

Innovators in Botany and Physics Assignment

The goal of this assignment is to become familiar with a current or historic, notable, under-represented minority in the fields of botany (plant biology) and physics. This assignment will give each student the opportunity to showcase notable contributors to these fields of science that may not be as visible because of unconscious biases and discrimination in our society, and specifically in the field of science. Working with a partner, you will research and identify a botanist (plant biologist) and a physicist who belongs to an under-represented group in sciences and who you find inspiring in some way.

Some examples of under-represented groups in science¹: persons with disabilities, women, racial/ethnic minorities (Black, Hispanic, American Indian/Alaskan), LGBTQA individuals (lesbian, gay, bisexual, trans*, queer, or asexual)

In your research, try to discover the following:

Context: What is your subject's educational and career background? Who influenced them? What drew them to their field? Did any specific characteristics enable them to become a significant contributor?

Accomplishments: What contributions did they make to science? What specific areas of ecology/physiology does their work impact? What kind of recognition have they received for their work?

Characteristics: What traits do they possess that you admire? What similarities do you see between this scientist and yourself? What does it take to impact the field of ecology/physiology today?

To turn in assignment: Prepare two PowerPoint slides including photos, short summaries of info on your chosen botanist and physicist and their work, and a short bibliography citing your sources. You and your partner will present your slides to the class for discussion. Your slides will be posted to the class web-site. Bullet points are fine, but pay attention to details including spelling, grammar, and links, so your slide is easily legible for readers.

Tips for conducting your research:

- Since some of the scientists you will be researching may be currently active (and some pretty young), limited info may be available online. If you can't find all of the details listed above, just bring whatever interesting facts you do find – the point is to become familiar with these individuals and their work, and to make them visible to our learning community.
- You might start by searching Google Scholar or conducting a search on the library website of journals in plant ecology, plant physiology, or physics for topics in these fields that are of interest to you. Once you locate an article that sparks your interest, you can research the authors and visit their websites for further information about them and their careers.
- Here is a list of suggested journals:
 - *Proceedings of the National Academy of Sciences*
 - *The New Phytologist*
 - *American Journal of Botany*
 - *Physics Today*
 - *American Journal of Physics*
 - *The Physics Teacher*
- You may also consider searching news, blogs or popular science magazines to find interesting research.
- You may also consult with faculty for suggestions or sources.

¹ Women, Minorities, and Persons with Disabilities in Science and Engineering: 2013 National Center for Science and Engineering Statistics Directorate for Social, Behavioral and Economic Sciences National Science Foundation