

The Center for STEM Education

PRESENTS

“Current Research Concerning Science Learning from Middle School to College”

Dr. Philip Sadler,
Director, Harvard-Smithsonian
Center for Astrophysics Science
Education

December 11 2007
Raytheon Amphitheater
2.30–3.30 p.m.

This event is free &
open to the public

Bio:

Philip M. Sadler heads the Science Education Department at the Harvard-Smithsonian Center for Astrophysics. As F.W. Wright Senior Lecturer in Astronomy, he teaches graduate courses in science education and undergraduate science at Harvard University. His work informs national policy debates on the teaching of science and professional development. Dr. Sadler has won awards for his research from the Journal of Research in Science Teaching, the Astronomical Society of the Pacific and the American Institute of Physics. He is the inventor of the Starlab Portable Planetarium and has been a middle school math and science teacher. The materials and curricula that he has developed are used by an estimated fifteen million students yearly.

Abstract:

For several years, our department has been studying the development of students' scientific understanding from middle school to college level. One useful method is to gauge how the naive ideas that students hold change or remain stable as the result of instruction. We have been able to characterize the difficulties and useful interventions in both the physical and earth and space sciences from middle school to high school and from high school to college. We have also been able to model the effectiveness of changing course sequence, mathematics background, laboratory, project work, and advanced coursework in high school. I will report on the strategies and methods that either help or hinder the development of students' scientific understandings and success in college science courses

Center for STEM Education
716 Columbus Avenue
Suite #378CP
Boston, MA 02120

Phone (617)373-5154
www.stem.neu.edu