2012 AAAS ANNUAL MEETING: SYMPOSIUM PROPOSAL

TITLE: Global Climate Change Science Education Principles, Communication, and Practice

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SESSION DURATION: 180 minutes **[up to 1000 characters state why 3 hours is justified]** For this draft, see the Symposium Roles section for time allocation given for each of the symposium speakers, discussion, and a break.

CATEGORY SELECTION

Primary subject category: education

Secondary subject category: climate change

SECTION MEMBER AFFILIATION: Section Q, Education

DISCIPLINARY SECTIONS CONSULTED: Section Q, Education

SYNOPSIS **[up to 1500 characters]**

Subject description, scientific issues, innovations, research to be addressed

Global climate change science challenges and inspires students to learn about the complexities of the Earth's biotic and abiotic systems that both impact and respond to climate. Yet, because of its complexity and cross-curricular breadth, climate change science can be difficult to teach. In addition, climate science education has incited controversy and resistance similar to the challenges experienced in teaching evolution.

This symposium will describe the principles that define a climate literate person, report America attitudes toward climate change science and the reality of climate change, provide recommendations for communicating climate science, and highlight examples of formal and informal educators and scientists who are actively involved in climate science education.

RELEVANCE TO THEME **[UP TO 500 characters; this =514]**

Climate science is multi-disciplinary encompassing all the Earth's systems, (atmosphere, geosphere, hydrosphere, and biosphere) and crossing boundaries into several humanities fields including economics, health science, anthropology, and social science. Knowledge and understanding of the complexities of climate change science is critical to 21st Century learning, as adaptation to and mitigation of climate change impacts will become an everyday reality with the present and future generation of K-12 students.

SYMPOSIUM ROLES

Organizer & Moderator: **Candace Lutzow-Felling *(confirmed)***
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Speaker 1. Foundations of Climate Change Science Literacy (20 minutes)
Describe Climate Literacy Principles & Climate Literacy Grade Level Benchmarks (concept knowledge maps) & their importance to guiding and structuring climate science education & learning
(*Potential speaker:* Frank Niepold, NOAA Educator)
What should a climate literate person know by the end of high school? How do the components of climate science build from one grade level to the next?

Speaker 2. Current Climate Science Knowledge Perspectives/Attitudes (20 minutes)
Attitudes towards climate change science across the economic and social sectors of the United States.
(*Potential speaker:* Yale Project on Global Climate Change Communication, Anthony Leiserowitz or Nicolas Smith, report co-authors; "Knowledge of climate change across global warming's six Americas")

Speaker 3. Communicating Global Climate Change (20 minutes)
How do we communicate global climate science and climate change science to the general public and K-12 education community? Up-to-date and accurate global climate information is critical to developing an informed community that can respond to the challenges of climate change. How do we communicate both the certainty and the uncertainty in climate data and data projections? How do we stimulate measured discussions on climate change and guide community responses to climate challenges? How can we support educators' inclusion of climate change science into the K-12 curricula?

Speaker 4, 5, & 6. Climate Science Education Practice (40-60 minutes)
Two or three examples of climate science integration in to K-12 curricula (some ideas)

a) **K-12 educator**
b) **NASA example: using NASA climate science data**
c) **UCAR, GLOBE: Student Climate Research Network**

Discussant: Brief review of panel discussion, including impacts of climate science education, to date & future directions **(10 minutes)**
(*Potential discussant*: David Suzuki, University of British Columbia)

Questions for the panel & general audience discussion (15 minutes)

Welcome & transition between speakers (15 minutes)