

# Sequence Overview

## Project Success Link

### English 120/Science 110

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The following two documents are part of a sequence of class and homework assignments designed to prepare students for their third paper assignment in English 120 and to deepen their understanding of the history of science portion of Science 110.

The content of this section is drawn almost entirely from the Science 110 course. The required skills are drawn mostly from the English 120 course.

#### **Science 110 – Content:**

- Overview of (western) history of science (taught primarily through investigation of particular scientist and particular scientific debates)
- Explanation of techniques of induction and deduction as they apply to particular scientific experiments and discoveries
- Introduction to historical contexts (cultural and religious) that impacted scientific progress and debate

#### **English 120 – Skills:**

- Careful and well developed use of exemplification as part of argument
- Use of library for research
- Ability to incorporate and account for counter arguments
- Ability to accurately identify audience and to employ appropriate tone and strategies in order to effectively “speak” to the audience

At the very start of this section in both courses, the students are given the essay prompt, which is discussed in detail in the English 120 course (see page #2). While Professor Oakes is introducing the History of Science content material in his course (through lecture and supplemental reading), Professor Hurvitz begins with class discussion and practice work with material from *They Say/I Say* (the chapters on counter argument and meta-commentary). This is followed by a two-day sequence of more focused work with counter-argument and audience based strategy. This sequence is based on the essay “Snow on Cholera,” first encountered by the students in Science 110, as part of their lesson on the elements of the scientific method. This sequence (see page #3) requires the students to see the essay in light of our discussions around incorporating counter argument (the essay includes several excerpts of Snow’s own argument strategies) – and then asks the students to imagine how they might re-write one of Snow’s arguments for their own chosen audience. This helps them to begin to understand how to go about structuring and strategizing the arguments and examples they will incorporate in the scientist letter assignment.

# Scientist Biographies And Letter to a Scientist

In this section of the science course you have learned about the works of several different scientists. Each section has been presented as a pairing of two scientists with differing notions about particular scientific questions - Brahe/ Kepler, Priestly/Lavoisier, Newton/Hooke, Darwin/Lamarck.

You will need to choose one of the pairings of scientists discussed in Science 110 and, based on your independent research, you will complete a three-part assignment:

**Part I – Biography:** You will write a short (3-4 page) biography of each scientist. Be sure to include important dates and scientific contributions. Also, AND MOST IMPORTANTLY, include other biographical information that might help you (and your readers) gain a deeper insight into each scientist as an individual. For example, you may wish to include information about their families, religious and political beliefs, personalities, personal struggles, etc.

**Part II – Persuasive Letter:** In addition to the two biographies, you will also be writing an essay in which you imagine that you are one of the two scientists writing a letter to the other. This will be a persuasive essay. You will be attempting to convince your reader (the other scientist) to abandon his/her own idea, and accept your own.

Your essay should include the following components:

1. You should demonstrate an understanding of your fellow scientist's idea or theory, as well as provide a thorough explanation of your own.
2. You will need to attempt to use some of the persuasive strategies we have learned in English 120 in order to persuade the recipient of the letter that you have the better theory. (Remember to use the biographical information you have collected in order to assist you in understanding your "audience").

**Part III – Persuasive Letter Analysis:** You will provide a one page "explanation section," detailing the **two or three most important strategic moves** you make in the letter and why you make them/why you think they will be especially persuasive.

You **MUST** use proper MLA citation and include a separate Works Cited page. This essay should be 4-pages long (not including the explanation section or the Works Cited).

Remember: This is not just a logical explanation of your argument. You are working on incorporating persuasive strategies based on the biographical information you have gathered about the scientists!

# English 120

## “Snow on Cholera”

### Using Counter-Argument

One of the more challenging skills required in the Scientist Letter assignment is the ability to *explain the merit of your idea in relation to the idea of another*. We see this kind of writing in professional essays all the time – but often we take it for granted and end up missing some of the common techniques and strategies that make this kind of explanation work effective.

Consider the essay we read from Science 110 – “Snow on Cholera.” This essay provides a detailed explanation of Snow’s theory on the cause of Cholera outbreaks and spreading. Of course, we know that Snow was not the first person to investigate this issue, and there were several theories already in circulation when he began his study. According to the essay, the most commonly held and persuasive theory was the “effluvia” theory, which held that cholera was spread through the tainted air that escaped the bodies of those dying and dead from cholera.

Because this was such a common and widely believed theory, Snow had to find a way to explain his own theory, AND show how and why it was better than the effluvia theory.

Your tasks are:

1. To make a list of all the facts about cholera that Snow’s theory explains, which cannot be explained by effluvia theory. Also, make a list of facts that Snow’s theory does not explain
2. To find at least three (3) moments where Snow explains his theory in ways that either explicitly or implicitly confront the effluvia theory
3. To develop a list of techniques or strategies that seem to help Snow’s argument to be more persuasive in these passages
4. To re-write one of Snow’s explanations with a tone and/or emphasis that would be appropriate for your Scientist Letter assignment (consider the biographical information you have gathered so far, and use it to guide you)

Note: The first three tasks are to be done in class, in small groups. We will come together and discuss these today. The fourth task is a journal assignment – and should be about 1 page, typed. We will go over these together in our next class meeting – you should be prepared to have your work shared with the class – and to be able to explain the logic behind your choices.