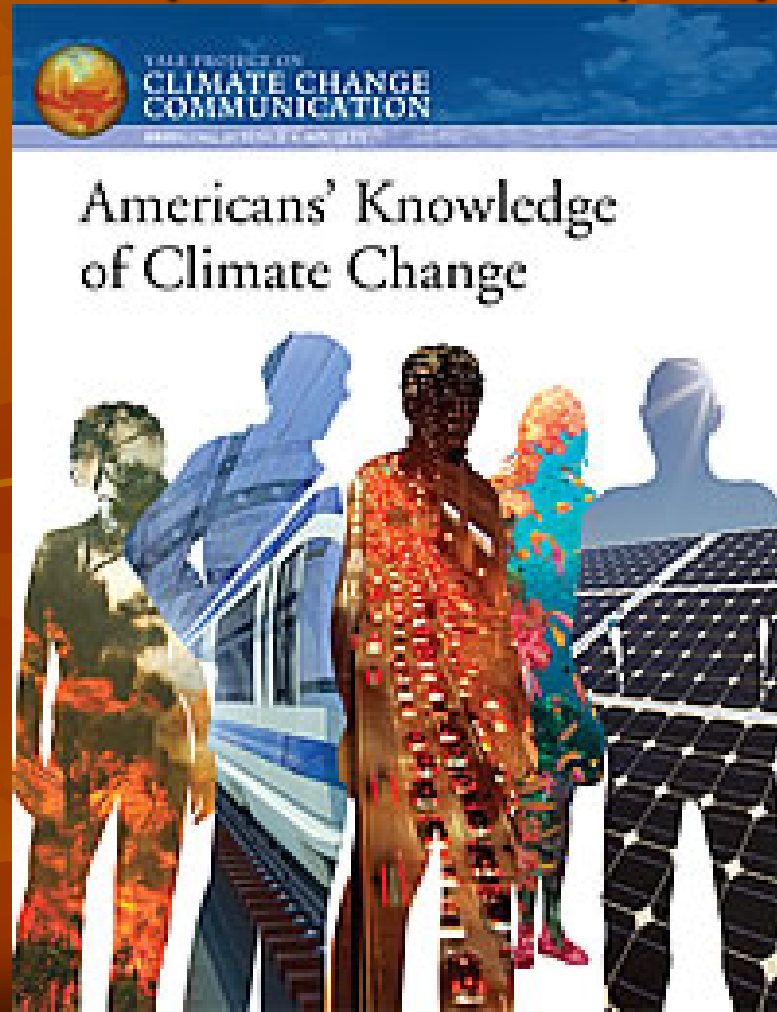


Climate Change Education: Resources and Challenges

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Americans' Knowledge of Climate Change

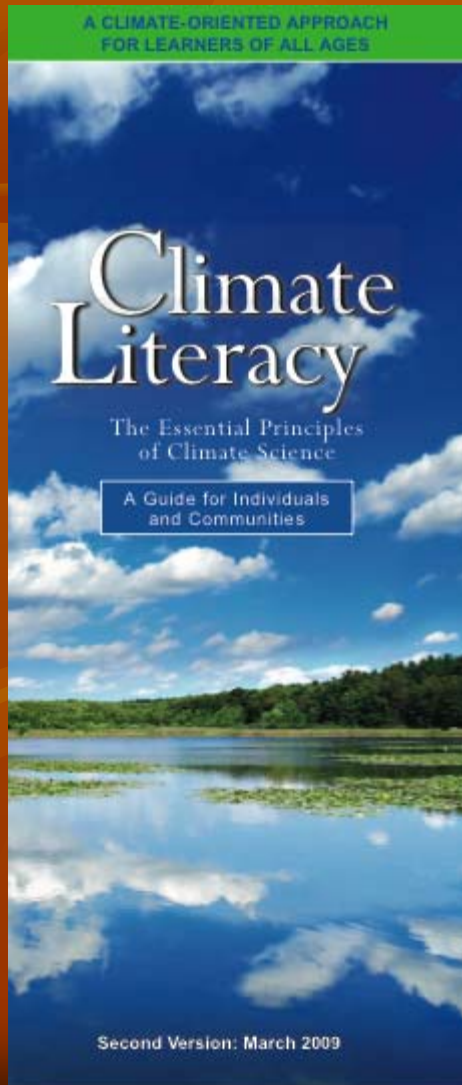
(a Yale survey of 2000 people in July)



American's Knowledge of Climate Change

- Only 57% knew that the "greenhouse effect" refers to gases in the atmosphere that trap heat.
- Only 50% understood that global warming is caused mostly by human activities.
- Only 45% understood that carbon dioxide traps heat from the Earth's surface.
- Only 25% had ever heard of coral bleaching or ocean acidification.

Climate Literacy - A Climate-Literate Person:



- Understands the essential principles of Earth's climate system,
- Knows how to assess scientifically credible information about climate,
- Communicates about climate and climate change in a meaningful way, and
- Is able to make informed and responsible decisions with regard to actions that may affect climate.

Essential Principles of Climate Literacy

- Climate Science:
 - The Sun is the primary source of energy for Earth's climate system.
 - Climate is regulated by complex interactions among components of the Earth system.

Essential Principles of Climate Literacy

- Ecosystems:
 - Life on Earth depends on, is shaped by, and affects climate.

Essential Principles of Climate Literacy

- Climate Variation:
 - Climate varies over space and time through both natural and man-made processes.

Essential Principles of Climate Literacy

- The Study of Climate:
 - Our understanding of the climate system is improved through observations, theoretical studies, and modeling.

Essential Principles of Climate Literacy

- Climate Change:
 - Human activities are impacting the climate system.
 - Climate change will have consequences for the Earth system and human lives.

Guiding Principle for Informed Climate Decisions:

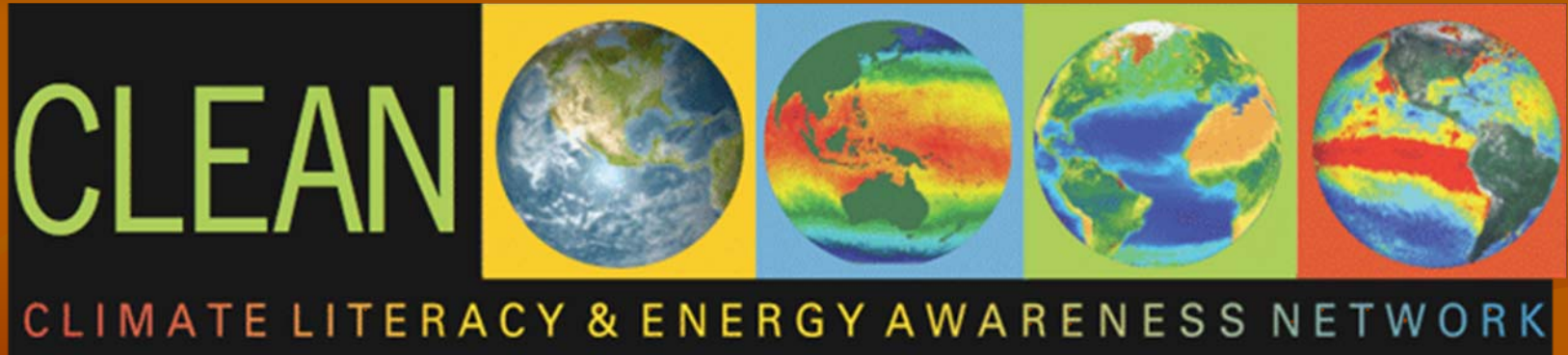
- Humans can take actions to reduce climate change and its impacts.

Guiding Principle for Teaching Energy Awareness

- Being aware of the role of energy in the Earth system and human society allows us to take actions to conserve, prepare, and make informed energy choices.

Educational Challenges

- Teachers need high-quality standards-based materials.
- Many online climate and energy teaching resources are of poor quality.



<http://cleanet.org/index.html> provides:

- A reviewed collection of resources for grades 6-16
- Tools to enable responsible decision-making about our environment

Additional Educational Challenges

- TN State standards related to climate occur in both Social Studies and Science.
- TN State standards have substantial gaps in coverage of climate change and energy issues.

Ways SAMAB Can Help

- Provide online sources for data specific to our region.
- Encourage the incorporation of Climate Literacy in our state Environmental Literacy Plans.
- Encourage the inclusion of Climate Literacy in proposed revisions of state Social Studies Standards.



**Any Questions or
Suggestions?**