

# NCSSMST Professional Conference October 26-29, 2011

## Cultivate, Balance, and Sustain through Innovation

CoHost : Liberal Arts & Science Academy Austin, TX  
Conference Location: The Historic Driskill Hotel, Austin, TX

"Our challenge is to create something unprecedented in human history: an ecologically sustainable civilization that offers a high standard of living widely shared among its citizens, a civilization that does not maintain itself through more-or-less hidden subsidies from antique solar income or from the unsustainable exploitation of ecosystems and peoples held in slavery or penury, domestically or in remote regions of the globe. The world has never known such a civilization." - Eric Zencey

## Overarching Question

How can we broaden STEM education to reflect a current world climate, expanding everything we teach to include ethics, balanced science curriculum, and the "3 E's" of sustainability: economics, environment, and social equity?

## Rationale

The scientific community, innovative businesses, and, increasingly, governments and industry are beginning to understand that viewing STEM through an exclusively economic lens is outdated and ineffective. The world is beginning (or, in some cases, in the middle of) a SHIFT to viewing STEM from a sustainability lens.

As STEM educators, we can also shift our focus to not only train but also inspire socially responsible, successful STEM professionals.

## Session Strands

### Balance

Curriculum Trends to reflect the 3 E's of Sustainability (Economics, Environment, Social Equity)

Examples

- courses specifically designed to address this issue
- units within courses addressing sustainability
- innovative interdisciplinary projects which address this issue

Curriculum Philosophy – Redefining STEM Education from a sustainability lens: mission and outcomes

Educating the Whole Child - the role of non-STEM disciplines (arts, etc.), activities, and creativity in a STEM school

STEM Pipeline – connecting with earlier grades, preparing for post secondary  
STEM Ed and the Community  
STEM Ed and Public Policy

### Cultivate

Community Connections – using partnerships to enhance and authenticate education

University, Industry, Government  
Community – Service Learning – Student Experiences

Leadership

Administrative/Staff  
Student  
Community

### Sustain

Building Activities that support sustainability and innovation

Energy/Resource use  
Green Building  
Clubs/Organizations  
Advisory/Events