



LESSON PLAN

Level: Grades 5 to 6

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The lesson is part of the [Stay on the Path: Teaching Kids to be Safe and Ethical Online](#) lesson series.

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

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* 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 <http://kids.britannica.com/>.

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 Encyclopedia Britannica 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 Kids Britannica 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, on <http://www.atlasobscura.com/places/oak-island-money-pit> and <http://www.oakislandtreasure.co.uk/index.php>, ask the groups to find:

- the purpose of the site
- the author of the article
- whether the author makes any broad statements that aren't supported by evidence
- the date it was published or last updated

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

Finally, have groups complete the rest of the questions on the *Reliable Sources* handout. Ask students to explain their rationale (and give examples) for their conclusions about the legitimacy of the websites.



Reliable Sources

The Internet has plenty of places to find information, but not all of them are created equal. Some are reliable, but some may be trying to persuade you or sell you things and some are just jokes.

You can find out if a site is useful and trustworthy by asking yourself the following questions:

Is the website's purpose:

- to give information?
- to entertain me or persuade me about something?
- to sell me something?
- to make fun of something?
- just a joke?

One way to find out is to look at the kinds of words that are used.

For example, here's a headline from a humorous site called *The Onion*: "Michelle Obama Seen Outside Walking Family Rhinoceros". Compare this with a headline from the *New York Times*: "Michelle Obama Confronts Heckler at Fund-Raiser". Which seems more likely to be for real?

Next you want to find out if someone has taken responsibility for what is written there. Is an author's name listed? When no author has taken responsibility for what is written, it makes it difficult to find someone to answer questions about the information on the website.

Does the website offer more than one point of view (what someone thinks about the issue) or links to other points of view?

For example, blogs will often only show the point of view of the people who write them, while websites belonging to universities will usually have many links to other research and opinions.

Can the information be proven from other sources?

For example, many UFO websites have stories of sightings where only one person saw a UFO. It doesn't always mean that this information is wrong or false, but it means you are relying completely on that person's honesty and memory.

Does the site show when the information was created and last updated?

In general, the older the information, the more chances it is less reliable (this is especially true of scientific information). How much should you trust medical advice that is more than 40 years old?

An easier way to remember how to check if a website is reliable is to look for PROOF:

Purpose – why was the site made?

Responsibility – can you tell who made the site and wrote the text?

Other views – does it give more than one side of the story?

Other sources – does it give proof of what it is saying?

Find a date – is it fairly recent? Does that matter for this topic?



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

On the search results page:

1. Look at the title of the result: does it match the information in the summary?
2. Look at the URL: does it look like it is related to what is in the title and the summary? Does the domain name reflect an organization you can trust?
3. Remember that page rank or the order a result appears does not equal credibility.
4. Try to triangulate your findings (find 3 similar sources).
5. Look for fact-checking sites and "do one more search".

On the website:

1. Ask yourself: How might the tone or style of the writing impact its credibility?
2. Look for misquotes or falsified images.
3. Review the following sections (where available) on the website itself: the "About us" page, the "Contact us" page and the "site map".
4. Try finding specific text on the page (use ctrl-f or Command-f to find text on the page).

If you can't find enough information on the website, you might also conduct a search on a WHOIS provider to drill down on the person or company who's behind it.

2. 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.

