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Teaching Effective Search Course Packet

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Critical Thinking Required

Teaching your students to think critically about the search results they are looking at can take some time and convincing. As search tools change and algorithms steer us off in different directions, students need to take control of their search to find their perfect answers. After reviewing the article and lesson plan by Liz Deskins, use the chart below and draft a lesson plan for teaching students how to think critically when using digital resources.

Subject		Grade Level	
Time Needed			
Materials			
Objectives			
Instructions			

A Whole New Level of Search

Turning your students into smart searchers requires reflection on the skills they already have. Knowing the search skills your students already possess will help to guide your lessons towards a whole new level of search! After reading Kristin Fontichiaro's SLC article, which is full of good tips from librarians, choose 3-5 of the "How do I help students…" questions at the beginning of the article. Using the chart below, write down some thoughts about where your students already are with these skills and some lesson ideas to implement in your search lessons.

How do I help students…	Lesson Ideas

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Imagine Your Perfect Source

Having students imagine what their search results will look like allows them to become more selective researchers. A student who imagined their perfect source would know not to click on a Major League Baseball website to learn more about mythical creatures! To start their imaginations flowing, choose 5 sources from the SLC articles provided and provide them with the URL only. Ask them to imagine the types of sources they would find on a site like that. What types of queries would lead them to that site? Then allow the to visit the site and see how close they were. If you want to challenge more advanced searchers, create a query for each of the 5 URLs and have students match the questions to the source.

URL	What Do You Think You Will Find Here?	What Did You Find Here?

Choosing the Right Sources

Once your student has narrowed down their search results by imagining their source, how do they know which ones to choose? Is the site reliable? This is another important aspect of strong research skills. Choosing the right source takes some evaluation skills. When the brief blurbs found in the search results are not enough to determine if that site is what you need, what's next? How do you help students gravitate towards more scholarly sources, or even databases, for their research needs? After reviewing the SLC article and lesson plans included in the Resources, create your own lesson plan for teaching students how to evaluate the sources they have determined are the best.

Lesson	
Objectives	
Websites	
Instructions	

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There is More Than One Way to Say That

In the days of print encyclopedias as the main source a student would use for research, varying viewpoints on a topic were right in front of you in a single entry. However, today there are endless amounts of information (and opinions!) available at the click of a mouse. How you word your search can often change the results that you get. Looking at the use of formal vs. informal language in searches may help raise student awareness that there can be several ways to say the same thing—each way giving you different search results. To work this into your search lessons, use the chart below to create 3-4 search activities that will help your students understand how language affects search results.

Query	Informal Search Terms	Formal Search Terms	Results

Recognizing Bias in Search Results

It is important that students look at their results and can recognize if all the sources are skewed towards one particular viewpoint or group. Recognizing bias in results is a skill that students will need as they become researchers. How are you going to work with your students to help them recognize if that has happened? After reading the SLC Topic Page article provided in the Resources, what are some ideas you have to demonstrate how bias can show up? Start by searching using some of the examples talked about in this lesson and a few from recent topics that could result in biased results and try to reduce the bias by using alternative search terms. Using the chart below will give you a starting point for your recognizing bias in search results lesson.

Query / Search Term	Bias	Alternative Search Terms

Stepping Stone Sources

Stepping stones help you get from one place to another. In research, stepping stone sources give you ideas about search terms or specific kinds of evidence that you might want to build into your search. If you are unfamiliar with your research topic, predicting what your results might look like could be difficult. Starting with a basic search on your topic will provide you the vocabulary you need to deepen your knowledge on the topic and help build your research strategy. The idea of stepping stone sources is a wonderful way to take your students to the next level of their research game. Using the chart below, create a sample search process that you can use to illustrate the benefit of stepping stone sources.

Research Query / Topic:

Stepping Stone Sources:

Keywords / Vocabulary:

Formal Research Strategy:

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Using Images as Stepping Stones

In this lesson, Bergson-Michelson talks about using images as stepping stone sources to help build student's recognition of regularly used language and identifying elements they can use to build their search. This activity is a fantastic way to introduce using primary sources in their research. Would your students even think of using a primary source as a stepping stone source? After reviewing the resources of this lesson, use the chart below and create a quick activity using primary sources as stepping stones. Choose a topic that your students are not familiar with and provide them a primary source for that topic. Have them pull what they can from the different elements of that source and then list 2-3 other sources they found from using the primary source as a stepping stone.

Topic	Primary Source
Stepping Stone Search Terms / Elements	
Resources Found	

Navigating Through Sources

One segment of source literacy is being able to navigate through the available sources. This is another challenge that students face as they begin their research journey. What types of sources are out there and how do I recognize them? In this lesson, Bergson-Michelson works through an activity of having students create cards with source types and what type of questions these sources answer. Using the worksheet below, provide a list of 2-3 different types of primary sources to your students. Allow students to work in small groups to pool their knowledge on what types of information they can gather from these sources and what questions it will answer. You can then have groups swap/compare sheets to continue to share their knowledge. Once completed, students have a great base of knowledge on what types of primary sources will help them in their searches.

Primary Source	Information Need	Questions Answered

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Context Terms are Game Changers

In this lesson, Bergson-Michelson states that "context terms are complete game changers with students who are struggling with search." A context term describes the type of source that you are looking for and would appear in the title, caption, or other text on the page. Using these terms can help your students find sources that they would not normally find in an open web search. Using the chart below, create an assignment for your students using 3-4 different context terms for each topic and list the different results that they get. Ideally, this exercise increases source literacy and continues to build strong researchers.

Topic	Context Terms	Results

Topic	Context Terms	Results

Using Operators to Refine Your Search

Librarians have long relied on operators in their searches to find the book that someone has one or two details about but can't quite remember the name of. Using Boolean operators, like 'and', 'or', and 'not', help to indicate relationships among search terms. In addition, using other operators like site:, intitle:, etc., allow your search results to be very specific and help your patron find the book they're looking for. Using the chart below, create 2-3 challenges for your students by providing 1-2 sentences with information about a particular source and have your students indicate what operators they can use to find the source you described. Ideally, the context you provide them in the information will allow them to visualize what they are looking for—have them indicate what they visualized as well to pull all the skills together.

Information about Source	
Operators I will use:	**Source results:**
Based on information, I visualize:	
Information about Source	
Operators I will use:	**Source results:**
Based on information, I visualize:	
Information about Source	
Operators I will use:	**Source results:**
Based on information, I visualize:	

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For Your Advanced Searchers

In this lesson, we talk about associated search terms and having students start to think about words that appear in specific sources that may not be directly related to the topic itself but make excellent search terms. Keep in mind that Bergson-Michelson points out that this skill should be reserved for your advanced searchers! For this activity, we're going to upgrade what you've already done. Using the charts below from previous activities, which have been updated to work with an associated search term activity, brainstorm how you can use these as a starting point and provide your advanced searchers with a good challenge!

Skill Practiced	Student Progress	Next Steps to Deepen Skills

Build a Web to See What You Already Know

Giving your student researchers the confidence to become successful researchers takes time! In this lesson, we learn about creating webs, or mind maps, to expose what we already know about the topic they are researching, and they can use the webs to draw upon stepping stone sources. This skill can be used at all ages, from having an elementary student write down all the words they know about their topic to a high school student who can turn stepping stone sources into a strategy by building a web. Using the space below, create a sample web for your students, based on their age-level, which will show them how they can use webs to strengthen their search skills.