This laboratory introduces you to several resources for finding information on scientific and technical topics, ranging from popular publications to scientific journals. You will have a formal introduction to the resources and search strategies by Ariel Andrea, Chemistry Librarian, followed by your conducting a search and preparing an annotated bibliography.

Later in the semester, you will be writing a research paper and presenting on a topic of your choosing. To prepare for these assignments, you will create an annotated bibliography that reflects how scientific information is represented in different source types and for different audiences. (Don’t worry – you do not have to commit to using the topic you choose for this bibliography! However, if you do keep this topic, you’ll already have some sources for your paper!)

Your annotated bibliography must include 4 sources:

- One must be from a popular source written for a more general audience
- One must be a book, print or electronic
- One must be a primary research article
- One must be a secondary research article (review)

You may include more sources if you wish, but 4 is the minimum.

Format for annotated bibliography:

Citation in ACS Style, including the article title
2-3 sentences describing what the article is about
2-3 sentences explaining how you found this article, what type of source it is, and why it would be useful to read if you were planning on doing research in this field

Information on finding books and articles and using ACS style can be found in the CHEM 115 course guide: [https://researchguides.library.wisc.edu/chem115](https://researchguides.library.wisc.edu/chem115)

**Assignment Due:** Next week (10/3-10/4) in lab
Search Strategy Development

1. Write down your search topic in the form of a question, statement or phrase, and underline the key words or phrases.  Example: What is the impact of emissions of VOCs (volatile organic compounds) from trees?

2. Divide these key words into concepts and list below. Use as many concept boxes as needed. You may not need all four boxes. List synonyms for each concept. Consider spelling variations, different word endings, truncation, synonyms, etc. Caution: Different databases use different symbols for truncation (examples: * $ ? :). Check database Quick Guide.

<table>
<thead>
<tr>
<th>Concept 1</th>
<th>Concept 2</th>
<th>Concept 3</th>
<th>Concept 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>emit* OR emission</td>
<td>AND voc OR volatile organic compound</td>
<td>AND tree OR forest</td>
<td>AND</td>
</tr>
</tbody>
</table>

3. Construct your search strategy using Boolean operators, truncation, and parentheses.

⇒ Connect the synonyms with the Boolean operator OR. You must use parentheses around synonyms connected with OR. OR broadens your search by gathering records in which one or more of your terms appear.

⇒ Connect the concept sets with the Boolean operator AND. AND narrows your search by requiring at least one term from each concept set to be present.

Example: (emit* OR emission*) AND (voc OR volatile organic compound*) AND (tree OR trees)