

## RESOURCES for a Successful Teaching Career

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### The Life Science Teaching Resource Community ([www.lifescitrc.org](http://www.lifescitrc.org))

An online community for life science educators at all levels. The resources are free and open to educators worldwide, although free registration may be required to participate in some community activities, such as posting comments.

This community has extensive material on career development, improving presentations skills, interviewing, running a lab, etc. The materials come from multiple sources including NIH, National Academy of Sciences, AAAS, and a variety of professional societies. It includes self-paced online training courses. For example:

“Best practices for publishing your research” (7 modules)

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- **The Promoting Active Learning and Mentoring (PALM) Network** <https://palm.ascb.org/>  
Established to increase the use of active learning in undergraduate lecture courses. PALM Fellows can be postdocs aiming for a career that involves undergraduate teaching or they may be faculty at almost any stage of their academic career.
  - HHMI Postdoc Teaching Fellows (various institutions)
  - **Emory Fellowships in Research and Science Teaching (FIRST) program** [www.biology.emory.edu/first/](http://www.biology.emory.edu/first/)  
provides postdoctoral fellows with both research support and training in teaching methods. Collaboration with Morehouse College and SOM, Spelman College, and Clark Atlanta Universities.
  - **National Postdoctoral Association** [www.nationalpostdoc.org/?page=TeachingFellowships](http://www.nationalpostdoc.org/?page=TeachingFellowships)
  - **NIH NIGMS Institutional Research and Academic Career Development Awards (IRACDA)**  
<https://www.nigms.nih.gov/Training/CareerDev/Pages/TWDInstRes.aspx> (various institutions)
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### SELECTED BOOKS AND ARTICLES

- *HOW PEOPLE LEARN* Read free at <http://www.nap.edu/catalog/9853/how-people-learn-brain-mind-experience-and-school-expanded-edition>
- *A Taxonomy for Learning, Teaching, and Assessment: A revision of Bloom's taxonomy of educational objectives.* (Anderson and Krathwohl, 2001) For an overview, see [www.unco.edu/cetl/sir/stating\\_outcome/documents/Krathwohl.pdf](http://www.unco.edu/cetl/sir/stating_outcome/documents/Krathwohl.pdf)
- Biology in Bloom: Implementing Bloom's Taxonomy to Enhance Student Learning in Biology. *CBE Life Sci Educ.* 2008 Winter; 7(4): 368–381.
- Silverthorn *et al.* It's Difficult to Change the Way We Teach: Lessons from the Integrative Themes in Physiology (ITIP) Curriculum Module Project. *Adv Physiol Educ* 30(4): 204-214, 2006.
- Freeman *et al.* Active learning increases student performance in science, engineering, and mathematics. *PNAS* 111(23): 8410-8415, June 10, 2014. Available at [www.pnas.org/content/111/23/8410.abstract](http://www.pnas.org/content/111/23/8410.abstract)
- Silverthorn, D.U. Teaching and learning in the interactive classroom. *Adv Physiol Educ* 30: 135–140, 2006.
- Michael, J. Where's the evidence that active learning works? *Adv Physiol Educ.* 30(4):159-67. 2006 Dec

- Eddy *et al.* PORTAAL: A Classroom Observation Tool Assessing Evidence-Based Teaching Practices for Active Learning in Large Science, Technology, Engineering, and Mathematics Classes. *CBE—Life Sciences Education* 14:1-16, Summer 2015.
  - Luckie *et al.* Model-based reasoning: using visual tools to reveal student learning. *Adv Physiol Educ* 35: 59–67, 2011. (About using concept mapping.)
  - Carraccio *et al.* Shifting Paradigms: From Flexner to Competencies. *Academic Medicine* 77( 5): 361-367, May 2002. free download at <https://www.aamc.org/download/378530/data/shiftingparadigms.pdf>
  - Scientific Foundations for Future Physicians: A Report of the AAMC-HHMI Committee (2009) <https://www.aamc.org/download/271072/data/scientificfoundationsforfuturephysicians.pdf>
  - *Understanding by Design*. G. Wiggins and J McTighe.
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## FREE SEARCH ENGINES

- Pubmed (U.S. National Library of medicine) [www.pubmed.gov](http://www.pubmed.gov) Education articles for university and professional school education are often indexed here.
  - ERIC (Educational Resource Information Clearinghouse) [www.eric.ed.gov](http://www.eric.ed.gov) This database includes education journals that scientists may not know about. The articles include research in pre-college levels as well as university and professional.
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## Journals for physiology education research

- *Advances in Physiology Education* (free full-text, peer reviewed) <http://advan.physiology.org>  
Email Alerts is a free service providing table of contents, searching, article citation, and other email based alerts for all APS journals. Visit [www.physiology.org](http://www.physiology.org), select a journal, and sign up under Alerts!
  - *CBE Life Sciences Education* (free full-text, peer reviewed) [www.lifescied.org](http://www.lifescied.org) Sign up for email TOC alerts on the home page
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## Organizations

- American Physiological Society (APS) [the-aps.org](http://the-aps.org) Sections for trainees and for education
- The Human Anatomy & Physiology Society (HAPS) [hapseweb.org](http://hapseweb.org) For teaching anatomy and physiology
- Society for the Advancement of Biology Education Research (SABER) <https://saber-biologyeducationresearch.wikispaces.com/>