

Sara Lacy

617 873-9738

Sara_Lacy@TERC.edu

Biographical Summary

Sara Lacy is a Senior Scientist at TERC and is currently Principal Investigator of the NSF-funded project, *Focus on Energy: Preparing Elementary Teachers to Meet the NGSS Challenge*. The project is a collaboration between TERC, Seattle Pacific University, Tufts University, Boston College, and FACETS Innovations to develop resources that support teaching and learning about energy in grades 3-5. Previously, she led *Rethinking How to Teach Energy: Laying the Foundations in Elementary School*, an exploratory research project to investigate students' ideas about energy and to develop a theoretical learning progression for energy in Grades 3-5.

Sara has worked at TERC since 2001, developing science curriculum for K-12 students (*The Inquiry Project, Physics That Works*) and material to boost the science and pedagogical content knowledge of in-service K-8 teachers (*The Fulcrum Institute, TERC/Lesley Masters in Science Education, Talk Science*). She has developed material for environmental action groups in the *Statistics for Action* project and has taught web-delivered science courses to in-service K-8 teachers as an adjunct faculty member at Lesley University.

Sara holds a Ph.D. in Civil Engineering from Princeton University. Before coming to TERC, she served on the faculty of the engineering schools at Rutgers University and at Tufts University.



Selected Publications and Presentations

- Crissman, S., Lacy, S., Nordine, J., and Tobin, R. (2015). Looking through the energy lens –Teaching a crosscutting concept in elementary school. *Science and Children*, 52(6), 26-31.
- Lacy, S., Tobin, R., Wisner, M., & Crissman, S. (2014). Looking Through the Energy Lens: A Proposed Learning Progression for Energy in Grades 3-5. Published in: Chen, R. F., Eisenkraft, A., Fortus, F., Krajcik, J., Neumann, K., Nordine, J. C. & Scheff, A. (2014). *Teaching and Learning of Energy in K-12 Education*. New York: Springer.
- Tobin, R., Crissman, S., Doubler, S., Gallagher, H., Goldstein, G., Lacy, S., Rogers, C., Schwartz, J., & Wagoner, P. (2012). Teaching Teachers About Energy: Lessons from an Inquiry-based Workshop for K-8 Teachers, *Journal of Science Education and Technology*, 21:5, 631-639.
- "Looking Through the Energy Lens: A Learning Progression for Energy in Grades 3-5." Presentation at the Energy Summit, Michigan State University, Lansing, MI. December, 2012.
- "How can students in grades 3-5 understand energy? A learning progression approach to understanding a core idea in science," Lacy, S. J. and Crissman, S. Presentation at the National Science Teachers' Association (NSTA) 2012 National Conference, March 29-April 1, 2012, Indianapolis, Indiana.
- Lacy, S. J., "A Learning Progression for Energy: Laying the Foundation in Elementary School." Presentation at the International Society for Design and Development in Education (ISDDE) Conference, Design and Development: Transforming STEM Learning, Sept. 12-15, 2011, Boston Museum of Science, Boston, MA.
- "Shedding Light on Global Warming: Physics Concepts and Technology Tools That Help Teachers Better Understand a Complex Process," S. J. Lacy, S. Crissman, and E. Kemp-Benedict. Short Course at NSTA 2008 National Conference, March 27-30, 2008, Boston, Massachusetts.
- "Earth Science From a New Perspective: An Online Course for K-8 Teachers," S. Lacy. AGU 2003 Fall Meeting, San Francisco, California, December 8-12, 2003.