

# Scientist-Educator Workshop Fall 2008 (Evaluation)

## 1. Educator Info

Thank you for attending the COSEE-OS Scientist-Educator Workshop ("Get to Know a Scientist: Not just what they know, but how they think!") on the special topic of "Climate Change". Please answer the following questions to help us evaluate what you gained from this workshop, and to improve our evolving model for educator-scientist communication. Your feedback represents a crucial step in this research effort.

Some of the questions will be very similar to those you answered in your application in order to help us document any changes that may have occurred as part of this workshop effort.

**\* 1. Please provide some basic demographic information (this information will not be shared).**

Name:

**2. What grade level or levels are you currently teaching?**

 K-5 6-8 9-10 11-12 College NA

Other (please specify)

**\* 3. Did this workshop meet your expectations? (check one)**

 yes, definitely mostly not sure not really no, definitely not

Please make a statement justifying your choice above

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## 2. Organization of Workshop

Please rate our workshop organization.

**\* 1. How effective was the workshop organization in helping you understand how concept mapping can be used to present ocean - climate science concepts? (Scale of 1-7: Ineffective=1 to Effective=7)**

Ineffective (1)    (2)    (3)    (4)    (5)    (6)    Effective (7)

Comments on how to better organize the workshop?

**2. Rate the overall length of this workshop. (check one)**

too long    just right    too short

**3. Rate the overall pacing for today. (check one)**

too slow    just right    too fast

**4. Rate each of the following for your workshop experience. (check one response for each)**

	not enough	just right	too much	NA
New learning/new content	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
New experiences	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Enjoyment/fun	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Interactions with colleagues	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Interactions with scientists	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Interactions with COSEE-Ocean Systems staff	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other (please specify)

**5. If you were able to attend, how would you rate the Friday evening "social event" with scientists, educators and facilitators? (Scale of 1-7: Very boring=1, Great fun=7)**

Boring! (1)    (2)    (3)    (4)    (5)    (6)    Great fun! (7)

Comments (e.g., what would have made it more fun?):

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## 3. Multimedia Tools

The next set of questions ask you to provide feedback about the potential usefulness of the multimedia tools and resources demonstrated in the Ocean-Climate Interactive (OCI).

**\* 1. How useful do you think the Ocean-Climate Interactive (online multi-media tool) will be to help you find good education resources about ocean and climate literacy concepts for yourself? (Scale of 1-7: Not useful=1 to Extremely useful=7)**

Not useful (1)    (2)    (3)    (4)    (5)    (6)    Extremely useful (7)

Comments on how to make concept mapping more useful to you and your teaching colleagues?

**\* 2. How useful do you think the Ocean-Climate Interactive (online multi-media tools) will be to help you create good science education modules and/or presentations for use in your classroom? (Scale of 1-7: Not useful=1 to Extremely useful=7)**

Not useful (1)    (2)    (3)    (4)    (5)    (6)    Extremely useful (7)

Comments on how to make concept mapping and the online multi-media tools more useful to you as an educator?

**\* 3. How useful do you think the Ocean-Climate Interactive (online multi-media tools) would be to your students (if they had direct access) to understand and make connections between ocean and climate literacy principles? (Scale of 1-7: Not useful=1 to Extremely useful=7)**

Not useful (1)    (2)    (3)    (4)    (5)    (6)    Extremely useful (7)

Comments on how to make concept mapping and the online multi-media tools more useful and accessible to students?

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## 4. Concept Mapping

The next set of questions ask you to provide feedback about the potential usefulness of the multimedia tools and resources demonstrated in the Concept Map Builder (CMB).

**\* 1. How useful do you think the Concept Map Builder (online multi-media tool) will be to help you find good education resources about ocean and climate literacy concepts for yourself? (Scale of 1-7: Not useful=1 to Very useful=7)**

Not useful (1)     (2)     (3)     (4)     (5)     (6)     Very useful (7)

**\* 2. How useful do you think the Concept Map Builder (online multi-media tools) will be to help you create good science education modules and/or presentations for use in your classroom? (Scale of 1-7: Not useful=1 to Very useful=7)**

Not useful (1)     (2)     (3)     (4)     (5)     (6)     Very useful (7)

**\* 3. How useful do you think the Concept Map Builder (online multi-media tools) would be to your students (if they had direct access) to understand and make connections between ocean and climate literacy principles? (Scale of 1-7: Not useful=1 to Very useful=7)**

Not useful (1)     (2)     (3)     (4)     (5)     (6)     Very useful (7)

**\* 4. Do you think the process of using Concept Mapping helped you think through the topics you learned during this workshop?**

Yes     Sort of     No

I think concept mapping is....

**\* 5. Was concept mapping helpful to you as a way to share ideas and build a bridge for communication with the scientists?**

Yes     Sort of     No

If no, what other tools or techniques would have been more helpful to you?

**6. How can COSEE-Ocean Systems be more helpful to you, your students, and/or your school to make connections between ocean and climate concepts, and incorporate ocean science research into your curriculum?**

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**7. Would you like COSEE-Ocean Systems to contact you concerning future workshops that build upon this concept mapping model with emphasis on scientist-educator interaction?**

Yes

No

Comments:

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## 5. Content Knowledge

The following nine Climate Literacy and Ocean Literacy "fundamental concepts" listed below were included in this workshop as the ocean scientists discussed their research efforts and interests in the context of the BIG PICTURE: Climate Change.

Please take a moment to comment on your new (if changed) comfort level with each concept, and newly discovered (if changed) relevancy of these concepts to your classroom curriculum - as a result of this workshop. Also, if you discovered or learned new ways to address the "fundamental concept" through your teaching, please briefly describe your ideas.

### \* 1. For the following Climate Literacy "fundamental concept" covered in this workshop...

How has your comfort level changed as a result of this workshop?

How has your perception of relevance changed as a result of this workshop?

**"Life on Earth, including microbes, plants, and animals such as humans, can influence climate substantially and has throughout the evolution of life on the planet."**

As a result of this workshop, what new ideas or resources have you learned about that would enable you to teach this "fundamental concept" in your classroom?

### \* 2. For the following Climate Literacy "fundamental concept" covered in this workshop...

Comfort Level?

Relevance?

**"Observations, experiments, and theory used to construct and refine computer models and develop scientific explanations lead to better understanding of the linkages between the atmosphere-ocean system and how it relates to the overall climate system's behavior. As a result, more reliable projections of future climate changes will develop over time."**

As a result of this workshop, what new ideas or resources have you learned about that would enable you to teach this "fundamental concept" in your classroom?

### \* 3. For the following Climate Literacy "fundamental concept" covered in this workshop...

Comfort Level?

Relevance?

**"The carbon cycle influences climate in a variety of ways, including seasonal interactions between the atmosphere, biosphere, and hydrosphere, and the formation and consumption of fossil fuels. Carbon dioxide, an important greenhouse gas, is removed from the atmosphere in the ocean and other parts of the Earth system through biologic and geologic processes."**

As a result of this workshop, what new ideas or resources have you learned about that would enable you to teach this "fundamental concept" in your classroom?

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## \* 4. For the following Climate Literacy "fundamental concept" covered in this workshop...

Comfort Level?      Relevance?

**"The consensus of scientific opinion is that the natural processes driving Earth's long-term climate changes cannot entirely explain the rapid changes observed in recent decades, nor do they solely predict those projected for coming decades."**

    

As a result of this workshop, what new ideas or resources have you learned about that would enable you to teach this "fundamental concept" in your classroom?

## \* 5. For the following Climate Literacy "fundamental concept" covered in this workshop...

Comfort Level?      Relevance?

**"Human activities have affected the land, oceans and atmosphere and have altered regional and global climate. These activities include burning fossil fuels, releasing chemicals into the atmosphere, reducing the amount of forest cover, and rapidly expanding farming development and industrial activity."**

    

As a result of this workshop, what new ideas or resources have you learned about that would enable you to teach this "fundamental concept" in your classroom?

## \* 6. For the following Ocean Literacy "fundamental concept" covered in this workshop...

Comfort Level?      Relevance?

**"The ocean has had, and will continue to have, a significant influence on climate change by absorbing, storing, and moving heat, carbon and water."**

    

As a result of this workshop, what new ideas or resources have you learned about that would enable you to teach this "fundamental concept" in your classroom?

## \* 7. For the following Ocean Literacy "fundamental concept" covered in this workshop...

Comfort Level?      Relevance?

**"Most life in the ocean exists as microbes. Microbes are the most important primary producers in the ocean. Not only are they the most abundant life form in the ocean, they have extremely fast growth rates and life cycles."**

    

As a result of this workshop, what new ideas or resources have you learned about that would enable you to teach this "fundamental concept" in your classroom?

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## \* 8. For the following Ocean Literacy "fundamental concept" covered in this workshop...

Comfort level?      Relevance?

**"New technologies, sensors and tools are expanding our ability to explore the ocean. Ocean scientists are relying more and more on satellites, drifters, buoys, subsea observatories and unmanned submersibles."**

As a result of this workshop, what new ideas or resources have you learned about that would enable you to teach this "fundamental concept" in your classroom?

## \* 9. For the following "fundamental concepts" covered in this workshop...

Comfort Level?      Relevance?

**"Use of mathematical models is now an essential part of ocean sciences. Models help us understand the complexity of the ocean and of its interaction with Earth's climate. They process observations and help describe the interactions among systems."**

As a result of this workshop, what new ideas or resources have you learned about that would enable you to teach this "fundamental concept" in your classroom?



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## 6. Scientist Interactions

One of our key objectives for this workshop was to foster interactions between educators and scientists. We would like you to rate your experience with the scientists, and if this interaction had or will have an effect on your understanding and teaching of climate change topics.

**\* 1. How would you rate the quality of interaction between scientists and educators in this workshop?**

- Negative interaction (1)     (2)     (3)     (4) Neutral     (5)     (6)     Positive interaction (7)

Please provide any comments you have on this subject.

**2. Do you feel the scientists and educators at this workshop were interacting as peers/colleagues to communicate?**

- Yes     Sort of     No

Please make a statement to support your choice above.

**3. How can COSEE-Ocean Systems help you sustain interactions with scientists you met during the workshop?**

**4. Please share with us any suggestions or comments that would help us improve this workshop.**

Thank you for completing the COSEE-OS Scientist-Educator Workshop evaluation, and we look forward to working with you again in the future!