

**WML Information Literacy Instruction Assessment 2021-22**  
**Classroom Activity Report – Individual**

**Faculty Librarian:** Donna Witek

**Semester:** Spring 2022

**Course Number and Name:** BIOL 351L: Developmental Biology Lab

**Course Instructor (Last Name):** Driver

**Date(s) of Information Literacy Instruction:** 2/22/2022

**Time(s) of Information Literacy Instruction:** 8:30-9:30am and 1:00-2:00pm

**Location:** LSC 368

**Number of Students Registered in Course:** 15 and 16 (2 sections)

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**Summary of research assignment or task**

Students are assigned the Developmental Biology Presentation Project in which they need to select a topic within the field of developmental biology and present: general background information on the topic; one explanation of primary research on the topic that shares significant/breakthrough research; one explanation of primary research on the topic that provides new directions for research; and one secondary review article that shares history/background, known advances, or future directions for research on the topic.

Databases covered in order to accomplish these tasks include Biological Abstracts (via Web of Science), ProQuest Biology Journals, PubMed Central, and Nature Journals Online. I also created a handout (attached) that shares how to access a tutorial created by the University of Wisconsin Parkside Library about Primary, Secondary, and Tertiary Sources in Biological Sciences, which we also worked through together during my instruction, as well as the list of recommended University of Scranton Biology databases with advanced search techniques for each; my contact information is also included on the handout.

**Classroom Student Learning Outcomes (SLOs) – at least one, no more than three**

SLO 1: As a result of this information literacy instruction, students will identify the differences between primary research and secondary review articles in the biological sciences and apply advanced search techniques in the databases enabling them to search for each.

SLO 2: As a result of this information literacy instruction, students will become aware of access options for journal articles including Serials Solutions and InterLibrary Loan, as well as the various tools for saving and citing articles in the Biology databases.

SLO 3: As a result of this information literacy instruction, students will focus their developmental biology topics from broad to narrow through the search process, rooting their research in their own interest and curiosity.

### **How will you know how students are doing as they work toward meeting these outcomes?**

For SLOs 1 and 2, their successful completion of the Developmental Biology Presentation in all of its stages (including three Planning Sheets the course instructor requires at different points in the assignment timeline) would signal their success at meeting these two outcomes.

SLO 3 is a lot more difficult to assess. The course instructor designed an Initial Project Planning Lab Activity worksheet students would be completing after my instruction that gets at some of the conceptual work of exploring then narrowing a developmental biology topic; successful completion of this activity could be a proxy for successfully demonstrating this SLO. If students were ready to begin searching during my time with them, I could also visit around the room and workshop their topics to see them apply the techniques for narrowing from a broad topic to a subtopic within an area of developmental biology using the discipline-specific tools in the databases demonstrated. Ultimately the appropriate scoping of a developmental biology topic/subtopic is best assessed by the course instructor who is the expert in the discipline in which students are doing advanced research.

### **Based on your experience teaching this class and any assessment of student work you were able to do, what can you change next time to improve how you teach it? Or, what was successful that you want to be sure to do again the next time you teach it?**

I helped two students from this course in the weeks after my instruction, and questions that arose include how to place a scientific book chapter in the primary-secondary source evaluation framework and understanding how the research design of a systematic review falls in that same evaluative framework. This tells me the matrix of the types of research published in the developmental biology field is nuanced and that I may need to revise the part of my instruction that addresses this to better reflect that nuance.

The course instructor also sent me a thank you email in which she shared, “I saw a number of students using your hacking tips during the lab activity and feel pretty confident that they really benefited from your session.” She also shared feedback that I demonstrated some advanced search features in the Biology databases that she, as an expert researcher, was unaware of herself, so that also signals the value of the instruction.

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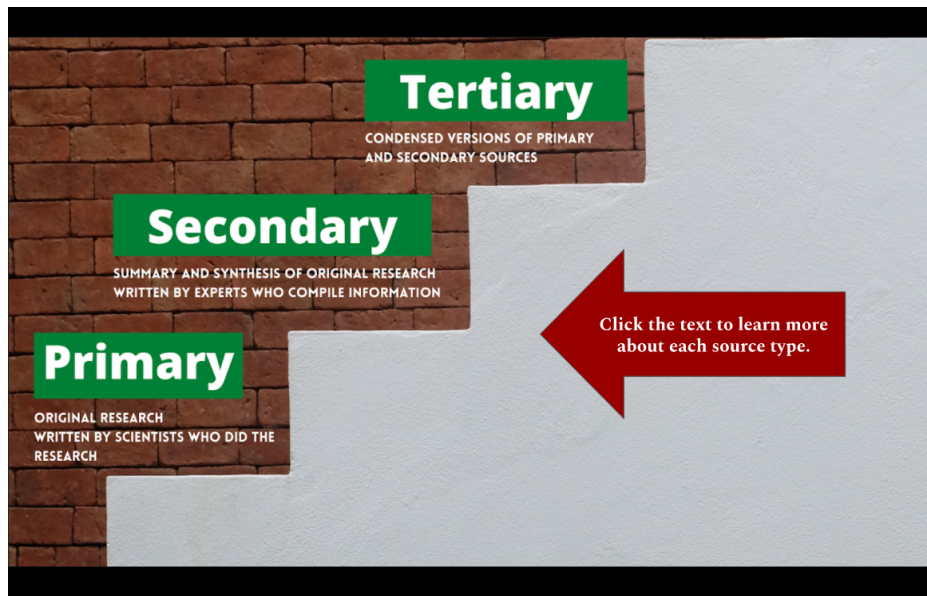
**Information Literacy Program Learning Outcomes (PLOs) – at least one, no more than four – this information literacy instruction supports**

PLO2: Students will gain insight and understanding about diverse sources of information in order to evaluate and use resources appropriately for their information needs.

PLO3: Students will identify the appropriate level of scholarship among publication types (scholarly journals, trade publications, magazines, websites, etc.) in order to critically evaluate the usefulness of the information for their research need.

PLO4: Students will articulate the key elements in their research questions in order to develop and execute a search strategy.

Primary, Secondary, and Tertiary Sources in Biological Sciences:



To view the tutorial shared in today's presentation, visit the website of the **University of Wisconsin Parkside Library** by following this link to their online research guide focusing on Primary, Secondary, and Tertiary Sources in the Biological Sciences (tutorial is at the bottom of the page):

[tinyurl.com/Scranton-BIOL351L-SourceTypes](https://tinyurl.com/Scranton-BIOL351L-SourceTypes)

*Screenshot and tutorial shared with permission from Anna Lian, Reference and Instruction Librarian and Library Liaison to the Biological Sciences, University of Wisconsin Parkside Library*

Getting to the University of Scranton Biology Databases:

Log into [my.scranton.edu](http://my.scranton.edu) → Click on LIBRARY → Library Resources: Databases → Browse databases by subject: Biology

Recommended Databases:

❖ **Biological Abstracts (via Web of Science)**

- Tip: Start with a broad topical search
- Research Area filter: Developmental Biology
- Literature Types filter: Literature Review (exclude for primary research; limit to for secondary research)
- Major Concepts filter: Use to explore and refine sub-topical research interest
- "Find Full Text" to locate in another U of Scranton database or to request via InterLibrary Loan

❖ **ProQuest Biology Journals**

- Tip: Start with a broad topical search AND "developmental biology"
- Source type filter: Scholarly Journals
- Document type filter: Review
  - Tip: You'll need to open and examine articles for context clues to determine if it is primary or secondary research
- Subject filter: Use to explore and refine sub-topical research interest
- Full Text, Cite, Email, and Download options

❖ **PubMed Central**

- Tip: Start with broad topical search
- Additional Filters → Article Type
- "Searches related to" at bottom of results list
- MeSH terms in article records
- Full Text Links → U of Scranton → If needed, request via InterLibrary Loan

❖ **Nature Journals Online**

- Search features are limited on this platform
- Will need to do a broad topical or focused sub-topical search and browse results for articles of interest
- Note that article content goes far back in time on this platform; pay attention to date of publication

Getting Additional Research Help:

Use the Ask a Librarian chat boxes on the Library's web page or email me at [donna.witek@scranton.edu](mailto:donna.witek@scranton.edu).