

Explaining a Scientific Concept For Page and Screens

Project One: Scientific Writing

Timeline

- ▶ Week One: In-class Workshop
- ▶ Week Two: Final Draft Due

Your first task will be to explain a difficult concept or recent discovery in writing for an audience of non-specialists. You can choose anything, so long as it is a sufficiently complicated idea to require three pages, at least, to explain. You will have seen and discussed several examples of explanation so far: the importance of micro flora (Buhler), the microbiology of human evolution (Kolbert), the development of AI (Mueller), etc. We have also looked at a couple of explanations about how to explain a scientific idea to non-specialists.

In particular, you should work on the skill—discussed in detail by science writers George Johnson and Joshua Schimel—of developing the explanation in stages. Start with a schema or analogy and then build on it to help a non-expert reader through the idea step-by-step.

In addition to this essential skill, you will develop and practice several moves essential for science writing:

- Put the explanation into the context of a brief narrative—this can be a profile or even a narrative or your own discovery.
- Work on providing definitions and glosses that are concise but complete.
- Give background on the problem or discovery. Why is it significant? How did it change our thinking about a given problem or phenomenon?
- Use a striking fact, image, or statistic to generate interest in the explanation.

Finally, no matter which techniques you use, your essay should also explain the significance of the concept. What can readers understand now that they “get” the idea? How have you walked them from data to information to knowledge to, finally, understanding?

Submission Details:

- ✓ Bring a laptop or tablet to class on Monday (Week 1) to use for the workshop. Be prepared to email the draft to your workshop group.
- ✓ Submit to Desire 2 Learn (D2L) assessments dropbox using the link with the appropriate title.
- ✓ Upload a .doc or .docx file.
- ✓ Minimum 900 words
- ✓ Use a standard 12pt. font (e.g. Times New Roman, Cambria).
- ✓ Include references at the end.
 - ✓ You may use graphics, although do not rely exclusively on them.

Project Two: Digital Video

Timeline

- ▶ Week Three: Bring draft of script and images for storyboarding. Setup WeVideo account and watch tutorials.
- ▶ Week Three: In-class work in WeVideo. Bring a copy of your audio file in mp3 format.
- ▶ Week Four: Bring a rough cut for workshop and feedback.
- ▶ Week Five: Publish project and post link to D2L.

You will revise your explanation into a three-minute video. This assignment will help you as science writers in three key ways:

- a) You will develop skills working with digital media.
- b) You will gain skills using images to enhance your explanations, making them central to your writing.
- c) You will continue to develop your awareness of the demands of working in different media and genres for different audiences.

Planning

Over the weekend, you should look carefully at your explanation essay. Think about which parts might serve as useful voiceovers in a video, and which parts you need to cut. Consider how you might best reorganize your explanation given the possibilities and limitations of working in a digital medium. Consider the strategies from the videos we screened in class and think which approaches are best suited for your explanation.

Read your essay out loud several times. Revise for clarity as a spoken-word piece. Time it to determine if you need to cut or expand. Also, note what kind of images you need to accompany the different parts of the video. Are there parts that might not have any accompanying images or video? You will probably need to revise so that the images keep moving and your audience stays engaged. You will also need to consider issues of redundancy. What you explained clearly (and at length) in writing might be easily captured in one image.

For Monday (Week 3), bring in a revised version of the essay that can serve as the basis of the “script.” You should also begin collecting images, music, video clips, etc. that you will use in the video. Ideally, images should be 200dpi and clips HD. Audio should be in mp3 format. In class, we will go over storyboarding techniques and I will show you some of WeVideo’s features. You will have a chance to start storyboarding in class.

Between Monday and Wednesday (Week 3), you should record your voiceover. While WeVideo has a record option, being cloud-based it does not always provide the best quality. Using Audacity (an open-source audio editing program) will provide better audio. I will cover how to use it in class.

On Wednesday (Week 3), you will have time to construct your video in class. I expect this to be a collaborative process. You can use each other as resources to figure out how to overcome some of the technical hurdles.

By next Monday (Week 4) you will have completed a rough cut of the video. You will receive feedback in small-group workshops on the clarity of the explanation and the visual style. You will have a chance during the second half of class to revise, ask questions, and figure out technical fixes. On Wednesday (Week 4) you will have time in class to work on the video and get help from your classmates and me.

Publish your video the following Monday (Week 5). Do not do it until you are certain it is final. I will show you how to publish it in class. You should then post the WeVideo link to D2L dropbox. This has to be done by 2pm so that I can create a playlist for screening in class. We will watch everyone's videos so that you can see multiple approaches to multimedia explanation.

Submission Details:

- Post your WeVideo link to D2L by Monday.
- Aim for the video to be around three minutes. (No shorter than 2:30, no longer than 4:00)
- You'll have the chance to reflect on what worked well, what didn't, and what you might have done differently if you had more technical skills in the end-of-unit reflection.

Project Three: Writer's Statement

Timeline

- ▶ Week Five: Screen Videos in Class
- ▶ Week Five: Post Writer's Statement to D2L

As a capstone to the first unit, write a 750-word writer's statement that discusses both assignments and analyzes the uses and limitations of the different media. Specifically, comment on all of the following:

1. Which media (digital video vs. written essay) did you think helped you explain your topic best? Why? What are the affordances and limitations of each? How might you use the affordances in one medium to augment the other?
2. If you were to revise your essay based on your experience working in digital media, what would you change? Be as specific and concrete as possible. Consider: How would you incorporate images? How would you revise your prose? What would you cut? Add?
3. Describe the strengths and weaknesses of your video. Which aspect(s) explains your topic most effectively? What would you have done in your multimedia had you more time or technical expertise? Discuss three of the videos we watched together in class: What might you learn from them about different strategies in the media?

Submission Details

- ✓ Submit the reflection to D2L using the link with the appropriate title.
- ✓ 750-word minimum.

Grading

In general, the grades for each part of this assignment will reflect how well your finished product employs strategies from our common readings and videos. I will allot time in class to collaborate on constructing a detailed rubric. As you work on the video, you might face some technical hurdles. While the final draft should be polished and mostly glitch-free, you'll have a chance to reflect on the challenges of the working in the digital medium in your writer's statement. It will be more important to reflect critically on your rhetorical choices than to master all of the technical aspects of making the video.