Homework Assignment #5, Explaining Physics Concepts to Nonscientists—Final

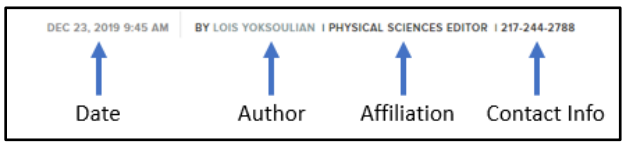
N.B. This assignment will be peer-reviewed (HW #6). Be sure to get this week's assignment (HW #5) submitted by the deadline (February 28) so that your reviewers have time to complete HW #6.

In this assignment, you'll take your synopsis and outline from last week and, using the ideas from the "Paragraphs" lecture, expand your outline into a full paper. Remember your audience! Make sure the language and the figures that you use would be understandable to a nonspecialist.

This assignment consists of two "deliverables": **(1)** Your collaboratively written paper, to which you and your teammate contribute and submit as a single joint assignment. Be sure to put both your names on the paper, but each of you must upload the final version to your my.physics portal by the deadline. **(2)** A separately written "reflection" that each of you will write and upload independently. In the reflection, identify your contribution to the joint paper and say whether you think the work was distributed fairly. Comment on what went well and what didn't. Provide an evaluation of the assignment itself—what did you learn? What did your find most challenging, and why? (Be honest.) How could this assignment be improved? Upload your reflection as a separate document for HW #5 in the portal. Your reflection will be kept confidential and will ***not*** be given to you peer reviewer for HW #6.

Your paper (deliverable 1), which should be no more than three pages, including text and figures, must contain the following six elements:

1. An engaging title.
2. A "byline"—your names, the date of the article, and your contact information. See https://news.illinois.edu/view/6367/730694 for an example of how to do the byline, as shown below. Use "Department of Physics, University of Illinois" for the affiliation, and your email addresses instead of a phone number for the contact information.



3. A strong, engaging opening to capture the audience's interest and make them want to keep reading.
4. A single main idea, conveyed in laypersons' language (no jargon, no arcane technical terms, no equations). You cannot cover every aspect of your chosen topic in this assignment. Pick one element (e.g., what? why? when? how?) and make your story about that main idea.
5. At least two illustrative images, with appropriate credit given to the sources. The figures should be understandable and meaningful to a general audience (i.e., no complicated plots or equations) and inserted in the text of your story (as I have done with the byline figure here). You do not have to create these figures yourself, but you must credit the original authors and identify the sources of the figures if you use someone else's figures. You must also provide **your own, original captions** to explain the figures.
6. At least four embedded hyperlinks[1] in the text to related, supplementary material that a reader could use to learn more about your topic. Links should be to content at an appropriate level for the intended audience—no links to technical papers. N.B. **Do not** just type the URL in your document; hyperlink the text in your article to the external material.

Unlike scientific papers, popular science articles do not provide a list of references at the end of an article. Instead, hyperlink the source to an appropriate word or phase in your article. See an example of this type of hyperlinking in "Schrödinger's Cat breakthrough could usher in the 'Holy Grail' of quantum computing, making them error-proof" on the LiveScience website.

Your "reflection" (deliverable 2) should be no more than one page.

Due: **Friday, February 28, 9:00 p.m.** Upload your completed assignments to my.physics. Assignments submitted after

[1] See this video for instructions on how to insert a hyperlink in a Word document.

the deadline will have points deducted. Be mindful of your reviewers and ***get your story submitted by the deadline***, so they have adequate time to complete their reviews. Assignments submitted after the deadline will have ***at least 30 points deducted*** and will be ineligible for rewrite points.

Total—(1) Jointly written paper–120 points; 40 points on the accuracy of the physics, 40 points on how well you pitch your story for your intended audience of nonscientists (including use of figures and hyperlinks), and 40 points on clear, concise, compelling writing. (2) Reflection–30 points.