Document Title: Three Birds, One Stone

Author: Sarah Davidson

Course: Plant Biology 150

Course Title: The Art of Science Writing

Year of Award: Spring 2008

Copyright Statement:

This material is copyrighted by the author and made available through the Cornell University eCommons Digital Repository under a Creative Commons Attribution, Non-Commercial License.

This document is part of the John S. Knight Writing in the Disciplines First-year Writing Seminar Program collection in Cornell's eCommons Digital Repository. http://ecommons.library.cornell.edu/handle/1813/ 10813.

Spring 2008 Knight Award for Writing Exercises and Handouts

The Knight Award for Writing Exercises recognizes excellence in short exercises and/or handouts designed to improve student writing. Appropriate topics may be drawn from the whole range of writing issues, large scale to small scale, such as development of theses, use of secondary sources, organization of evidence, awareness of audience, attention to sentence patterns (e.g., passive/active voice; coordination/ subordination), attention to diction, uses of punctuation, attention to mechanics (e.g., manuscript formats, apostrophes). Exercises and handouts may be developed for use in and/or out of class.

Submissions should comprise three parts: (1) A copy of the handouts or instructions that go to students. (2) An explanation of the exercise/ handout and of the principles behind it addressed to future instructors who may use the material. (3) If possible, an example of a student response.

Submissions may range in length from one to four or five pages.

Winning Writing Exercises and Handouts will be deposited in a web accessible archive and made available to other instructors under a creative commons attribution, non-commercial license. (See creativecommons.org for more information about cc licensing.)

The two winning entries will receive \$350; honorable mentions (if any) will receive \$125.

Submissions are due in 101 McGraw Hall by Friday, May 9. No exceptions can be made

Spring 2008 Knight Award for Writing Exercises and Handouts

~Please Print Clearly~

Instructor's name SARAH NELL DAVIDSON

Department Plant Biol Course # and title Bio Pl 150.1 The Art of Science Writing

Should I win a prize, I give the John S. Knight Institute permission to publish, quote from, and/or distribute copies of the writing exercises, and to distribute publicity to newspapers and other publications, local and/or national, about my winning the prize. I also grant the Knight Institute permission to deposit the writing exercises in a web accessible archive and make them available under a creative commons attribution, non-commercial license. I am prepared to send electronic versions of my text to the Knight Institute (knight_institute@cornell.edu). I will receive the award for my prize-winning essay upon submission of the electronic text.

Three Birds, One Stone: figurative lunguage, concision, and peer review in explanatory writing Exercises

Instructor's signature(

Date 5-41-19

Three Birds, One Stone; figurative language, concision, and peer review in explanatory writing.

This short exercise sequence, completed early in the course, aims to address the following key challenges in writing; specifically in the context of explanatory writing:

- Writing concisely
- Specificity of language
- Peer revision
- Self revision

The first component of the exercise followed a discussion of figurative language. To effectively write about science, writers must craft clever ways of conveying complex ideas to an audience with little background knowledge of the subject. This is often achieved by comparing the unfamiliar (science) with phenomena familiar to the reader through metaphors and similes. I asked students to use figurative language to explain a concept in science of their choosing to a lay reader with little to no background in science in roughly 500 words.

The second step of the assignment focused on peer revision. Students exchanged papers, rewrote, and revised their peers' explanatory writing piece for clarity and concision. The word count limit was cut to 300. In contrast to the original essay they authored, many students were confronted with a topic they knew very little about. This illustrated the different challenges science writers face when they are writing a story within their area of specialization versus one within which they have very little background. As students soon found out, often it is easier to write about an area in which you have less background. The writer is less inclined to include too much scientific detail and is more likely to aid the reader's understanding with figurative language, since the author also struggled to grasp unfamiliar concepts.

In the third part of the exercise, students received the first two versions of the assignment (one their own, one written by their peer) and were asked to cut the text down to 75-100 words; pages to a paragraph. Words were chosen carefully. Students thought about the most effective and economical way of clearly articulating an idea. In many cases, the figurative language was cut, while in other cases, using an analogy was the most efficient means of explaining the concept. Since every word counted, each had to be assessed as necessary or superfluous. Most importantly, students had to detach themselves from their words — one of the greatest challenges of revising one's own work.

At the end of the exercise students felt they had significantly changed the way they experienced the revision process. As they embarked on writing a full-length science feature article for their final essay later in the semester, we often recalled this exercise. It allowed us to practice explaining science in the concise, yet colorful ways that are inherent to good feature-style writing.

Part 3. Making Science Accessible: analogies and metaphors.

Monday, January 28th.

In class:

- Part 1. We will establish peer review groups and read each other's essays. Providing valuable feedback will be a theme throughout the course and you will be evaluated on your own job as a peer reviewer. As you review your partner's paper, comment on the style and content of the essay, but pay pointed attention to their use of quotes. After you have reviewed your peers' papers, I will read both the essay and the reviewers comments.
- Part 2. In-class discussion: What is an analogy? What is a metaphor? How are they useful in explaining science and making it accessible to a broad audience?
- Part 3. In preparation for Part 2 of your homework, we'll brainstorm ideas of concepts in science that you can address in your homework.

Homework:

- Part 1. Find a piece of science writing in mass media where an analogy is employed to explain a scientific concept.
- Part 2. Take a concept in science (how the planets orbit the sun, how a nucleus controls the workings of the cell, how termites eat wood, etc.) and in roughly 500 words, explain how it works employing figurative language.

Part II. Trimming the Fat

"Explaining Science" Revisions

Part of the challenge of the revision process is making sure each point is clear, concise, and relevant to the story being told. Each sentence and each word should *need* to be there. We tend to "overwrite" and often our text can be reduced drastically by "trimming the fat." In order to trim the fat from our "Explaining Science" essays you are gong to be asked to take your peer editing partner's essay and reduce it to NO MORE THAN 300 WORDS by re-writing it in a more concise way.

"Explaining Science" revision due by Friday. Please drop it by my office (Plant Science 260) BEFORE 3 pm on Friday. Please do not e-mail me your revision.

Part III. Strengthening your writing by "trimming the fat."

Monday, February 11.

Today I am returning to you the original versions of your "how it works" essays as well as the versions "trimmed" by your peers.

For Wednesday, you will need to strengthen your essay further by trimming it down to the word count I indicated on your papers (varies slightly among papers, depending on the original concept and scope).

In order to guide your focus, we will undergo the following in-class exercise.

I want you to pair up with the person whose essay you worked with. Take the other person's paper and answer the following questions:

- 1. What, specifically, is the concept being explained?
- 2. Circle the three key sentences that explain the concept. Limit yourself to three sentences.

Now exchange papers so that you have your own original paper and discuss with your partner what you see to be the key concept being explained and the three key sentences that back up this concept. Explain why you chose the three sentences and discuss what elements in the paper are really essential to the assignment goal; that is, essential to explaining this particular concept.

For Wednesday, you will need to trim this explanatory writing piece yet again. Although your partner has guided you in what they think are your key three sentences, you may not agree. You can make that call. Regardless of what you decide to keep in the essay, I want you to really rework each sentence in your 75-100 word piece to make each word count. It is unlikely that any of your original sentences will show up in the paper you turn in on Wednesday.