

**WML Information Literacy Instruction Assessment 2017-18**  
**Classroom Activity Report – Program-wide**  
*Prepared by Donna Witek, Information Literacy Coordinator*

**Faculty Librarians:**

George Aulisio, Kelly Banyas, Frank Conserette, Kevin Norris, and Donna Witek

**Semester:** Fall 2017

**Course Number and Name:** BIOL 141L: General Biology I Lab (EP)

**Course Instructor (Last Name):** Marshall (Faculty Coordinator)

**Date(s) of Guest Information Literacy Instruction:** Week of 08/28/2017\*

\*9 information literacy presentations delivered to 17 sections

**Time(s) of Guest Information Literacy Instruction:**

Various; presentations were 20-25 minutes long

**Location:** LSC 223/229

**Number of Students Registered in Course:** 263 students total across 17 sections

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**Summary of research assignment or task**

See Information Literacy Instruction Planning Template (attached); this document was shared across all librarians teaching the information literacy module in this course.

**Student learning outcomes for the guest information literacy instruction (at least one, no more than three)**

As a result of this guest information literacy instruction and the assignment associated with it, students will understand the differences between primary research articles and secondary articles on science-related topics.

As a result of this guest information literacy instruction and the assignment associated with it, students will practice finding both secondary articles on science topics in the popular press as well as primary research articles on science topics using the Journal Search as well as the Biology Databases provided by the Library.

As a result of this guest information literacy instruction and the assignment associated with it, students will develop good habits in time-management related to the research process by conducting their scientific literature searches early enough to request articles via Inter-Library Loan if needed.

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

Evidence of all three learning outcomes will be found in the students' timely and successful submission of the Science Literacy Assignment #2 to their course instructors.

**Based on your experience teaching this session 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?**

Assessment data that directly measures the three learning outcomes were not made available to the Information Literacy Coordinator for Fall 2017.

**CLOSING THE LOOP — Planned changes for Fall 2018:**

In future semesters, the Information Literacy Coordinator will ask the faculty coordinator of the general biology labs for student scores on the associated assignment very soon after the assignment is completed in order to increase the chance that this data will be sent to the Library for assessment.

The logistics of this information literacy module are complicated because the instruction supports an assignment that is assigned in the second week of classes and due one week later. Scheduling this many face to face information literacy presentations by a librarian in the second week of Fall classes is a challenge. Furthermore, since the labs are longer than the information literacy presentation we deliver, it has been customary for the librarian to deliver this instruction in the lab classrooms. These rooms are not set up well for this instruction.

In Fall 2017 we made the decision to combine sections so that individual librarians did not deliver an unreasonable number of presentations in a single week. This helped the librarians' work load and staffing concerns in the Research & Scholarly Services department, but it meant some students did not have seats during the presentation, making it difficult for them to take notes.

After much discussion, the Research & Instruction Librarians have decided to change the modality of this presentation for Fall 2018 by recording a screencast video of the search process we demonstrated in person in Fall 2017. Factors that went into this decision include the fact that we are down one instruction librarian in Fall 2018 due to a retirement as well as an objective on the Library's current tactical plan that states we will investigate hybrid modalities of information literacy instruction for our program. This BIOL 141L information literacy module is a great opportunity to pilot strategically delivering instruction asynchronously online.

The plan will be to share the video with the faculty coordinator of the general biology labs and with the support of CTLE to embed this video in the learning management course shells for all of the labs. Students will be assigned to watch the video and then complete the research tasks for the assignment. The Library will supplement this online video instruction with Research Services both in person at the Research Services desk and online through our Ask a Librarian chat service.

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### **WML Information Literacy Program Student Learning Outcomes this information literacy instruction supports**

SLO2: Students will gain insight and understanding about diverse sources of information in order to evaluate and use resources appropriately for their information needs.

SLO3: 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.

SLO6: Students will properly distinguish between their own ideas and the intellectual property of others in order to ethically use information and demonstrate academic integrity.

# Information Literacy Instruction Planning Template

Course: BIOL 141L Fall 2017

Date/Time of IL Session: Week of Aug 28, 2017

## Summary of research assignment or task

*Include here any background information provided by the course instructor in their request, as well as any resources you want to remember to teach students how to use.*

For background/context see **Science Literacy Module BIOL 141L F17** (attached)

For assignment see **Science Literacy Assignment No 2 BIOL 141L F17** (attached)

Science Literacy Assignment #2 is **DUE 1 WEEK AFTER** the IL presentation; it is due to their course instructor via D2L dropbox.

Tasks students will need to do **in this order** as part of the Science Literacy Assignment #2:

**Task 1:** They will find a **secondary science article in the popular press** in which a primary research study is being cited.

- a. **PLUG:** NY Times Group Pass and NY Times website—Science category

**Task 2:** They will track down the **primary research article** that is cited in the secondary popular press science article. [**NOTE:** MAY REQUIRE USING INTER-LIBRARY LOAN]

- b. A link within the secondary article may take them to the primary research study's citation information + abstract (and possibly even an open access full-text version of the article)
- c. If an open access version is not available, using the citation information for the primary research study they will **use the Journal Search** (called "Periodical Search" in my.scranton.edu Library tab) to see if the Library has full-text access to the article
- d. If we do not have full-text access to the primary research study, they will need to **request the article via ILL**
  - i. **NOTE: They have 1 week to complete the assignment so we strongly encourage that they try to find the cited primary research study within ~2 days of our IL presentation** so if they need to place an ILL request for it, there will be enough time for the Library to fulfill the request in order to complete the assignment on time.
  - ii. **STUDENTS SHOULD NEVER PAY FOR ARTICLE ACCESS** but timeliness is essential—**PLUG:** Assistance is available from Research Services both in-person (desk on 2<sup>nd</sup> floor of Library) and online: we can **ensure they do not pay to access their cited primary research study.**

## Information Literacy Instruction Planning Template

Course: BIOL 141L Fall 2017

Date/Time of IL Session: Week of Aug 28, 2017

**Task 3:** They will **do a topical search in the Library's databases** on the science topic addressed in the previous two articles and **find another primary research article** related to the first two.

- e. Databases by Subject → Biology → Databases to demonstrate: **ProQuest Biology Journals** and **Science Direct**

Space for individual IL Librarian background notes:

### **Student Learning Outcomes for the IL Session (at least one, no more than three)**

*These are statements that you write for yourself that describe what students will be able to do, practice, know, understand, or value, as a direct result of your teaching. You can begin each statement with "As a result of this IL session, students will..." and then complete the statement with the outcome you are aiming for. Think of outcomes as your aspirations for your students: What do you hope they will learn through your teaching?*

1. As a result of this IL session [and the assignment associated with it], students will understand the differences between primary research articles and secondary articles on science-related topics.
2. As a result of this IL session [and the assignment associated with it], students will practice finding both secondary articles on science topics in the popular press as well as primary research articles on science topics using the Journal Search as well as the Biology Databases provided by the Library.
3. As a result of this IL session [and the assignment associated with it], students will develop good habits in time-management related to the research process by conducting their scientific literature searches early enough to request articles via Inter-Library Loan if needed.

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

*Note that often we as librarians don't have access to the evidence of how students are doing as they work toward our information literacy outcomes. Even if you won't have access to this work, please connect the outcomes you will teach with the work they will be doing for their course instructors during the rest of the course, as potential evidence of information literacy student learning.*

Evidence of all three learning outcomes will be found in their timely and successful submission of the Science Literacy Assignment #2 to their course instructors.

# Information Literacy Instruction Planning Template

Course: BIOL 141L Fall 2017

Date/Time of IL Session: Week of Aug 28, 2017

## **Draft outline of how you will use the time**

*Here you can sketch your notes for what you plan to do and say as you teach the session. Include here steps for any active learning opportunities you plan to facilitate for the students.*

See **IL Session Notes BIOL 141L F17** (attached) for speaking notes for this IL session.

Other Logistics:

The presentation should be completed in **20-25 minutes**.

You will need to use the **instructor's terminal and projector** in the lab room.

→ Vince Marshall, our faculty contact for the course, has been asked to instruct the course instructors for each lab to have the computer terminal turned on, logged into, and the projector screen on, if possible, at the start of the lab when we will be presenting.

If you are presenting to **concurrent sections** of the lab, the students should be combined into one of the labs at the start of the lab—you will present to the combined sections in the lab they have combined into.

→ Vince will instruct the course instructors to facilitate the combining of the students into one lab.

If there is a **handout for the students**, Donna will make this available to you by the Friday of the week before we present.

→ Any other supporting materials (Research Guide for the course, etc.) will be described and included with the speaking notes in **IL Session Notes BIOL 141L F17** (attached).

## **AFTER THE SESSION:**

**Based on your experience teaching this session 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?**

*If you do not have access to student work that provides evidence of their information literacy student learning, here you can brainstorm ideas for activities and assignments you could design in the future in collaboration with the course instructor that would provide you with evidence of their learning.*

## BIOL 141L – Notes for IL Session – Fall 2017

For your Scientific Literacy Assignment #2, you need to find a **secondary science article in the popular press** in which a **primary research study** is being cited, then locate the primary research article in which that study has been published.

Background (adapted from “Science Literacy Module” course document—give verbal credit that we’ve adapted this for our presentations in the Bio labs):

The main way that scientists communicate the findings of their work is through **peer-reviewed journals**. Peer review refers to the process in which other researchers in the same field as an article’s author(s) have reviewed the article—its methods and findings—and determined that the research that led to the article is sound. In the science fields, this means the merit of the work and whether it should be published has been decided by other scientists.

The original publication of peer-reviewed research is referred to as **primary literature** or **primary research articles** or **primary research studies**. In contrast, **secondary articles/sources** contain other people’s interpretation of primary research, such as critiques, summarizations of the findings on a particular topic in a **review**, or journalists and other individuals reporting on scientific advances in articles (newspapers, blogs, etc.) While secondary sources are useful for finding out about new discoveries, being able to access primary research articles is important for understanding and evaluating current findings in science, helping us develop into critical consumers of information.

For your Science Literacy Assignment #2, strategies for finding the **secondary science article in the popular press** include using the new NY Times Group Pass we all have free access to here at the university [Show NYT Group Pass link/web page], as well as the Science category on the NY Times Website [Show NYT main web page and click on Science category].

[Demonstrate selecting an interesting-sounding article, and evaluating it to see if it cites/links to a primary research study]

Ex: “Gut bacteria can fluctuate with the seasons”

Then show both linked articles within—explain difference between them

Second link in article: “Gut microbiome of the Hadza hunter-gatherers” in *Nature Communication*

Demonstrate Library Journal/Periodical Search—we have it full-text, show how to get it

**Plug that if we do not have it full-text, ILL will be needed** [Show ILLiad link, where it is, quick overview of what's involved—**HERE EMPHASIZE TIMELINESS OF THEIR RESEARCH PROCESS** and **DO NOT PAY FOR ARTICLE ACCESS=RESEARCH SERVICES CAN HELP**—Show ways to get help from a Librarian (Ask a Librarian web page)]

Once you have found first a **secondary popular press article** and then **the primary research article that it cites**, the third task your Science Literacy Assignment #2 asks you to do is to use the Library's Databases to search for **an additional primary research article** on the same topic the first two articles address.

[Demonstrate topical searches in the Biology Databases:

My.Scranton.edu → Databases → Databases by Subject: Biology

Two recommended Databases:

ProQuest Biology: search for – human gut microbiome variation

→ I discovered these terms in the abstract of the first primary research article “Gut microbiome of the Hadza hunter-gatherers” in *Nature Communication* [Show them this in the abstract]

→ First result: “An integrated catalog of reference genes in human gut microbiome” in *Nature Biotechnology*

→ Show how to access Methods (in online version linked in the full-text found in this database)

→ Show how to generate/export citation—will need this to complete Science Literacy Assignment #2

[If there's time...]

ScienceDirect: search for – human gut microbiome variation, limit to 2013-present

→ partway down page, result: “Molecular Insight into Evolution of Symbiosis between Breast-Fed Infants and a Member of the Human Gut Microbiome *Bifidobacterium longum*” in *Cell Chemical Biology*

→ not available full-text in ScienceDirect, show Article Linker at bottom of article record, also not available in any other of our Databases, show ILLiad/ILL request

→ Show how to generate/export citation—Export button at top of article record page, select Text format and download