually an expert on something will probably have stronger opinions about it than someone who isn't – but they'll be better-informed opinions.