

THE CENTER OF SCIENCE AND MATH IN CONTEXT (COSMIC) &
GRADUATE COLLEGE OF EDUCATION & COLLEGE OF SCIENCE
AND MATH PRESENT:

Science Education Colloquium

University of
Massachusetts Boston
Campus Center
Ballroom

Thursday,
March 6, 2008

4:30 PM

Event is free and open to
the public, but advance
registration is requested

Please RSVP to Anthea
Gabriel at 617-287-7587

or
anthea.gabriel@umb.edu

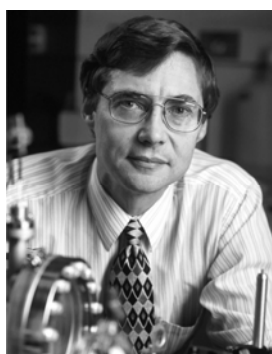
Science Education in the 21st Century: Using the Tools of Science to Teach Science

Dr. Carl Wieman, Director of the Carl Wieman Science Education Initiative (CWSEI) at the University of British Columbia, Chairman of the Academy Board on Science Education, **Nobel Prize in Physics (2001)**

Guided by experimental tests of theory and practice, science has advanced rapidly in the past 500 years. Guided primarily by tradition and dogma, science education meanwhile has remained largely medieval.

Research on how people learn is now revealing how many teachers badly misinterpret what students are thinking and learning from traditional science classes and exams. However, research is also providing insights on how to do much better. The combination of this research with modern information technology is setting the stage for a new approach that can provide the relevant and effective science education for all students that is needed for the 21st century.

I will discuss the failures of traditional educational practices, even as used by "very good" teachers, and the successes of some new practices and technology that characterize this more effective approach, and how these results are highly consistent with findings from cognitive science.



Carl Wieman is a recipient of the Nobel Prize in Physics, the National Science Foundation's Distinguished Teaching Scholar Award in 2001, the Carnegie Foundation's U.S. University Professor of the Year Award in 2004, and the American Association of Physics Teachers' Oersted Medal in 2007. He conducts research on problem-solving skills and student beliefs about physics, and has worked on a variety of research and innovations in teaching physics to a broad range of students.

This event is presented by the Center of Science and Math in Context (COSMIC) at the University of Massachusetts Boston, with partial support from the Boston Science Partnership. Please visit our project websites at

www.cosmic.umb.edu and www.bostonscience.org

to learn more about our initiatives to improve science teaching and learning in Boston's schools, community colleges and universities.

