



## Writing to Learn in Undergraduate Science Education

- Reynolds, J.A., Thaiss, C., Katkin, W., and Thomson, Jr., R.J. 2012. Writing-to-learn in undergraduate science education: a community-based, conceptually-driven approach.
  - The result of a National Science Foundation (U.S.)-supported initiative to raise STEM faculty awareness of research on the effectiveness of writing to learn. Table 2 provides references for representative empirical studies and promising descriptive ones, by discipline.

### Example writing to learn activities

#### Generic activities

- Low-Stakes Writing Assignments. Centre for Teaching Excellence. University of Waterloo.  
<https://uwaterloo.ca/centre-for-teaching-excellence/teaching-resources/teaching-tips/developing-assignments/cross-discipline-skills/low-stakes-writing-assignments>  
-Includes several examples of low-stakes writing activities
- Low Stakes Writing. UW Writes. Writing Resources for Departments, Teachers and Students. Arts & Sciences Writing Program. University of Washington.  
<http://depts.washington.edu/writeuw/lowstakeswriting.html>  
-Includes several examples of low-stakes writing activities
- Examples of Writing to Learn Activities. The WAC Clearinghouse. Colorado State University.  
<http://wac.colostate.edu/intro/pop5.cfm>

#### Discipline-specific activities

- Schmidt, S.J., Parmer, M.S., and Javenkoski, J.S. 2002. Learning Techniques in a Large Introduction Course: The Daily Microtheme. *Journal of Food Science Education*, 1: 28–33.  
-Details their use of microthemes and provides example questions at different levels of Bloom's taxonomy and for different purposes (e.g. stimulate discussion, etc.).
- Russek, B. 1998. Writing to Learn Mathematics. *Writing Across the Curriculum*, Vol. 9, 36-45.
- Cooper, M.M. 1993. An Approach for Large-Enrolment Chemistry Courses. *Journal of Chemical Education*, 70(6): 476-477.  
-Example writing to learn assignments for chemistry
- Hoffman, M.E., Dansdill, T., and Herscovici, D.S. 2006. Bridging Writing to Learn and Writing in the Discipline in Computer Science Education. *ACM SIGCSE Bulletin*, 38(1): 117-121.