**Identifying and Citing Sources: In-Class Activities**

**Activity 1 (work together, 5 minutes)**

To refresh your memory about some of the concepts that were covered in the pre-class activities, find a partner (or work in a group of three to ensure nobody is alone) and discuss with them:

1. What it is that makes a source primary, secondary, or tertiary? That is, **how do you differentiate between them?**
2. Why does it matter whether you use each type of source to provide evidence/support?
3. What sort of information within these sources needs to be cited to avoid plagiarism?

*Note that your instructor will briefly discuss these points with you before you all move on as a class to the next section.*

**Finding Appropriate Sources in the Scientific Literature**

In the pre-class activities, you used [Google Scholar](https://scholar.google.com) to find at least two primary sources that were relevant to the science topic you are going to write a short piece about in these in-class activities (and in the post-class activities to come).

Google Scholar is not the only useful search engine that can be used to find useful references, however. Today, we will use [Web of Science](http://resources.library.ubc.ca/?searchtype=keywords&search=web+of+science) to develop your searching skills further.

There are two general categories of tips for making your literature search more effective; these will either **narrow** your search or they will **broaden** it. Whether you wish to employ either strategy will depend on what you are searching for.

**Broadening Your Search**

1. Use the *Boolean operator* ‘**OR**’ to include words with similar meaning in your search (e.g. Canine OR Dog OR Husky OR Malamute)
2. Use *truncated* words and an asterisk (\*) to discover material with variations around the same basic word (e.g. ‘Alask\*’ finds literature focusing on ‘Alaska’, and ‘Alaskan’)
3. Search for the scientific species name as well as the common name (e.g. Gray Whale OR *Eschrichtius robustus*).

**Narrowing Your Search**

1. Use the *Boolean operator* **‘AND’**to only return results containing both search terms (e.g. Earthquake AND Volcano AND Lava)
2. Use the *Boolean operator* **‘NOT’** to remove certain results you are not interested in (e.g. Earthquake NOT Tremor)
3. Use *phrased search terms* **“”** to only include results that have these terms next to one another (e.g. “Global Climate Change”)
4. Use a *filter* to focus on the dates of publication you are interested in (e.g. Tick ‘Since 2012’ or enter a custom range such as ‘2012 – 2013’)

**Narrowing and Broadening Your Search: One Last Tip**

* ***Snowball*** a paper that contained useful references by reading those cited within it (and listed in its references section at the end); many of these will also be very useful for you too!

**Activity 2 (20 minutes, work together)**

Make sure you are working so that at least one of your pair/group has a laptop/tablet with which you can both access the Internet and Web of Science.

Spend 10 minutes each searching for more primary sources that will provide relevant information on the science topic you chose to write about. Try to experiment with the tips above to narrow and/or broaden your searches, but make sure you find (and save, if possible) at least two more useful primary sources each.

*Note that your instructor will lead a very brief discussion before you move on to see whether you learned any other strategies, just by experimenting.*

**Integrating Sources via Citations**

Proper referencing includes two parts: in-text citations and a complete **reference list of sources** from which these arose (this should come at the end of your piece of writing).

In-text citations show your reader(s) that certain pieces of the specific information you have used to strengthen your paper came from the work of others. The list of references at the end of your paper then gives the exact references you used, which allows your reader(s) to easily find and refer back to them.

**Citation Formatting**

In science writing, **expanded referencing** is the most universally used style for citing references. It includes:

1. The author/authors’ last name/names and the year of publication in the body of the writing
2. An **alphabetical** list of all these references at the end of the article, which contains more complete information (the title of the paper, the journal it was published in, the issue number of this journal, and the specific page numbers)

**General Rules for In-Text Citations**

Some journals use subtly different formats for their in-text citations, so you should always check to make sure you are using the correct format required (whether you are writing an article for a specific journal, or completing an essay at university). However, we will focus on the most commonly used format, which follows the two key rules below.

1. If there are **one** or **two** authors, cite both surnames (and the date of publication)
2. If there are **more than two** authors, only write the **first** name followed by **et al.**

**Examples**

* Blue, left-handed widgets are actually wodgets (Smith, 1993).
* Bloggs et al.(1995) noted that…
* Smith and Jones (1997) wrote that…

**General Rules for Reference Lists**

As with the format of in-text citations, subtle differences will exist from journal to journal, and from university to university. We will focus again on the most commonly used format, which follows the basic rules below.

1. Place at the end of your piece of writing
2. Compile in alphabetical order
3. There are numerous different styles, but the most common one uses the format: **All Surnames and Initials, (Publication Year). Title. Journal, Issue: Pages.**

e.g. **Smith, T, Shineton, JL, (1993). Widgets and wodgets. Journal of Computing, 37: 6–15.**

**Activity 3 (work alone and then together, 10 minutes)**

Begin thinking about how you might use some of the sources you have found about the science topic you are going to write about. To gain practice in citing them correctly, try to write one sentence for each source so that you attribute a piece of information to each one (**use the examples above to help you**).

Remember that it is very unusual to quote one of your sources directly in a piece of science writing. Instead, try to *paraphrase* the original information provided and simply include the citation to confirm which author this idea belongs to.

*Note that your instructor will be on hand to help you here, and to answer any questions you have about paraphrasing and citing your sources.*