



## 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 Three: Treasure Maps



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

## Overview

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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 apply what they have learned in the first two lessons to find and verify information online.

## Learning Outcomes

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Students will:

- avoid unwanted search results
- target and specify their searches
- use advanced search techniques
- judge the legitimacy of a result or a website

## Preparation and Materials

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- Arrange for computer and internet access for all students
- Read the *Search Skills* Teacher Backgrounder
- Photocopy the *Treasure Map Assignment*

## Procedure

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Begin by recapping with students the key points of lessons one and two:

- anyone with internet access can put up a blog, images, websites, etc.



- although some people and organizations who post things on the internet check their facts, there is no one person or organization that monitors all of the information online to make sure it is true, accurate and valid: you have to be your own fact-checker
- there are search techniques that you can use to get the best possible results (you may want to quickly review these from the *Narrowing Your Search* handout from lesson one)
- there are questions we can ask to assess the reliability of an online source of information, such as:
  - the purpose of the site
  - whether the author is an expert or authority on the topic
  - whether there's any reason to think the author or source is biased in a way that makes them less reliable

### Treasure Maps

Distribute the *Treasure Map Assignment* to students. Individually, have them create a “treasure map” that documents all the steps they take to find out when the *Oriental* was stranded on Sable Island (March 1, 1879) and the cargo it contained (corn). Creating the map will require including a successful search string and an appraisal of the “treasure” that’s found (assessing the reliability of the source) and then testing the search string in two different search engines.

The date the *Oriental* was stranded can be found on a few websites, including this map ([http://epe.lac-bac.gc.ca/100/205/301/ic/cdc/sableisland/english\\_en/history\\_hi/graveyard\\_gr/Shipwreck\\_Map.htm](http://epe.lac-bac.gc.ca/100/205/301/ic/cdc/sableisland/english_en/history_hi/graveyard_gr/Shipwreck_Map.htm)) but the best site to confirm the date and cargo information can be found here: <https://novascotia.ca/museum/wrecks/wrecks/shipwrecks.asp?ID=3700>.

To complete the activity, students have to fill out the questions in the handout and provide the following information:

- the keywords they used to find the information
- the names of the two search engines they used
- the search operators they used
- whether the resource was an image, an archived news article, a database entry, etc.
- a suggested ‘optimized’ search string that would return their source as a top result

Students also need to evaluate the reliability of the information and provide evidence for their appraisal (Web address, author’s name, dates, organization, and so on).

Students will be marked on:

- their ability to create focused, effective search strings
- the quality of their analysis and justification for a site’s reliability (or lack thereof)
- their structure, polish and presentation of the treasure map



## Search Skills Teacher Backgrounder

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### 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.



## Treasure Map Assignment

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In this assignment you will create a “Treasure Map” based on the search string you develop that gives you the correct answers to the following questions:

1. What date was the ship Oriental stranded on Sable Island?
2. What cargo was it carrying?

### Instructions

To complete this assignment, you must:

- Test your keywords and strings in TWO different search engines.
- Write down the names of the search engines you tried.
- List the keywords, operators and search strings you used for your search.
- Provide your final search string.
- List the top five results your final search string returns in both search engines.
- Find and write down the correct answers to the questions above.
- Finally, confirm the reliability of the site(s) where you found your answers by asking these questions and writing down your answers:
  - What do you find when you do a search for it?
  - What reasons do you have for thinking the source is (or isn't) an expert or authority?
  - Is there any reason to think the source might be *biased* in a way that makes it less reliable?



## Assessment Activity: Search Strings

	Learning Expectations	Achievement
<p><b>Use</b></p> <p>Skills and competencies that fall under “use” range from basic technical know-how – using computer programs such as word processors, web browsers, email, and other communication tools – to the more sophisticated abilities for accessing and using knowledge resources, such as search engines and online databases, and emerging technologies such as cloud computing.</p>	<p>use information technology-related vocabulary in context</p> <p>acquire information from electronic sources</p>	<p>Insufficient (R);</p> <p>Beginning (1);</p> <p>Developing (2);</p> <p>Competent (3)</p> <p>Confident (4)</p>
<p><b>Understand</b></p> <p>Understand includes recognizing how networked technology affects our behaviour and our perceptions, beliefs and feelings about the world around us.</p> <p>Understand also prepares us for a knowledge economy as we develop information management skills for finding, evaluating and effectively using information to communicate, collaborate and solve problems.</p>	<p>demonstrate understanding that anyone can publish on the Web, so not all sites are equally trustworthy</p> <p>judge the validity of content found on the internet, how to find appropriate material, and what sources can be trusted</p> <p>use overt and implied messages to draw inferences and construct meaning in media texts</p>	<p>Insufficient (R);</p> <p>Beginning (1);</p> <p>Developing (2);</p> <p>Competent (3)</p> <p>Confident (4)</p>
<p><b>Create</b></p> <p>Create is the ability to produce content and effectively communicate through a variety of digital media tools. It includes being able to adapt what we produce for various contexts and audiences; to create and communicate using rich media such as images, video and sound; and to effectively and responsibly engage with user-generated content such as blogs and discussion forums, video and photo sharing, social gaming and other forms of social media.</p> <p>The ability to create using digital media ensures that Canadians are active contributors to digital society.</p>	<p>communicate ideas and information in a variety of oral, print and other media texts, such as short reports, talks and posters</p> <p>identify conventions and techniques appropriate to the form chosen for a media text they plan to create</p> <p>produce media texts for specific purposes and audiences, using a few simple media forms and appropriate conventions and techniques</p>	<p>Insufficient (R);</p> <p>Beginning (1);</p> <p>Developing (2);</p> <p>Competent (3)</p> <p>Confident (4)</p>