Raising Climate Literacy Through DataStreme Earth’s Climate System

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The American Meteorological Society (AMS) DataStreme Project is a free professional development program for in-service K-12 teachers, in which they gain considerable content knowledge and confidence in Earth science instruction. It can be used as a curriculum and instruction model for those designing long-duration, content-rich teacher professional development courses while working with a network of educators and scientists to build scientific literacy.

DataStreme ECS Outcomes
- Reached 1,027 teachers in 35 states
- Evaluated through pre/post tests on pedagogy and content, as well as a comprehensive end-of-course assessment and literacy evaluation
- Teachers acquired useful teaching knowledge, their attitudes changed toward science issues, and they gained scientific and training skills

DataStreme ECS Textbook
- New DataStreme ECS Textbook
- Part I: Defining Climate
  - This section defines Earth’s climate system and its subsystems and differentiates climate variability and climate change. Evidence of climate change is also presented.
- Part II: Principles of Climatic Processes
  - This section focuses on the underlying science of Earth’s climate system and dives deeper into the subsystems.
- Part III: Variability of Climate
  - This section describes the natural and human processes by which climate can change, what notable factors trigger it to change and how it has changed in the past. Reconstruction of past climates, the present state of climate, and modeling of the climate system are also discussed.
- Part IV: Our Relationship to the Climate
  - This section explains why society is vulnerable to the current, unprecedented changes in the climate system. At-risk portions of society, how modern-day conveniences are in conflict with the causes of anthropogenic climate change, and options we have to respond to climate change and mitigate future hazards are examined.

Environmental Literacy Survey Results
- Average overall level of environmental literacy: 93%
- Average overall level of scientific literacy: 95%

DataStreme Atmosphere, Ocean, and Earth’s Climate System (ECS)
- AMS develops materials
- LITs mentor teachers
- Teachers share information

Spring 2011 – Fall 2013

Teachers share information

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Part I: Defining Climate

Part II: Principles of Climatic Processes

Part III: Variability of Climate

Part IV: Our Relationship to the Climate