Exercises in Scientific Integrity: Additional Ideas for Assignments

These ideas for short homework assignments or projects are provided in three major categories: utilizing newspapers, participating in representative democracy, and engaging in public outreach. If you're at a loss for a scientific integrity issue to write about, there are many thought provoking topics in the Union of Concerned Scientists' "A to Z Guide to Political Interference in Science" at *www.ucsusa.org/atoz.*

I. Newspaper Assignments

1. Letters to the editor are an important and effective way for citizens to get the attention of their elected officials and the general public. Write about a recent news story related to scientific integrity; the UCS website offers letter writing tips (*http://www.ucsusa.org/ssi/resources/letters-to-the-editor.html*) and a sample letter (*http://www.ucsusa.org/ucs/about/writing-a-letter-to-the-editor.html*).

2. Another method of getting your viewpoint out through the media is to write an op-ed piece. Write about the scientific integrity issues raised by a recent news article, important event, or long-term problem in your community. The UCS website offers op-ed writing tips (*http://www.ucsusa.org/ssi/resources/writing-op-eds.html*).

3. Write an original news story on a scientific integrity issue. Since most news is event-driven, check the websites of newspapers and other media, Congress, or nonprofit groups for topics. Don't worry if the topic is a bit dated; just focus on writing a piece with substance, solid background research, and relevant quotes.

4. Editorial cartoons are another great way to use the media to bring attention to scientific integrity. Draw a cartoon about a recent example of politicization; the UCS website offers tips on drawing an effective editorial cartoon (http://www.ucsusa.org/scientific_integrity/science_idol/).

II. Representative Government Assignments

1. Congress, in providing oversight of federal agencies, should consider the importance of scientific integrity. Write a letter to Congress or another legislative body (for example, your city council or state representatives) calling for laws to preserve scientific integrity or expressing your concerns about a particular instance of political interference in science. The UCS website offers tips for writing to elected officials (*http://www.ucsusa.org/ssi/resources/writing-an-effective-letter.html*).

2. Prepare a briefing memo for one of your elected officials on a scientific integrity issue. A briefing memo attempts to summarize an issue in a single page of text without watering down any of the relevant facts; it should contain all the necessary background information and enough detail so your representative can pull "talking points" from it. Be sure to address how the issue is relevant to the representative's constituency, as well as any broader (national or international) implications.

3. While in session, the various committees of Congress hold numerous hearings every day; these hearings are usually shown live on the committee's website (where some are also archived). Choose a recent or archived hearing with a scientific integrity theme and write a short paper on the issues discussed, the viewpoints of witnesses and representatives, and some of the more interesting questions asked.

Public Outreach Assignments:

1. Scientific integrity should be an important issue to the public, since the U.S. economy and public health can suffer if policy decisions are not based on the best available science. Find a creative way to make a scientific integrity issue easily accessible to the general public; for example:

- write a short speech
- create a brochure or pamphlet
- design a poster
- write a script for (and/or produce) an original TV or radio infomercial

Keep the focus of your assignment narrow, but be sure to give your audience enough background information to illustrate why the issue is important.

2. Write a letter educating a friend or family member about how an abuse of science affects him or her.

3. Plan a scientific integrity roundtable discussion or lecture series with a panel of experts. Consider what issue(s) you will cover and why, what experts you would invite (keeping in mind that you should have reasonably diverse viewpoints represented), and how you would draw attention to your event.

4. Interview one or more science or policy professors about scientific integrity issues and note their responses. When formulating a list of questions, be prepared to briefly detail a couple of relevant abuses of science—do not assume the interviewee will already know about the specific abuse. For a more involved project, you could draft a survey to send to scientists at your institution; the UCS website offers examples (*http://www.ucsusa.org/scientific_integrity/interference/survey-summaries.html*).

5. Organize a classroom debate on a specific scientific integrity issue: for example, whether government scientists have the right to act as whistleblowers when they become aware of a breakdown in scientific integrity, and under what circumstances it is appropriate to do so. Your research should include current protections for whistleblowers under federal law. Note the areas where you and your fellow students reach a consensus and those where you disagree.