Writing an Annotated Bibliography in Biology
Definition of an Annotated Bibliography:

- A set of citations for articles, studies or books, that include one paragraph per citation which
  - summarizes the contents
  - analyses the central themes or arguments
  - evaluates the relevance of the work to your argument/thesis
- It usually includes a General Introduction to highlight the problem, that presents a thesis statement.
How to Read a Primary Article

1. Read the Introduction
   - Look up definitions for any terms you do not know

2. Read the Results
   - Write down any questions you have about how the research was conducted
   - Write down what methods you think could be used to get these results
   - Write down your own interpretation of the data including any conclusions you think may be drawn
How to Read a Primary Article

3. Read the Methods
   ▪ Compare the actual methods to what you expected. Any surprises?

4. Read the Discussion and the Conclusion
   ▪ Do you agree with the author’s interpretation? How does it compare to your own interpretation?

5. Reread the whole article and summarize each part in your own words
Sample Introduction

Pechenik pg 144-5

- 4-7 introductory sentences to:
  
  Name your topic and describe the aspect of the topic that you are interested in

  Introduce your thesis that answers the question:
  
  What is particularly interesting about this information?
  
  What is the basis of your argument?
Each Annotation consists of:

- The full citation in CSE style
- A few sentences (250 words) describing what the article is about, and your assessment of the usefulness, relevance, quality and implications of this article to your thesis
- Must give the reader an understanding of:
  - **Contents** of the work
  - **Central findings and arguments**
  - An assessment of the quality and merit of the article
  - An **evaluation of its usefulness** to your thesis and how you will use it to develop your thesis
Recommended approach:

- Go back to the topic you selected in Assignment 2
- Recall your refined research question in Assignment 2 Part 4.
  - Use it to develop a thesis statement.
- Review the 3 Primary articles you selected to submit for this assignment.

N.B. You may opt to use other articles for your annotations, but this is a place to start as the work has already been done.
Recommended Sequence:
Read your 3 chosen articles, keeping your topic in mind. Refer to Pechenik Ch3:34 on Reading and Note-taking.
Complete 1 Information Table per article, answering the questions as you read
Write an Introduction to your Annotated Bibliography using Pechenik’s recommendations for writing essays and review papers in Ch8:139. Pay particular attention to:
- Developing a Thesis Statement – pg 142
- Writing the paper: The Crucial First Paragraph – pg 144
Write a 250 word annotation for ONE of the 3 articles
An Annotation Defined:

- The citation in CSE style.
- A 250 word paragraph that includes:
  - A summary of the article
  - An analysis of the central themes or arguments
  - An evaluation of the relevance of the work to your argument

  - Evaluate the usefulness of this primary research article – is it a useful source for your thesis? Why or why not?
  - What is particularly interesting about this information?
  - Is this related to information you have already read (in the other articles)? Does it affirm or contradict this information?
Annotations: Summarizing

1. Identify the thesis, hypothesis or research question of the article
   - Look for repeated keywords and concepts
   - The research question or hypothesis can usually be found in the Introduction, at the beginning of the article and in the Conclusion, at the end of the article
Annotations: Summarizing

2. Identify the major methods used
3. Identify the conclusions reached by the authors

N.B. Do not merely describe the contents of the article; describe why the contents are there (i.e. describe the author’s argument).
Assess the relevance the source has to your research question or problem

Identify the value of the source to the research question or problem as a whole
- Does the source offer a new point of view?
- Does the source offer new evidence?
- Does the source review research or offer a historical perspective on your topic?

Identify how the source’s conclusions impact the question or problem you raised in your introduction
Annotations: Value

- Assess the quality of the source including the quality of methods used
  - What is the credibility of the author?

- What are the limitations of the source?
  - What are the limitations of the methods?
  - What are the limitations of the hypothesis?

Additional information on critically analyzing sources of information may be found in this guide from Cornell:
http://www.library.cornell.edu/olinuris/ref/research/skill26.htm
In-class EXERCISE

- In the interest of saving time, we will use the same research article that you are already familiar with from the first in-class exercise.
- Working in groups of 5, select a scribe for your group
- Take 20 minutes to read the article and answer the questions listed in the Information Table.
- We will fill in the table together as a model for this assignment.
Writing a Literature Review

- A literature review summarizes and criticizes the published information on a given topic.

- Steps in your Literature Review:
  1) Choose a Topic ✓
  2) Research Your Topic ✓
  3) Developing a Thesis Statement
  4) Writing Your Paper
Developing a Thesis Statement

- Your Thesis Statement will appear at the beginning of your paper and you will use the literature you found to support your thesis
  - You may not reach a definitive conclusion
  - Refine your thesis as you read the literature
    - What interested you when you were reading the articles?
    - What questions did you have while reading the articles?
    - Do you see any relationships between the articles and what you already know?
    - Are there any contradictions in the literature?
Before you start writing…

- Get organized!
  - Organize your notes based on how you intend to organize your paper
    - You may choose to use index cards to help sort your notes
  - Eliminate anything that is irrelevant to your thesis
- Use your annotation tables to compare and contrast the articles
Writing your Paper

Introduction
- Introduces your thesis
- Provides any necessary background information

Body Paragraphs
- Present support for your thesis
- Summarize and critique the relevant literature

Conclusion
- Summarize your thesis and support
- Do not provide any new information

Cite your sources

Revise, revise, revise!
- Typos, spelling and grammar
- Logic and content