



Maryland and Delaware Climate Change  
Education Assessment and Research



UNIVERSITY OF  
MARYLAND

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# Formative and Summative Assessment and Sea Level Rise; Item Review

November 16, 2013

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Viriden Center, Summer 2013  
Photo by Emily Hestness

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Climate Change Learning Sciences Research  
at the University of Maryland



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## Welcome MADE-CLEAR Teachers to the Assessment and Sea Level Rise Session!

In this session we'll:

- Describe and give you time to interact and provide feedback on our new and improved Sea Level rise assessment instrument.
- View student responses to assessment items.
- Work on your assessment items for your learning segment or learn more about using Google Forms for assessment.



## Lets get started!

\* Required

**Sea level is projected to rise between 10 and 70 cm by the year 2100.**

Why is sea level rising? \*

- A. Not as much evaporation is taking place due to the hole in the ozone layer.
- B. Increased rain and snowfall are adding to the amount of water in the seas.
- C. Shifts in plate tectonics reorganizing the shape of the sea floor.

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### Lets get started!

Your response has been recorded. Click the following link to see student responses to this question:  
[www.climateedresearch.org/PD/Nov2013/IntroStudentRes.html](http://www.climateedresearch.org/PD/Nov2013/IntroStudentRes.html)

[See previous responses](#)

Create your own form

Google Drive

**Construct Being  
Assessed in the  
Climate Change  
Conceptual  
Progression**

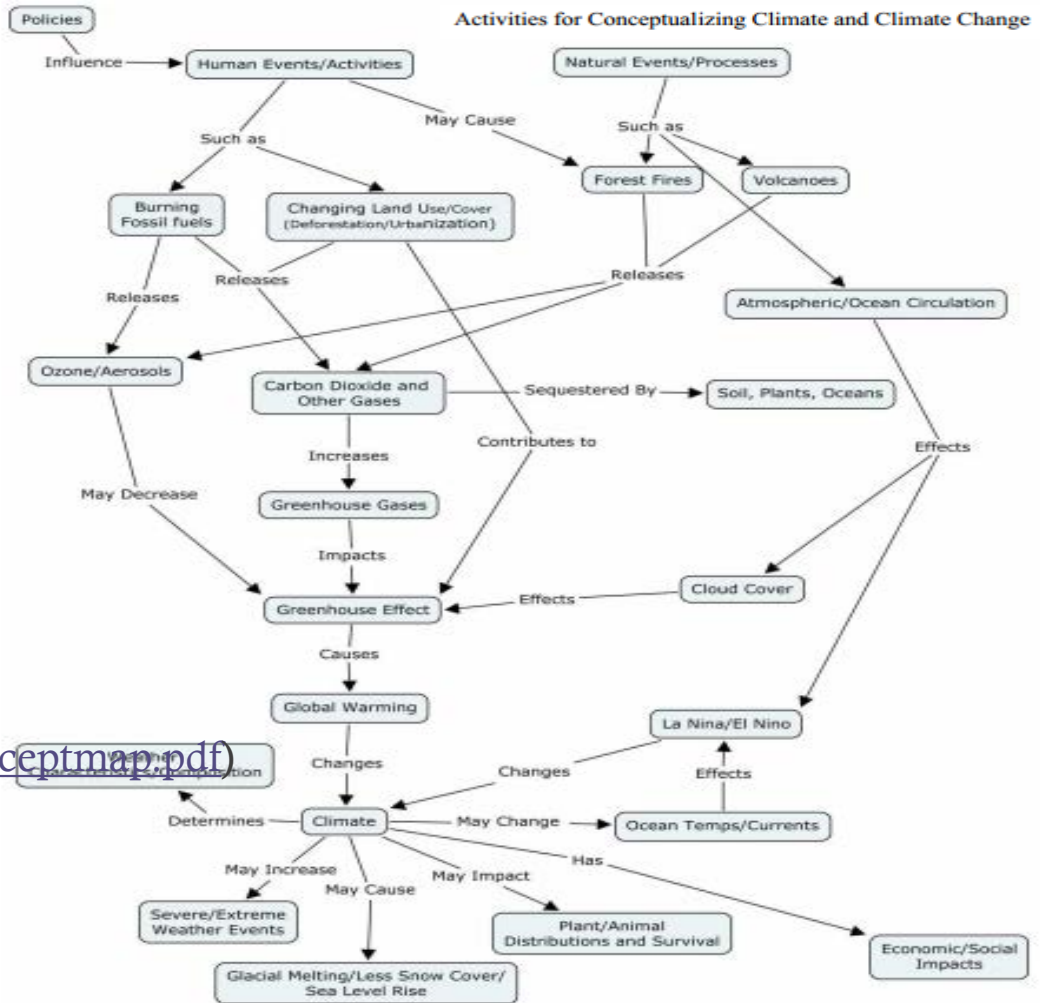
**Global  
Warming**



# Climate and Climate Change Conceptual Progression

(Shepardson, et. al)

(From <http://iclimate.org/ccc/Files/conceptmap.pdf>)



# Sea Level Rise Learning Progression and Science Constructs (represented in the NGSS)

Global warming\*

Ice Melting (glaciers and land ice)\*

Thermal expansion (atomic-molecular scale)

Ecosystems (Plant and Animal Distribution)\*

Human Events/Activities\*

Greenhouse Gases\*

Economic/Social Impacts\*

Geographic Uplift and Subsidence

\*Overlaps with the *Climate and Climate Change Conceptual Progression* from Shepardson et al.



## Activity: Assessment Questions & Feedback

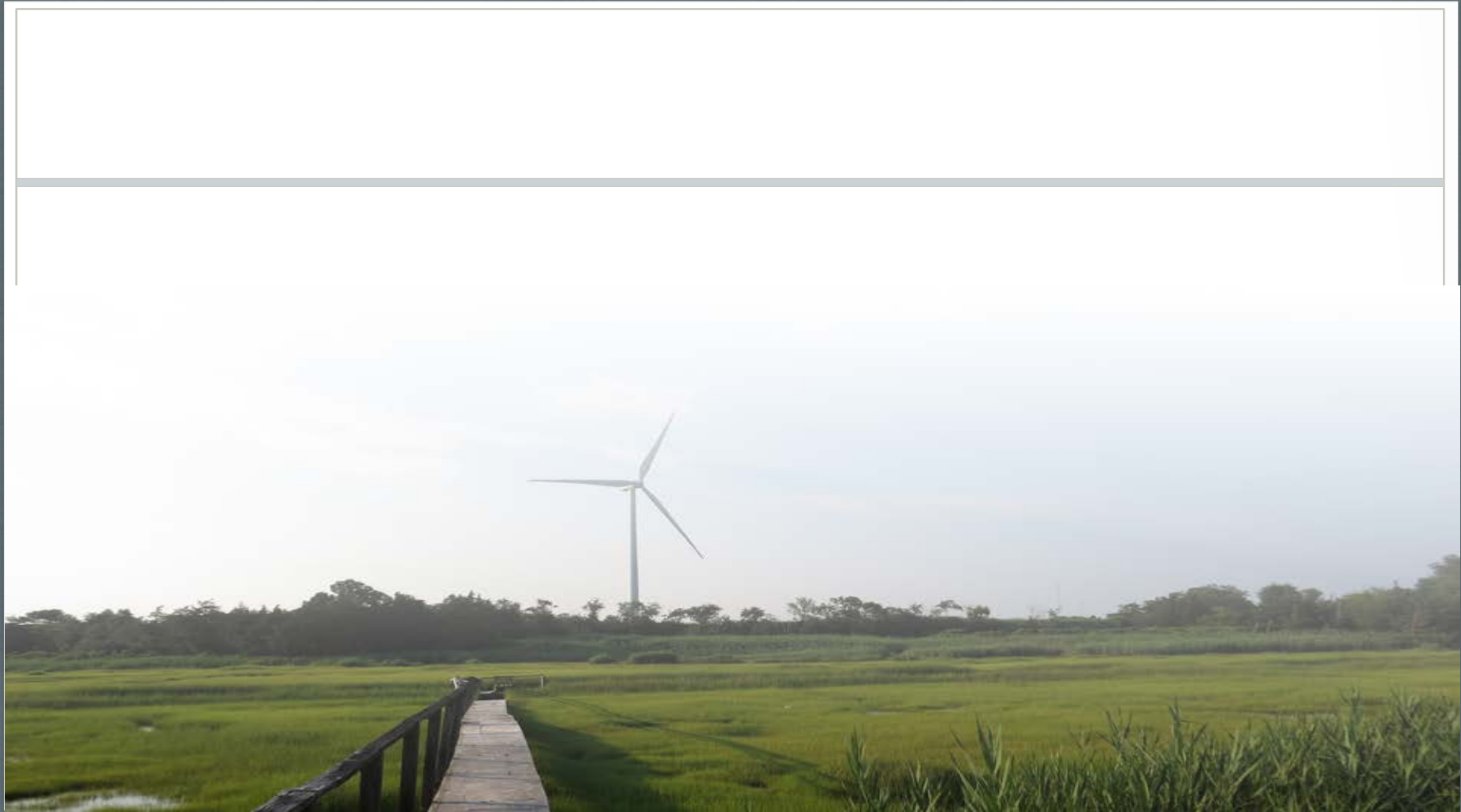
In your group please respond and provide feedback to a set of three questions (A, B, or C) on the website.



## Activity: Assessment Questions & Feedback

How would these questions inform you about your learners' thinking?

How would they guide your learning segment and instruction?







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Education, Assessment and Research

University of Maryland  
Learning Sciences Team

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